The Role of Contracts, Informal Agreements and Coalitions in Assuring Downstream Coordination

by

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(ABSTRACT)

The importance of coordination between independent organizations in a vertical distribution system is stressed in most discussions of marketing channels and inter-organizational relations. The nature and structure of the vertical relation affording effective coordination between autonomous firms or units has been a matter of research interest as well as managerial concern. This thesis attempts to develop and empirically validate a model for understanding the institutional mechanisms for coordination between firms vertically related to each other.

An emerging notion in organizational theory and economics is that the firm is a nexus of contracts and economic activities of the firm are governed by contracts ranging from the simple price-quantity contract to more complex adaptive as well as employment contracts. While most or all interfirn relations would be governed by a basic contract, the institutional framework under which any relation would be organized would vary with respect to the use of detailed, sequential contracts; pledges, guarantees and other informal or implicit agreements; and, power, dependency and centralized decision-making. The three institutional mechanisms, contracts, informal agreements, and coalitions differ with respect to their use of bonding mechanisms, power, conflict resolution, and enforcement of obligations. This research attributes the relative predominance of any one institutional mechanism in the vertical relation to relevant industry/market characteristics and firm/transaction considerations within a model unifying theories and concepts from diverse disciplines.

Empirical validation of the conceptual model is through a field survey (mail questionnaire) of respondents (mainly top and middle management personnel) drawn from some representative industries. The structural form of the interrelationships between the hypothesized constructs are
examined through simultaneous equations modeling and the three-stage least squares estimation procedures.

The institutional environment is thus more realistically presented as arising from a combination of environmental and rational selection factors. Moreover, the economic, strategic, relational and transactional properties of inter-organizational relations are considered in one integrated framework. It is hoped that the findings of the study would lead to future theoretical insights that consider the economics, sociology and politics of organizations in a more integrative and realistic framework.
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Chapter I

INTRODUCTION

Organizations present a strange paradox. On one hand, they have been in existence, in either social, or economic, or political forms for centuries; however, on the other hand, they lend themselves not only to newer forms but also to newer approaches to study them. Thus, old problems are continually analyzed anew, and newer forms of organization constantly emerge. This thesis attempts to study the problem of coordination of economic activity. While much of the problem itself was addressed as far back as the 17th century by the British moral and political philosopher, Thomas Hobbes, the present exercise recasts interfirm coordination as the adoption of institutional alternatives that are both rationally created as well as historically given. The preamble to the thesis, in the following few pages, elaborates briefly on the problem of coordination and the current state of knowledge in the area of inter-firm relations.

One key feature of the capitalist economy is the division of labor between the firm and the market. This simplified conception is also the prime requirement for understanding the nature of capitalism as well as its problems. Central to the notion is the planning of activities as carried out within the firm and the spontaneous execution of activities as in a market. The problem that arises
is that of the specific delineation of activities to be performed by the firm and those that are to be left to the vagaries of the invisible hand (Coase 1937; Richardson 1972). The problem increases in complexity when one realizes that the dichotomy of the firm and the market is but a specific case of an even broader problem, that of the individual versus the collective (or agency versus structure) with the firm as the unit of analysis. Dimensions of this broader superstructure of problems are visible within the firm wherein the voluntary relationship of the marketplace takes on a whole new dimension of authority and supervision that impinges on the autonomy of the individual (Marx 1858; Simon 1947, 1951).

Twentieth century economic theorizing envisages the role of force within the factory devolve into mere authority relations or even, at best, incentive and monitoring relationships in order to elicit cooperation and achieve coordination among the members of the firm. The same has been true of relations between firms; here, as within the firm, authority and/or market forces ensure coordination between firms agreeing to cooperate. The gains afforded by the division of labor and specialization within the Adam Smith pin factory were complemented with the need to monitor and supervise work due to measurement problems (Alchian and Demsetz 1972; Smith 1776). The notion that the hierarchical arrangement of the firm is superior in specialization, communication and control aspects despite the "dulled incentives" for the individual employee is a notion that is common between the archaic political economy of Adam Smith and the relatively modern disciplines of neo-classical and new institutional economics (Coase 1937; Smith 1776; Williamson 1975).

The late stages of the twentieth century now face a different reality. The ideal of pure markets has been demolished by the realities of domesticated markets (Arndt 1979); the ubiquity of "public goods" and "externalities" challenge the innovating capabilities of any firm (or government); perfect competition in the marketplace is now the myth that adorns only economics textbooks; environmental and human behavioral uncertainty has only highlighted the problems of devising suitable contracts (Williamson 1975), or of even contingent commodities and claims (Arrow 1969); a litigious society (Lieberman 1981) has made court-remedy inefficacious, while private ordering is beset with bargaining problems (Galanter 1981). This dismal scenario has prompted some students of the theory of the firm (Coase 1937; Williamson 1975) to gravitate towards a form of self-reliance.
in the ordering of all or most activities within the firm. Some, however, remain more exuberant in envisaging coordinations based on contracts and authority but flavored with trust and cooperation (Arrow 1974; Dwyer, Schurr and Oh 1987; Goldberg 1980; MacNeil 1980a).

The age of dichotomies is now nearing its end; the firm and the market can no longer be conceived as mere two sides of a planning coin. Even in planning at the level of the State, the ideals of Capitalism or the ideals of Socialism are now merely ideologies that can, at best, provide only a rough framework for political and economic planning and implementation. The New Left, characterized by a complete unity between the individual and social roles, and the New Right, wherein the "worship of the market" denies or minimizes the role of the state and of collective action and responsibility are both extremes to which there remain only a few subscribers (Arrow 1974). Most, today, operate in the middle realm (Arrow 1974), but a "New Middle" is still to emerge. Theories of the firm, with their logic of conscious planning and the theory of the market, with comparative analysis of the price mechanism under alternative structures, both suffer from harmless first approximations (Richardson 1972).

Theories of the firm abound, from the economic theories rooted in neoclassicism (Machlup 1967; Marshall 1920), to the managerial (Baumol 1959; Marris 1964; Williamson 1964), to the behavioral (Cyert and March 1963), to the ecological (Nelson and Winter 1982), to the more recent "new institutionalist" theory of the firm with its claims on comparative institutional analysis and explicit behavioral assumptions (Williamson 1975, 1985). The plethora of theoretical frameworks and the absence of consensual areas amongst the conflicting theories is well reflected in the lament of the New Palgrave Dictionary of Economics: "It is doubtful if there is yet general agreement among economists on the subject matter designated by the title "theory of the firm", on, that is, the scope and purpose of the part of economics so titled" (vol. 4, 1987).

Pluralism of theoretical approaches is the major problem in the articulation of a lucid theory of the firm, one that scores highly on both of the incompatible Coasian criteria of judging any theory of the firm, realism and tractability (Best 1990; Coase 1937). However, as regards the theory of interorganizational relations, the problem is that no single cogent formulation exists. Absent even the broadest meta-theoretical structure, theories within the fields of organization theory and
management are, at best, piece-meal middle-range theories that suffer from inadequate theoretical integration. While economists have been grappling with the problem of realism or lack thereof (Machlup 1967; Simon 1982), organizational theorists, while providing empirical support for their theoretical constructions, have been notably remiss in their attention to paradigm building. Both disciplines, however, cross-over on the persistent problem of the "boundaries of the firm" (Aldrich 1979; Best 1990; Coase 1937; Penrose 1959; Richardson 1972; Simon 1991; Thompson 1967; Williamson 1975, 1985).

It is here that the problem of organization, with its ubiquitous goals of achieving collective action by maintaining a balance, not only between authority and responsibility but also between individual and collective interests (Arrow 1974), can be readily extended to the problem of organizing the marketing channel relation.

**Marketing Channels: Progress and Problems**

Marketing Channels are "sets of independent organizations involved in the process of making a product or service available for use or consumption" (Stern and El-Ansary 1988). Marketing channels, in this sense, refer to the arrangement of activities geared towards the demand side or the consumer side of the firm. Two broad approaches in marketing channels research can be readily discerned. One, given the structure of the channel - conventional, contractual, administered, franchising, and vertical marketing systems - an assessment within and between the comparative forms can be made by addressing the issues of functions, roles, power, dependence, conflict and performance. Two, given the goals of the firm and the realities of the environment, an assessment of fit can be made across comparative structuring of activities or organizational and channel patterns or structures. The former approach has repeatedly borrowed from advances in economics, sociology and social psychology, while the latter has obtained key analytical insights from developments
in management and organizational theory. The scheme unifying both approaches under the paradigmatic rubric of "political economy" has met with only a moderate degree of success (Arndt 1983; Reve and Stern 1985; Stern and Reve 1980).

Another useful categorization of marketing channels research emerges from splitting the research stream into historical phases. Science progresses by consensus, anomalies and revolutions, and the historical progress of theory construction within the field of marketing channels has been a witness to this Kuhnian conceptualization (Kuhn 1962). The three phases of dominant thought that we identify, can be aptly titled economic, behavioral, and relational.

Phase I: The Economics of Marketing Channels

In the first phase (until 1970), marketing channels were conceptualized as economic institutions and agencies providing distribution efficiencies through exchange, assortment and routine transactions between production on one hand, and consumption on the other (Alderson 1950, 1954; Stigler 1951). Early research was primarily on commodity flows (Alderson 1954), with the problems of uncertainty and the lack of full information later considered for their impact on the ordering of economic activities amongst the intermediaries in the marketing channel (Balderston 1958). Primary issues of concern were the optimality of channel mix and channel structure and the aspects that were the focus of inquiry included distribution costs (Artle and Berglund 1959), service output levels and channel structure (Bucklin 1966, 1972), product assortments and laws of exchanges (Alderson and Martin 1965), postponement-speculation and channel structures (Alderson 1950, Bucklin 1965), and the equilibrium number of middlemen in vertical marketing systems (Balogh and Richartz 1964; Bucklin 1970). Table 1.1 provides a summary of some aspects of this research phase.
### Table 1.1

**HISTORICAL PHASES OF MARKETING CHANNELS RESEARCH**

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<th>PHASE I</th>
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<td>Research Agenda</td>
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<td>power and coordination in channels</td>
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<td>Key concepts studied</td>
<td>Channel length, Communication, Channel structures, Channel efficiency, Vertical Marketing Structures</td>
<td>Power-dependence, Conflict, Satisfaction, Control, Influence strategies</td>
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Phase II: Behavioral Dimensions and Political Economy

The publication of the seminal volume, *Distribution Channels: Behavioral Dimensions*, with contributions by Louis W. Stern and associates Jay W. Brown, Lynn E. Gill, Frederick J. Beier and J.L. Heskett, in 1969, prompted a radical break from the study of economics of marketing channels. The new behavioral view conceptualized marketing channels as a social system, *a la* Talcott Parsons (1951), with important behavioral dimensions such as role, power, conflict, and communication (Stern 1969, p. ix). It was argued that the conception of distribution channels strictly as economic systems 'limits knowledge of the relationships and interactions' within the channels and thus this perspective "must be broadened to include social and behavioral variables, for channels are social systems first and then economic systems" (Stern 1969, p. 5).

The dominant emphasis now turned to the study of power and coordination within marketing channels with the channel dyad increasingly becoming the focus of inquiry. The behavioral project was cheerfully carried on with repeated analysis of power, bases and sources of power, conflict, satisfaction, performance, influence strategies, and dependence, as well as the various permutations and combinations of such concepts within various alternative channel forms (Brown and Day 1981; Brown, Lusch and Muehling 1983; Cadotte and Stern 1979; El-Ansary 1975; El-Ansary and Stern 1972; Etgar 1976; Frazier 1983; Frazier and Summers 1984, 1986; Gaski 1984; Hunt and Nevin 1974; Lusch 1976; Lusch and Brown 1982; to name a few).

This behavioral project continued despite the publication of a much broader political economy framework by Stern and Reve (1980). The political economy perspective, originally propounded in organization theory by Zald (1970), viewed marketing channels as consisting of linkages of internal and external economy and polity (Stern and Reve 1980). This conception allowed for a revival of economic aspects along with the dominant sociological perspectives in the study of marketing channels. With only a limited following (Achrol, Reve and Stern 1987; Achrol and Stern
1988; Arndt 1983; Dwyer and Oh 1988; Dwyer and Welsh 1985; Reve and Stern 1985), coupled with the increasing methodological concerns in the study of behavioral dimensions (Gaski 1984; John and Reve 1982), the stage was set during the mid-1980s for another transition, this time, however, a more subtle one. Again, Table 1.1 provides a brief summary of the behavioral phase.

Phase III: Transactions Costs Analysis and Relational Aspects

The rise of the "new institutional economics" with its integration of perspectives from economics, organization theory and contract law (Williamson 1975), was welcomed within all disciplines wherein the organization of activity was an issue of concern (Zald 1987). The behavioral assumptions of bounded rationality and opportunism as well as the treatment of uncertainty and idiosyncratic relations, albeit within the neo-classical economic framework, are the most appealing features of this "cottage industry" (Simon 1991). As elsewhere, transactions cost analysis (TCA) and its precepts found acceptance among channels researchers especially in the study of opportunism (John 1984), "make-or-buy decisions" (Anderson 1985; Anderson and Coughlan 1987), contractual structures (Dwyer and Oh 1988), and downstream integration (John and Weitz 1988).

The notions of relational contracting and the conception of the channel relation as a long-term trusting relation with considerable potential for informal agreements and cooperative exchanges between channel partners is now in vogue (Anderson and Narus 1990; Anderson and Weitz 1989, 1992; Dwyer, Schurr and Oh 1987; Frazier, Spekman and O’Neal 1988; Young and Wilkinson 1989). Issues and concepts earlier neglected, such as trust, cooperation, commitment and communication are now a hotbed of research activity. Table 1.1 provides some facets of this phase in channels research.
While the TCA approach stresses contractual safeguarding in the presence of uncertainty and opportunism, the relational approach stresses the development of long-term trusting relationships that are more non-contractual and informal in nature. It is an interesting irony of research development, with one perspective stressing comparative economic efficiency amidst uncertainty and deceitful self-interest seeking, and the other stressing relational stability and continuity amidst reputational concerns and informal exchanges. Despite the paradoxical nature of this two-pronged research stream, there is considerable scope for further theorizing with the marketing channels relation now conceived of as a set of contractual and non-contractual linkages (Anderson and Weitz 1990; Macaulay 1963). What is, however, interestingly lacking from both the TCA and the relational frameworks is the absence of power considerations altogether.

One reason (or apologia) for the lack of consideration of power is its transient character (Williamson and Ouchi 1981), but more importantly, it could be argued that power considerations have always been absent from standard economic formulations despite the prevalence of asymmetrical market power relations, monopolies, and large business firms (Chandler 1977; Galbraith 1952, 1973; Penrose 1959). The other reason is that the notion of “economic power” does not encompass the full range of the sociologists’ or political scientists’ or even the radical institutionalists’ conceptions of power (Dugger 1988; Francis, Turk and Willman 1983).

It is in this vein that this current research endeavor attempts to include the notions of contractual relations, informal non-contractual relations and power relations within one overarching conceptualization of marketing channels.

**Statement of the Problem**

The notion that the boundaries of the firm are ambiguous and that it is difficult to obtain a tractable distinction between the firm and the market is now gaining momentum (Richardson 1972;
Simon 1991). The structural form of downstream relationships could thus be conceived as a mixture of firm-like and market-like properties. Stewart Macaulay (1963), in his classic study, argued that contractual and non-contractual relations co-exist within the same business dyad. Macaulay's (1963) thesis was that transactions could be described by their relative emphasis on contractual and non-contractual devices for creating exchange relationships and solving problems arising during the course of such relationships (p. 56).

Contesting Coase's sharp distinction between markets and firms, Richardson (1972) argued that co-ordination between firms could be achieved by any of the three ways - by direction, by co-operation, or by market transactions. More recently, a host of writers have argued for intermediate types of organization of activities between the firm and the market (Buckley and Casson 1988; Eccles 1981; Mariti and Smiley 1983; Miles and Snow 1986; Porter and Fuller 1986; Powell 1990, among others). The contention of these critics of the market/firm school of institutional economics is that there could be distinctly different organizational forms that are neither market nor hierarchy. However, Bradach and Eccles (1989) argue that the idea of intermediate organizational forms still retains the notion of markets and hierarchies as polar ideal types of a continuum, when in reality, features of markets and hierarchies are often combined (Bradach and Eccles 1989; Stinchcombe 1985). Instead, they call for the study of Plural Forms, in which various control mechanisms, characteristic of markets, hierarchies and trust, exist simultaneously within the same organizational arrangement (Bradach and Eccles 1989).

A comparative institutional perspective for analyzing the structure of transactions is not readily applicable to the study of interfirm relations (Simon 1991), since the boundaries of the firm are often vague. It is also for this reason that Bradach and Eccles (1989) explain the control mechanisms of price, trust, and authority and their interaction effects on organizing transactions, rather than attempt to explain structures that such control mechanisms may assume, viz., markets, collateral social structures, and hierarchy. In the inter-firm relationship, drawn by a similar perspective, one may argue that co-ordination between firms may assume forms that retain characteristics of market contracting, trust and authority as well as combinations of two or more such co-ordination mechanisms.
In economics, organization theory, sociology, and political science, there is today a "renaissance" of the study of institutions (Powell and DiMaggio 1991). Institutional analysis itself is more than a century old, dating back to Durkheim in sociology and Ayers, Veblen and Commons in the field of economics. Today, while each field has a plethora of approaches that are all called new institutionalism, there are many differences in assumptions and goals of these approaches (Powell and DiMaggio 1991). However, common to all is a call for the inclusion of the social context of human decisions and actions. It is argued that in today's complex collective life, "social, political, and economic institutions have become larger, considerably more resourceful, and prima facie more important" (March and Olsen 1984; p. 734). As such, ignorance of institutions and institutional structures could prove to be costly to the organizational analyses, be it within the fields of sociology, political science, economics, or even marketing.

The new institutional economics conceives institutions as governance structures or social arrangements that are geared to the reduction of transaction costs and the provision of dependable and efficient frameworks for economic exchanges (Powell and DiMaggio 1991; North 1990; Williamson 1985). The new institutional analysis in sociology views institutions as conventions that "take on a rulelike status in social thought and action" (Meyer and Rowan 1991; p. 42). As such, there is a tendency for seeking cognitive and cultural explanations that are supraindividual in analytic scope (DiMaggio and Powell 1983). In political science, institutions are interpreted as rules or procedures on appropriate behavior that are either imposed and enforced by direct coercion and authority or learned and internalized (March and Olsen 1989). Despite such differences in conceptualizations and assumptions, the study of institutions holds a promise of fruitful interaction of rational and routine actions, motivation and rule following, evolutionary behavior and rational selection, and cognitive and phenomenological processes (DiMaggio and Powell 1983; Nelson and Winter 1982; Zucker 1983).

Marketing channels could gain from such revolutionary insights from its companion social sciences. For a rudimentary theory of institutions to be applied to the field of marketing channels, a prerequisite is to discard the myth of the formal marketing channel structure. Instead of studying marketing channel forms such as administered channels, franchises, contractual channels, vertical
marketing systems, cooperatives, and the like, the institutional arrangement that holds the boundary members in a working relationship is to be made the focus of analysis. Marketing channels could be aptly viewed as institutional arrangements to secure coordination among the various actors involved in the planning and execution of marketing activities of the firm. Institutions, themselves, could be understood as mechanisms of social control of the activities of the channel partners. This conceptualization of marketing channels as a set of institutional arrangements captures the wide gamut of forms of such institutional modes of action and interaction that could ensure coordination between the firm and its intermediaries. Such institutional arrangements may be legalistic contracts, or flexible, informal arrangements, or strategic short-term partnerships or relational networks or control and influence mechanisms. It could be argued that such institutional arrangements may be a result of formal, rational planning or could be as a result of industry norms.

Institutions may be visible forms, such as authority, written communications and rules, and legal sanctions, or they may be "invisible" institutions, such as those of moral and ethical principles, and learned social norms, such as trust (Arrow 1974). The study of institutional arrangements, rather than the organizational form under which such institutions may be couched, is more relevant not only to the identification of the dominant patterns of the inter-firm relationship, but also in tracing the development and changes in the institutional modes of behavior within the same organizational form (March and Olsen 1989; Zucker 1986). Thus, within the firm, the employer-employee relationship may be one based on trust (Fox 1974), or it could be a relation wherein the employee is subject to persistent monitoring and supervision (Jensen and Meckling 1976), or it could be one wherein the employee voluntarily performs more than he is called for, due to a deep sense of identification and an anticipation for reward (Simon 1991). While all three examples refer to an internal hierarchical organization, deeper understanding results only when the institutions themselves are made the focus of inquiry. Thus, the dominant institution in the first example is trust, in the second it is control while in the third example the dominant institution is power/authority. It is argued, therefore, that the study of the institutional mechanisms, instead of organizational forms may offer a more accurate description of the empirical realities.

INTRODUCTION
Similar to Macaulay (1963), we attempt to study the institutional mechanisms of obtaining co-ordination between firms. Such institutional mechanisms can be identified as contracts, informal agreements, and coalitions. Contracts are explicit agreements that involve rational prediction of future contingencies and possess or use actual or potential legal sanctions (Macaulay 1963). What we refer to as informal agreements are a set of implicit understandings that are devoid of detailed planning and prediction of consequences and are enforceable not by legal sanctions but by the norm of reciprocity and reputational concerns (Gouldner 1960; Macaulay 1963; Powell 1990; Shugan 1985). Coalitions are networks of authority and communication between two or more firms so that either market or individual firm planning gives way to a relatively centralized planning and control of the activities of other firms by the exercise of power by the dominant firm. While only lateral coalitions have been studied in depth, the fact that such coalitional patterns may emerge even in vertical relationships has not been a matter of considerable research interest, except perhaps in the analysis of network structures and relationships (Benson 1975; Cook 1982; Emerson 1972; Miles and Snow 1986; Powell 1990) and the notion of tapered and quasi-integration (Harrigan 1985; Porter 1980).

The primary characteristic of the contract is the preservation of self-interest of independent parties to an agreement that specifies duties, obligations and remedies. On the other hand, informal agreements are "relational" (Goldberg 1980; MacNeil 1980a) in focus and seek to achieve co-ordination between interdependent parties. Whereas in the contract, punitive legal considerations are intended to assure performance, reputational concerns are the primary enforcement mechanisms when informal agreements are used. Explaining the prevalence of relatively non-contractual practices among Wisconsin businessmen, Macaulay (1963) observes:

"Contract and contract law are often thought unnecessary because there are many effective non-legal sanctions....Not only do the particular business units in a given exchange want to deal with each other again, they want to deal with other business units in the future. And the way one behaves in a particular transaction, or a series of transactions, will color his general business reputation" (p. 64).

In clear contrast to contracts and informal agreements, coalitions are driven by strategic considerations of securing competitive gains through joint action. Joint action is emphasized so that all available information and resources could be pooled to maximize the advantages deriving

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from the environment (Gamson 1961; Kelley 1968). Autonomous organizations form coalitions when they lack the resources to meet environmental opportunities or threats (Staggenborg 1986). However, power considerations override in an attempt to influence the partner’s actions such that these are directed towards strategic ends (March 1962). Apart from the use of power in the choice of goals and the allocation of information and resources, power may be used in the distribution of the payoff as well (Gamson 1961; Kelley 1968). In contrast to neo-classical institutionalism for which efficiency considerations are paramount (Williamson 1975, 1985), coalitional mechanisms secure distribution advantages by the use of authority. In this aspect they closely resemble hierarchies while retaining the characteristics of stable market relationships.¹

The difference between contracts and coalitions deserves some elaboration. Contracts are systems of negotiated order that secure allocative and distributional gains through negotiation based on the self-interest of the parties concerned, with such interests (preferences) themselves being exogenous to contract negotiation. Coalitions, on the other hand, are systems of conflict that secure allocative and distributional gains through mechanisms of power based on the distribution of social and economic rights of the parties concerned, with such rights themselves being exogenous to coalition formation. Whereas contracts are guided by a logic of exchange, coalitions are guided by a logic of unity (March and Olsen 1989). In contracts, the question of endowments is a question of property rights (Furubotn and Pejovich 1972); in coalitions, the question of endowments is a question of political rights (March and Olsen 1989). The contract, thus conceived, is primarily a socio-economic institution (the ubiquitous social contract also thus included), while the coalition is primarily a socio-political institution. The distinction between the “new institutional economics” of Williamson (1975) and the erstwhile institutional economics of Veblen (1927) and Commons (1934) couches the distinctions between the evaluation of organizations to gain “efficiency advantages” (contracts) and the evaluation of organizations to gain “power advantages” (coalitions).²

¹ It has been argued by Williamson (1975, 1985) that intermediate structures are unstable and that they are only in the stage of evolution towards internal organizations. Empirical results by Joskow (1987) and inconsistencies in the Walker and Weber (1984) study as to the existence of relatively long-term intermediate structures place a degree of doubt on the evolutionary characteristic of transaction cost theory.

² Also see Dugger (1983, 1988) and Francis, Turk and Willman (1983).
While to a degree the various institutional mechanisms would be present in every relation, it is our contention that there are various exogenous antecedents that have an effect on the relative degree to which any one institutional mechanism among contracts, informal agreements and coalitions would predominate in the inter-firm relation. Thus, differences in the inter-firm relation would derive from the differences in the intensity levels of each of the dimensions along which contracts, informal agreements, and coalitions may be characterized.

**Research Question 1**

It is argued by Williamson (1988a) that the dimensionalizing nature of transactions are the frequency with which they recur, the degree and type of uncertainty surrounding the transaction, and the condition of asset specificity. The original hypothesis was that the increase in these dimensions rendered contractual arrangements unstable, and proposed vertical integration as the only alternative (Williamson 1975). However, it is argued that for intermediate degrees of asset specificity, hybrid forms of contract are utilized (Joskow 1987; Williamson 1988a). While Williamson’s focus is only on the characteristics of the transaction, it could be argued that there are other antecedent conditions that favor hybrid forms of institutional arrangements. For example, Wilson (1980) found that the individual and market adaptation to the problem of uncertainty and small numbers bargaining in the New England fish markets was the development of very personal, long-term bilateral agreements. Palay (1985) found that informal agreements were used by the rail freight carriers and shippers in order to avoid regulatory constraints that were inefficient to the transaction. Moreover, the existence of franchise contracting in the fast-food industry, subcontracting in the defense and construction industry, absence of vertical integrations in automobile marketing, among other empirical realities, suggest that there could be various antecedents to the patterns of institutional arrangement, that could be industry-specific, or could derive from the characteristics of the market. Thus, we pose the question:
What are the industry-specific antecedent conditions and the market characteristics facilitating the emergence of particular dominant patterns of institutional mechanisms for coordination among contracts, informal agreements and coalitions?

**Research Question 2**

While the current advances in organization theory and marketing hold the model of close personal relationship between the buyer and the seller (Dwyer, Schurr and Oh 1987), and the need for creating such relationships for stability and strategic reasons (Anderson and Weitz 1989, 1990), there are important constraints on the establishment of very personal downstream relationships. First, most firms are multi-product, multiple market entities. For the firm to develop long-term personal forms of relationship with other firms, considerable time and effort of a bilateral nature are required, something that the firm, more than the channel member, feels hard pressed for. On the other hand, even if it is admitted that such relations can develop only in small-numbers situations, then how the firm circumvents the moral hazard problem ("opportunism" in Williamson's theory), has to be clearly delineated. If Williamson's solutions of detailed sequential contracts or internal hierarchy are dismissed in favor of trust and cooperation, the structural forms that such process characteristics assume need to be explained. Second, even if the firm establishes such long-term personal relationships on a selective basis, the inequity perceptions among channel members not so favored would disrupt the overall institutional stability. Such informal/alliance forms of relationships require considerable years of association; but if the relationship has already lasted a number of years, the implication is that the real reason for stability lies elsewhere. It could be argued that the particular environment of the transaction and the objectives of the firm have a large bearing on the form of institutional mechanism that is predominately used to achieve coordination. This brings us to our second research question:

What are the firm-specific and transaction-specific characteristics that facilitate the emergence of dominant patterns of institutional mechanisms for coordination among contracts, informal agreements and coalitions?
Significance of the Research

The present research aims to identify the contributing factors leading to the utilization of three important institutional mechanisms for obtaining coordination in vertical relationships in marketing channels. The focus of the study is not on the identifiable organizational structure but on the identifiable interorganizational structural properties. Rather than studying the structural aspects of the interorganizational relationship as the form the relationship assumes, viz., contractual,administered or vertical systems, this research attempts to understand the institutionalized patterns of coordination between firms. Williamson’s (1990) recent views are relevant: “...the term contract often carries unwanted legal meanings. A legalistic view of contract can deter rather than promote an understanding of complex economic organization...the substitution of the term treaty for contract brings private ordering forcefully to the fore” (p. 3-4; emphasis in the original). Further, “there is at least a possibility, however, that an interdisciplinary social science of organization - in which economics, sociology and political science are all joined - is in progress. In the degree to which the term contract is congenial to economics while treaty opens the dialogue up, added benefits could result from using the broader term. Issues of power, embeddedness, bureaucracy, coalitions and the study of political institutions are all implicated” (Williamson 1990; p. 5). The present research attempts to do justice to this view.

Institutionalized behavior is conceived to be the most important unit of analysis. The ground rules which firms adopt in order to successfully interact and exchange vary in kind as well as degree. Rather than merely study the degree to which one particular form of ground rules (or institutional mechanisms) vary in intensity, the focus is on the various institutional mechanisms available for assuring coordination between firms. To elucidate further, the transaction cost approach attempts to discretize transactions in terms of the associated costs under various contractual governance structures ranging from the simple price-quantity (market) contract to the employment (internal organization) contract. The relational approach, on the other hand, attempts to discretize the exchange relation in terms of the stability and long-term nature of the exchange under various coop-
erative (or reciprocal) governance structures ranging from the simple discrete exchange to more
organismic relational exchanges. The behavioral (or even, political economy) approach attempts
to discretize the dyadic relation in terms of inducement of some performance goal under various
power-dependence governance structures ranging from the simple balanced/imbalanced dyads to
centralized network structures.

While each perspective focuses on the same basic issue - that of getting work done - each,
nevertheless, requires different assumptions to be made about the nature of the individual and of
the firm. The transaction cost framework views the individual as being opportunistic whenever it
is feasible and profitable for individuals to be so, while the relational framework views the individual
as capable of trust and credibility. The behavioral view, however, views individuals as role players
in organizational positions, and thus, makes no special assumptions about individuals except those
stemming from their roles. The nature of the firm in the TCA framework is transactional with the
firm capable of exchange within its various departments (M-form organization) as well as with other
firms (market and bilateral contracting, and franchise bidding). In the relational framework, the
nature of the firm is an organism system capable of learning, trusting and evolving, and concerned
with reputational goals. In the behavioral framework, the firm is conceived as a social system or
even a conflict system where power considerations are paramount. While the three views are rela-
tively distinct in themselves, all three have never been studied simultaneously within one frame-
work.

This research attempts to study the variations in kinds of governance structures and the most
appropriate conditions for their existence rather than study the degree to which one particular
governance structure varies. Such a view contradicts none of the three research streams; if anything,
this research supplements the existing paradigms effectively. To give but one example, Williamson
(1991) recently argues: "...[One]...objection is that efforts to operationalize transaction cost eco-
nomics have given disproportionate attention to the abstract description of transactions as com-
pared with the abstract description of governance... The dimensionalization of both is needed" (p.
270). Also, "...hierarchy is not merely a contractual act but is also a contractual instrument, a
continuation of market relations by other means. The challenge to comparative contractual anal-

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ysis is to discern and explicate different means" (Williamson 1991; p. 271). Paraphrasing the above in terms of institutional analysis wherein the contract is merely one of many institutional means of assuring coordination, it will be evident that the description of the varied institutional mechanisms and the identification of their antecedent conditions - the central aim of this research endeavor - is indeed a worthwhile exercise.

Organization of the Dissertation

Many of the major concepts and theses have already been introduced in this chapter. The next chapter embarks on the elucidation of the problem of inter-firm coordination as well as the various perspectives on the nature and structuring of the interorganizational relation. The conceptual model is then elaborated in detail.

Since the study of institutions as well as the various institutional forms is still only in its adolescence, a specific literature review was not possible. However, insights into the various theoretical notions contributing to the development of the conceptual model are presented as a long and detailed Appendix chapter (Appendix A). This Appendix may either be read before reading Chapter II or read as and when necessary while reading Chapter II.

Details of the methodology and operationalizations for empirical validation are presented in Chapter III. Analysis and discussion of the results are in Chapter IV and the conclusions, contributions and limitations of the study form Chapter V.
Chapter II

THE CONCEPTUAL MODEL:

BACKGROUND AND ARGUMENTS

As was noted earlier, the focus of this research is on the varied institutional mechanisms available for the achievement of inter-organizational coordination. Our model building efforts are aimed on the identification of appropriate industry and market conditions as well as the firm and transaction factors that impinge on the institutional structuring of the downstream relation.

This chapter presents the conceptual model and the intellectual sources contributing to model construction. The chapter first notes the problem of coordination as well as introduces some areas wherein the classical notions of contract between firms could be expanded to include varied dimensions of the inter-organizational relation. Such dimensions include economic, strategic, relational and transactional facets of the inter-organizational relation. A brief overview of the proposed model is then presented so as to lay the foundation for a formal theory of contracts, informal agreements and coalitions. Case examples of select industries are then presented to highlight the diversity of institutional mechanisms. Finally, the proposed model is elaborated with a detailed
exposition on specific industry/market and firm/transactional factors contributing to the emergence of any one institutional mechanism among contracts, informal agreements, and coalitions.

The Problem of Coordination

Much of the recent tradition in economics, organization theory and marketing channels is concerned with the problem of assuring coordination between self-interested economic agents or autonomous firms. Given the division of labor and specialization of economic actors, the classical political economist could rely on the self-interest of the butcher, baker and the brewer to provide him with his dinner. It was assumed that markets would costlessly and efficiently enable economic agents to obtain gains-from-trade, and that the price mechanism would carry all information necessary for exchange and coordination.

The classical political economist fable is easily challenged by arguing that markets are not fairy godmothers that oversee the self-interested economic actors, lending them a helping hand in exchange and coordination. Markets, if anything, are in reality beset by transaction costs that may not only make exchanges costly and less efficient, but also at times lead to externalities that may detract markets from forming at all. It is when markets fail that the problem of coordination becomes more complex and economic agents grope for alternative structures and systems of resource allocation that would enable efficient exchanges (Arrow 1969). The problem then is to devise an institutional arrangement that involves the least cost and assures coordination (Arrow 1974; Chueng

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3 Adam Smith notes in his *Wealth of Nations*: "It is not from the benevolence of the butcher, the brewer or the baker, that we expect our dinner, but from their regard to their own interests".

1983; Goldberg 1980). The firm is one such response to market failure that enables collective action when markets and more specifically the price mechanism fails (Arrow 1974; Coase 1937).

Recent approaches in economics are involved in analyzing the microanalytics of assuring coordination (Hart and Holmstrom 1987; Holmstrom and Tirole 1989; Tirole 1988; Williamson 1985). While organizing all or most activities under an internal organization is an efficient response to the problem of assuring coordination, there are limits to vertical integration and firm size in a decentralized economy (Demsetz 1988; Tirole 1988). The search then is for an efficient contractual resolution (Hart and Holmstrom 1987).

At the same time, the long-term focus of any economic relationship is emphasized not only by economists and contract theorists, but also by organization theorists and sociologists (Granovetter 1985; MacNeil 1980a; Ouchi 1980; Williamson 1985). Such "relational" aspects of any inter-firm arrangement have found strong adherents as well as some empirical grounding within the field of marketing channels as well (Anderson and Weitz 1989, 1990; Dwyer, Schurr and Oh 1987; Spekman and Sawhney 1990). It is now argued that any exchange of a quid pro quo nature must be mediated by some form of contract - be it an explicit formal agreement or implicit informal arrangement (Anderson and Weitz 1990; Hart and Holmstrom 1987). The contract becomes an essential part of exchange whenever there is a considerable amount of time elapsing between the quid and the quo (Hart and Holmstrom 1987). However, it is also argued that due to transaction costs, contracts will always be incomplete in many respects (Hart and Holmstrom 1987; Williamson 1975). But such transaction costs are difficult to observe and measure and generally seem "slippery" and invoke mere "rationalizations" of the status quo (Chueng 1983; Fischer 1977; Goldberg 1985; Hart and Holmstrom 1987).

In general, some of the transaction costs considerations from a microanalytical contractual perspective on long-term relationships could be identified as below (cf. Hart and Holmstrom 1987; Williamson 1975, 1985):

1. The costs of anticipating the various future eventualities.

2. The costs of negotiating the specifics of dealing with such eventualities.
3. The costs of writing a contract so clearly and unambiguously that its terms can be observed and enforced by third party arbitration.

4. The costs of legal enforcement.

Consider these seriatim. The longer the anticipated duration of the relationship, the more impossible and costly is the prospect of anticipating future eventualities. A number of reasons could be advanced for such impossibility and costs, though bounded rationality and opportunism seem to be some preferred explanations (Simon 1957; Williamson 1975).

Bargaining a contract is not without its own costs (Johansen 1979). Self-interestedness of parties to a contract may not only detract from an efficient bargaining solution but maladaptations may also occur in the contract implementation stage. Again, while such maladaptations may not be easily rectifiable, ex post conditions may also change to make the gains-from-trade more favorable or unfavorable to any one party (Johansen 1979; Williamson 1975, 1985).

For the terms of the contract to be implemented by both parties and enforced by a third, knowledge should be common to both and information should clearly be communicable. However, most knowledge is idiosyncratic (Hayek 1945; Penrose 1959), and also tacit (Polanyi 1958). Besides, one party may possess more information than the other and it may be in the interest of such to withhold this information (Holmstrom 1979; Williamson 1985). The problem of enforcement is enlarged by the possibility that there is an information asymmetry not only between the contracting parties, but also between the parties and outsiders, such as courts (Hart and Holmstrom 1987). Thus, performance assessment and enforcement of contracts is often rendered impossible (Hart and Holmstrom 1987).

Finally, resort to external enforcement is not only costly for reasons mentioned above, but is also inefficient since the arbitrators or courts may often take a long time securing and assessing information before they are in a position to pronounce judgement (Galanter 1981; Williamson 1985, 1988a). Besides the judgements may not be favorable for the party seeking it; thus, there is a risk that must be borne when seeking third party arbitration (Hart and Holmstrom 1987;
Macaulay 1963). Such legal costs and risks of enforcement entail considerable investments of time and money and, in many cases, offsetting any gains from a favorable redress (Macaulay 1963).

To recapitulate, the existence of incomplete, long-term contracts is taken to be a reality and the central problem of coordination remains one of assuring coordination between rational, utility maximizing agents. Table 2.1 provides a summary of the preceding discussion along with some of the theoretical resolutions to the various contractual costs that have been considered in economics.

While economists place a primary importance on the contractual resolution of the problem of coordination, the stress in relational contracting and organization theory literature, while acknowledging transaction costs, is on building long-term relationships that are guided by trust, cooperation and commitment (Anderson and Weitz 1989, 1990; Anderson, J.G. and Narus 1990; Dwyer, Schurr and Oh 1987). It is argued that such cooperative relationships are important not only for achieving some degree of "loose coupling" and flexibility between autonomous organizations, but also for strategic reasons of facilitating efficient coordination and conflict reduction (Anderson and Weitz 1990; Granovetter 1985; Kaufman and Stern 1988).

Another important and now burgeoning school within organization theory, sociology and political science calls for the analysis of networks of organizational relationships (Benson 1975; Cook 1977; Mattson 1984; Miles and Snow 1986). It is argued that the analysis of bilateral monopoly or power-dependence aspects of only two firms ignores the larger environmental context which may constrain both firms (Cook and Emerson 1984; Nelson 1991). Thus, firms are not only interdependent but may also be linked to each other through some form of power/influence/authority mechanisms that are vested through mutual consent. Such coalitions may be formed to facilitate coordination between firms that seek to achieve some mutual strategic goals of either a short-term or long-term nature (Barnard 1937; Williamson 1990).

While a rudimentary contract between firms involved in mutual exchange may facilitate coordination, the contract, however, loses much of its scope and effectiveness in the presence of uncertainty and dependence. The longer the term of the proposed relationship between firms, the more compounded are the problems of uncertainty and the achievement of joint action between firms. In this context, the movement of exchanges away from the market and under the shelter of
Table 2.1

CONTRACTUAL COSTS AND INSTITUTIONAL RESPONSES

<table>
<thead>
<tr>
<th>CONTRACTUAL COSTS</th>
<th>RESPONSE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Costs of anticipating future eventualities</td>
<td>* Secure ex post adaptation through command or fiat</td>
</tr>
<tr>
<td></td>
<td>* Write long-term contracts that achieve an optimal balance between additional length and complexity</td>
</tr>
<tr>
<td>2. Costs of writing detailed specific contracts</td>
<td>* Write contracts that are sufficiently vague and subject to ex post changes</td>
</tr>
<tr>
<td>3. Costs of enforcing contracts through arbitration</td>
<td>* Take recourse to implicit agreements that account for self-interests</td>
</tr>
<tr>
<td>4. Costs of legal enforcement</td>
<td>* Search for alternative mechanisms that are self-enforcing</td>
</tr>
</tbody>
</table>

Source: Hart and Holmstrom (1987); Holmstrom and Tirole (1989); Macaulay (1963); Telser (1980); Williamson (1975; 1988a)
"governance" of an internal hierarchy has often been proposed (Coase 1937; Williamson 1975, 1979). But it has been argued equally effectively by critics from varied social science disciplines that the arrangement of economic activities along a continuum of markets and hierarchies is both mechanical and captures only one dimension of reality (Francis, Turk and Williman 1983; Nelson 1991; Powell 1990). Instead, due attention needs to be given to the role played by mechanisms such as reciprocity and collaborations (Powell 1990).

It is in this context, that the problem of coordination in this thesis is not posed merely as seeking an efficient contractual solution, but is seen in the broader context of management of uncertainty and dependence. The inter-organizational relation itself is perceived to be the means for achieving the twin goals of reduction of uncertainty and pursuing interdependent goals and tasks. The contract emerges as only one form of institutional response to the management of uncertainty and dependence in inter-organizational relations. While the breadth of institutional responses may vary across a broad spectrum of types and degrees, two other distinct mechanisms of organizing the inter-firm relation are the use of informal agreements and coalitions. An elaboration of these institutional mechanisms is provided in later sections after a discussion of the dimensions of the inter-organizational relation.

Dimensions of the Inter-organizational Relation

In this section, various theoretical conceptualizations from marketing, sociology, economics, organization theory and political science are integrated to demonstrate the multidimensional nature of the inter-organizational relation. It is argued that coordination between autonomous organiza-

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5 As Powell (1990) notes: "By sticking to the twin pillars of markets and hierarchies, our attention is deflected from a diversity of organizational designs that are neither fish nor fowl, nor some mongrel hybrid, but a distinctly different form" (p. 299).
tional entities has varied economic, strategic, relational and transactional concerns. Emphasis on any one concern affects the institutional response or governance structure adopted by the ex-
changing firms.

The inter-organizational relation is economic in nature since autonomous, self-interested firms engage in exchange to seek certain valued resources from each other such that each party's gains from the relationship are more than their investment in the relationship. The transactional feature of the inter-organizational relation is the provision of a governance umbrella to the exchanges by institutionalizing accepted norms of behavior that constrain the self-interested behavior of each party. The strategic aspect of the inter-organizational relation is evident from each organization's attempts at joint decision-making and collective action to obtain from the environment, resources and advantages that are shared on the basis of the relative power of each partner. The inter-
organizational linkage has a relational emphasis when organizations attempt to build a long-term focus in the relationship by foregoing immediate benefits and engaging in reciprocal actions.

Important elements of the various dimensions outlined above are provided in Table 2.2. It will be evident that while each of the dimensions is distinct, they are often found to be conjoined in reality. For example, precepts from neo-classical economics and transaction cost economics that are the origins of the economic and transactional dimensions as treated here have led to newer contractual perspectives. Such theories of firms recognize the incompleteness of contracts and the importance of governance but seek to retain the primacy of contractual relations between auton-

omous, self-interested agents. It could also be argued that the emphasis on relational exchanges and reputation-building as advanced by sociologists and relational contract law theorists could be effectively used to obtain strategic gains. The lack of an abundant theoretical base that uses a multi-disciplinary approach to the study of inter-organizational relations could be an unfortunate consequence of the development of each dimension within one Kuhnian paradigm. As Gottfredson

6 For such theories, see Grossman and Hart (1986) and an excellent review by Tirole (1988). Appendix A provides a distilled summary of these works.

7 Anderson and Weitz (1990) explicitly combine elements of relational exchanges and strategic inputs from industrial organization in their study. Again, the reader is referred to the Appendix A sections on contract law and sociology's contributions to the theories of organization.

THE CONCEPTUAL MODEL: BACKGROUND AND ARGUMENTS
### Table 2.2

**Dimensions of Interorganizational Relations**

<table>
<thead>
<tr>
<th>Economic</th>
<th>Strategic</th>
<th>Relational</th>
<th>Transactional</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Resource procurement &amp; allocation</td>
<td>* Reduction of uncertainty</td>
<td>* Building and sustaining commitments to mutual goals</td>
<td>* Governance of transactions</td>
</tr>
<tr>
<td>* Preservation of self-interest and efficient action</td>
<td>* Collective action to obtain market advantages</td>
<td>* Interests in long-term gains from reciprocal actions</td>
<td>* Economizing on bounded rationality and the risks of opportunism</td>
</tr>
</tbody>
</table>

**Institutional Responses:**

- Contractual agreements
- Coalitional arrangements
- Informal agreements
- Internal organization

**Institutional Framework:**

- Legality
- Legitimation
- Consensus
- Policy

**Characteristics of the Exchange Atmosphere:**

- Competition & Bargaining
- Power & Dependence
- Trust & Pledges
- Authority & Fiat
and White (1981) rue, "...differences in terminology, tradition and purpose have camouflaged the contributions... to understanding interorganizational behavior" (p. 471). An analytical summary of each of the dimensions is provided below in order to pave the way for elaborating a theory of contracts, informal agreements and coalitions.

The Economic Dimension

The economic aspects of the inter-organizational relation have their origins in Adam Smith's arguments for division of labor, specialization and exchange as well as in the recent emphasis on the legal aspects of exchange with focus on property rights and contractual enforcement (Grossman and Hart 1986; Klein and Leffler 1981; Smith 1776). While a detailed analysis of the contributions of microeconomics to the study of the inter-organizational relation is to be found in Appendix A, the economic dimension referred to here is largely the utilitarian view.

It is held by economists that exchanges are transactions occurring between rational and calculating self-interested actors who seek gains-from-trade by trading valued goods and commodities. The benefits derived from the voluntary exchange of goods contributes not only to individual benefits but results in social well-being as well. Thus, markets composed of atomistic units (individuals or firms) are formed and such markets enable resource procurement and economic efficiency through exchange.

Absent government intervention (at least in the pure competition theory in economics), any differences between the exchanging parties is sorted by the "invisible hand of the market mechanism" (Smith 1776). Individual self-interest is sufficient to align exchanges towards economic efficiency. However, in the contractual perspective, deviations from reciprocal exchanges are sorted by recourse to a comprehensive contract in which the promises and prices of each party are fully specified (Posner 1977). The fulfillment of such promises to the satisfaction of both parties also signals the liquidation of the contract (Lawry 1976). However, if the terms of the contract are be-
lieved to be violated by either party, the other could seek redress and remedies for the breach by appeal to a court of law.8

Thus, the economic view of the inter-organizational relation seeks to establish the problem of coordination as one of securing resources or skills while preserving the self-interest of autonomous parties to the exchange. Exchange takes place in an atmosphere characterized by competition and bargaining over the terms and both promises and performances are assured by the framework of the law.

The Transactional Dimension

The transactional approach to inter-organizational relations foresees contractual difficulties as emanating primarily from uncertainty, bounded rationality, and opportunism (Williamson 1975). It is argued that all transactions are beset by uncertainty due to the human limits on complete rational calculation and prediction (bounded rationality) as well as due to the human tendency to act in an unbridled self-interested manner (opportunism). The problem of coordination, in this view, is to adopt a governance structure that would minimize the consequences of both bounded rationality and opportunism.

Given the above view of the inter-organizational reality, internalizing costly transactions (particularly those that entail idiosyncratic non-salvageable investments and are exposed to uncertainty and opportunism) is proposed as an efficient solution to the problem of coordination. It is argued that the internal auditing mechanism of a hierarchical firm and the policy measures that could be prescribed minimize the costs of transaction and enable efficient exchanges. Costly com-

8 The vestigal roots of classical contracting in both economics and law has been the influence of Thomas Hobbes, who conceptualized the State as the absolute power over warring individuals. “If a Covenant be made, wherein neither the parties performe presently, but trust one another; in the condition of meer Nature, (which is a condition of Warre of every man against every man), upon any reasonable suspicion, it is Voyd: But if there be a common Power set over them both, with right and force sufficient to compell performance, it is not Voyd” (Hobbes [1651]/1968; p. 70).
petition and bargaining in external dealings is now replaced by the cost efficient mechanisms of authority and flat that are obtained by using an employment contract.⁹

It should be noted, however, that the transacational perspective retains the primacy of contractual analysis (Williamson 1988a). With increasing levels of asset specificity, bilateral spot contracting between autonomous firms is replaced by sequential adaptive contracts and is further displaced by vertical integration entailing an employment contract (Leblebici 1985). However, when there is only an intermediate level of asset specificity involved in the transaction, the inter-organizational relation assumes a complex hybrid structure (Williamson 1991). Such hybrid states are joint ventures, licensing, and franchising, as well as other types of coalitions or agreements (Reve 1990).

The Strategic Dimension

An early view in the development of a strategic insight of the theory of inter-firm relations is that of Schumpeter (1939, 1942). Schumpeter argues that the driving force behind the market system is not efficiency but innovation (Schumpeter 1942). Innovation is seen as the setting up of an altogether new relationship between the resources available to the firm; in short, the setting up of a new production function (Schumpeter 1942). Such innovation contributes to a creative destruction that constantly revitalizes the economic structure due to the actions of the firms that are capable of anticipating change and seizing their opportunities (Schumpeter 1942). Thus, the firm is portrayed as a strategic agent that overcomes competition and environmental constraints by innovation and accumulation (Schumpeter 1942).

While Schumpeter does not examine inter-firm coordination in great detail, his precepts can be invoked in the identification of a strategic dimension of the inter-firm relation with due emphasis

⁹ Transaction Cost Economics is elaborated in detail in Appendix A.
on the discretionary behavior of firms (Nelson 1991). The key facets of such a strategic view are
the reduction of uncertainty and obtaining market advantages by a pooling of resources by strate-
gically oriented firms. While such strategic resources could be obtained through acquisitions,
mergers and joint ventures (Pfeffer and Novak 1976), autonomous firms may still pool their re-
sources without tremendous loss of control by forming alliances and coalitions.

The Relational Dimension

The relational dimension stresses a long-term perspective to market relations. Specifically, it
is argued that the short-term discrete transaction is a fiction and that in reality all relationships have
at least some continuity. However, such continuity is assured when parties to the relation form
organismic solidarity through the development of supranorms that guide their behaviors (MacNeil
1980a). Such supranorms could be customs or traditions or social relationships that overlap with
the economic relation in complex ways (Granovetter 1985). Weak ties between firms still enjoy
committed behavior due to trust, cooperation and considerations of reputation (Granovetter 1985;
Macaulay 1963).

Relational goals emphasize relational continuity by stressing forbearance and foregoing
short-term self-interest seeking. Mutual interdependencies are enhanced and entrenched in an at-
mosphere of reciprocity and cooperation. Firms cooperate since it is economically profitable to
do so, and despite economic inefficiencies, there could be a clear enhancement of economic per-
formance (Dore 1983).

While the dimensions presented herein are only analytically distinct due to their development
within varied fields of social sciences, it could be argued that in reality, these dimensions themselves
are conjoined in complex ways. A better understanding of the inter-firm relation results when the
dimensions are combined in theoretically meaningful ways. Such an integrated perspective is the source of theorizing in this study.

The General Model

One primary argument of this thesis is to demonstrate the historical evolution of institutional mechanisms within the context of any industry. It is argued that governance can best be understood only at the level of industries and industrial sectors, and inter-industry difference should also account for differences in governance structures (Caves and Porter 1977; Goldberg 1980; Lindberg, Campbell and Hollingsworth 1991; Powell 1987, 1990). At the same time due importance is given to the rational selection of an institutional mechanism (Nelson 1991, North 1990). Thus, it is argued that the emergent institutional structure is a historical product of environmental and rational selection.

In our conceptual model, industry or environmental characteristics as well as discretionary firm behavior are both conjoined to predict the emergence of a predominant institutional mechanism within any industry. Institutional mechanisms are taken to be the systems of rules, procedures and norms that constrain or prescribe action and allow social control (March and Olsen 1989; North 1990). While a host of alternative formal and informal institutional mechanism may be recognized across firms and industries, our emphasis is only on three major institutional mechanisms that can be readily discretized. Further, it is argued that a specific combination of industry/market characteristics and firm/transaction factors play an important role in determining the dominant institutional mechanism being used to structure the inter-organizational relation.

It is assumed, following Lindberg, Campbell and Hollingsworth (1991), that each industry is a complex matrix of interdependent social exchange relationships that must occur among organizations. Further, the economic relation between business firms is embedded in the broader social
context (Granovetter 1985). Also implicit in our model building efforts is the notion that given the economic, social, technological and political constraints, exchanging firms would rationally select the institutional mechanism that leads to effective inter-organizational coordination.

The stage is now presumably set for a detailed elaboration of the conceptual model and its logical underpinnings.

The Conceptual Model

In our model building efforts, we seek to identify the particular sets of industry/market and firm/transaction factors that would predict the utilization of any one discrete institutional mechanism. As noted earlier, the institutional mechanisms studied are contracts, informal agreements and coalitions. Our discussion of the model starts with a detailed comparative analysis of contracts, informal agreements and coalitions, followed by case examples of various industries wherein the traditional formal detailed contract between business firms is more the exception than the norm. In the next few sections, the institutional mechanisms of contracts, informal agreements and coalitions are discussed in detail, following which the antecedent conditions to the emergence of any one form of institutional mechanism is elaborated in a propositional framework.

Contracts, Informal Agreements, and Coalitions

As discussed in the preceding chapter, use of the institutional mechanism of a legalistic contract to structure the inter-firm relation is characterized by detailed planning and specification of complex working rules that are formal and written. The legal aspects of the relation enjoy primary
importance. Detailed planning occurs on all relevant functional aspects and future contingencies with respect to variations in price, quantity and quality. The contractual arrangement is also a way of avoiding the direct and separate pricing of various activities (Coase 1937). Important duties and obligations are specified as complex working rules that are used to guide performance (Leblebici 1985). Obligations are enforced by credible threats of legal sanctions and the formality of the contract is underscored by resort to written, formal communication. Complex contingent contracts are long-term in nature and specify (i) unanticipated disturbances requiring adaptation, (ii) tolerance zones in terms of price and quantity adjustments within which misalignments can be adjusted, (iii) requires information disclosure and substantiation in the event of adaptation, and (iv) provides for arbitration when the contractual specification is not in consensual agreement (Masten 1985; Stinchcombe 1985; Williamson 1991).

Informal agreements, as noted earlier, are implicit understandings that are devoid of detailed planning and prediction of consequences and are enforceable not by legal sanctions but by the norm of reciprocity and reputational concerns (Gouldner 1960; Macaulay 1963). Extensive use of informal agreements in the inter-firm relation is characterized by limited or no formal rules, absence of legal threats and legal sanctions, very limited attention to detailed planning, flexibility and adaptation, extensive use of promises ("a man's word"), informal communication ("a brief letter, a handshake"), and pledges and guarantees (Anderson and Weitz 1990; and Macaulay 1963). Such informal agreements persist even when the relation is exposed to serious risks (Anderson and Weitz 1990). There is a high degree of trust and cooperation, and actions are guided by concern for business reputation, and reciprocity (Macaulay 1963). Disputes rarely arise, but when they do they are either suppressed or ignored or dealt with casually for the sake of preserving the long-term relation (Macaulay 1985).

Coalitions are networks of authority and communication between two or more firms so that either market or individual firm planning gives way to relatively centralized planning and control of activities of other firms by a dominant firm that possesses negotiated power. Sovereignty is surrendered along with some diffusion of power and parties accommodate their partially conflicting interests to secure a common ground (Trist 1983). In contrast to the predominantly contractual
forms, collaboration rather than competition is the basis for negotiated order and the value base for recognizing mutual interdependence (Trist 1983). Frequent recourse is made to the referent organization (or leader firm) as to the specification of tasks, analysis of situations, recommended courses of actions and for arbitration. The referent organization performs the important tasks of (i) regulation of the relationship and the activities, (ii) establishment of common ground rules and maintaining base values, (iii) provision of infrastructure support in terms of resource and information sharing, etc. (Emery and Trist 1965).

A comparative analysis may best identify the varied properties of contracts, informal agreements and coalitions and highlight their discriminating characteristics. Such a comparative analysis, elaborated in detail below, is summarized as Table 2.3.

**Primary Motivation**

The primary motivation for the use of contracts is the preservation of self-interest in exchange. Economic actors may be motivated towards preserving their autonomous status and, guided only by self-interest, they seek valued resources from each other in an atmosphere of self-imposed sanctions. Thus, private parties act in a legislative capacity and establish for themselves, a form of private law that dictates the terms of the trade and conditions of contractual performance (Farnsworth 1969). A form of economic voluntarism results wherein individualized economic planning is voluntarily organized to provide a structure to the relationship (Lawry 1976). The primary benefits of such an arrangement lie in its clear definition of promises and obligations; its scope for autonomous actions; and, in the guaranteed enforceability of commitments (Kronman and Posner 1979).

Informal agreements, on the other hand, are motivated by a long-term realization of gains. Parties may believe that private bargaining detracts from efficiency and may be motivated towards structuring a relationship so as to permit recurrent trading over a long period of time. It may be
### TABLE 2.3

**CONTRACTS, INFORMAL AGREEMENTS, AND COALITIONS**

*Comparative Properties*

<table>
<thead>
<tr>
<th>Contracts</th>
<th>Informal Agreements</th>
<th>Coalitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Motivation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Preservation of self-interest</td>
<td>* Realization of future gains</td>
<td>* Securing competitive gains</td>
</tr>
<tr>
<td><strong>Nature of Coordination:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Market (Price and Quantity)</td>
<td>* Cooperative (Trust)</td>
<td>* Directed (Authority)</td>
</tr>
<tr>
<td><strong>Form of Power:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Bilateral</td>
<td>* Colateral</td>
<td>* Unilateral</td>
</tr>
<tr>
<td><strong>Conflict Resolution:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Bargaining</td>
<td>* Reciprocity</td>
<td>* Administration</td>
</tr>
<tr>
<td><strong>Agent’s Preferences:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Independent</td>
<td>* Interdependent</td>
<td>* Dependent</td>
</tr>
<tr>
<td><strong>Bonding Mechanism:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Contractual Duties</td>
<td>* Pledges &amp; Guarantees</td>
<td>* Dependency</td>
</tr>
<tr>
<td><strong>Enforcement of Obligations:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Litigation</td>
<td>* Reputational Concerns</td>
<td>* Arbitration</td>
</tr>
<tr>
<td><strong>Decision Structure:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Formalized</td>
<td>* Participatory</td>
<td>* Centralized</td>
</tr>
</tbody>
</table>

*Constructed from ideas and concepts from Anderson and Weitz (1992); Bradach and Eccles (1989); Hall (1962); Hage and Aiken (1967); Macaulay (1963); Powell (1990); and Richardson (1972).*
believed that a commitment to one trading partner may result in long-term efficiencies and that deviations from an explicit structure to the relationship would foster flexibility and contingent adaptability (Arrow 1969; Macaulay 1963).

When strategic gains are perceived to be of primary importance, trading parties may form a coalition to gain collective and competitive advantages (Porter and Fuller 1986). Such coalitions may be of a short duration or may be long-term in nature; however, the emphasis is on pooling specialized skills and resources to obtain advantages from the environment. The benefits of coalitions are the promotion of a collective interest while at the same time, preserving autonomy through respect for self-interest.

**Nature of Coordination**

In contractual arrangements, coordination is across a market interface; individual firms may seek the best gains-from-trade and exchange with partners that are able to guarantee this. The major mechanism of coordination is through specifications of price and quantity. Such specifications enable the contracting parties to plan their own activities within their firms (Macaulay 1963). In certain cases, quality specifications may be made in detail; however, such specifications are made more in the context of product description than in the context of competitive bidding. For example, firms may only in rare instances award a contract to a supplier purely on the basis of a ranking of quality assurance of the bids.

In informal agreements, cooperation is the logic as well as the rule. Firms trust one another to adhere to implicit or explicit promises and such trust provides the basis for confident predictions necessary for firm-level planning (Luhmann 1979). Trust can be viewed as an extremely effective lubricant in economic systems (Arrow 1974). Coordination is more ad-hoc in nature with the initial agreement being only a reference point and the gaps in planning deliberately unfilled for future

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10 "It saves a lot of trouble to have a fair degree of reliance in other people's word" (Arrow 1974; p. 23).
adaptations that would ensure relational continuity (Lorenz 1988; Macaulay 1963). The cooperative relation is characterized by forbearance (refrains from cheating) between trading partners whose identities clearly matter, and, an explicit recognition of mutuality of benefits (Buckley and Casson 1988; Lorenz 1988; MacNeil 1980a).

In coalitions, however, coordination is assured by rules or norms of conduct that are designed to preserve the relation. Inter-firm behavior stems through the directives of a firm that is elected leader. The hierarchical advantages of standardization of processes, products and routines are explicitly negotiated and stability is sought through shared norms and rules\(^{11}\) (Lindberg et al 1991).

**Form of Power**

Inter-firm power can be viewed as the operational control over the activities of another firm\(^{12}\) (Mintz and Schwartz 1985). In contractual arrangements, power is bilateral in that ex ante each party can negotiate control over activities and terms (MacNeil 1980b). However, during contract execution, this bilateral power is split into two pieces of unilateral power whereby the party that performs first is now released from the application of unilateral power by the other (MacNeil 1980b). For example, when the seller delivers a particular good, her unilateral power of imposing sanctions for failure to pay remains intact, while the buyer can no longer apply his unilateral power of imposing sanctions for failure to deliver (MacNeil 1980b). However, bilateral power is restored when the buyer performs his obligations. Thus, the contract could be viewed as an instance of conferring bilateral power on the parties adhering to it (MacNeil 1980b).

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\(^{11}\) Franchises are an interesting form of organization and have yielded to considerable theoretical exposition on their nature, scope and rationale. While the economic view underscores franchising as leading to enhanced incentive benefits and reduced costs of monitoring (Rubin 1978), the transactional view emphasizes the protection of property rights through credible commitments of the franchisor (Williamson 1983), if the organizational properties of coalitions were made the explicit focus of inquiry, franchising may be viewed as a form of vertical coalition assured, albeit, through contractual guarantees.

\(^{12}\) Control could be strategic when it is exercised from outside or directed towards the control of the environment. Another form of control is hegemonic control in which one firm’s actions may determine the viable choices available to other firms (Gramsci 1971).
In the case of informal agreements, by contrast, power is co-lateral since parties recognize the importance of mutual performance and restraint from the use of power. Violation of the commitment is not of explicit concern since the parties trust each other; however, even if there are problems with performance, unilateral power is shelved in favor of internal conflict resolutions (Macaulay 1963; MacNeil 1980b). Moreover, there is an explicit focus on the creation and management of interdependencies (Dwyer, Schurr and Oh 1987; MacNeil 1980a; Scanzoni 1979).

In the case of coalitions, unilateral power is explicitly conferred upon one firm or a group of firms. Such unilateral power, however, is acquired only through the consent of other parties in the coalition (Trist 1983).

**Conflict Resolution**

In the case of contracts, there is clear recourse to both ex ante and ex post bargaining. While ex ante bargaining is over the terms of the contract, ex post bargaining is over performance and is usually accompanied by credible threats either of imposing legal sanctions or termination of the relationship (Klein and Leffler 1981). Conflicts and disputes are resolved either through a form of private ordering that is negotiated within the terms of the contract or by seeking third-party arbitration in the form of adjudicators and courts (Galanter 1981; Leff 1970; Lieberman 1981).

In the case of informal agreements, the stress is more on the norm of reciprocity. It is believed that such norms of mutuality and reciprocal actions would guide the parties to an effective resolution in the case of conflicts (Gouldner 1960; MacNeil 1980a). Since the relationship is envisaged over a long-term horizon, immediate conflicts may go unresolved or resolved through recourse to industry norms (Macaulay 1963). Calling for modifications of contract law based upon empirical realities, Macaulay notes:

"There are business cultures defining the risks assumed in bargains, and what should be done when things go wrong. People perform disadvantageous contracts today because often this gains credit that they can draw on in the future. People often renegotiate deals that have
turned out badly for one or both sides. They recognize a range of excuses much broader than those accepted in most legal systems" (Macaulay 1985: p. 467-8).

In coalitions, conflicts are resolved through administration. The more powerful or central firm acts as an arbitrator of disputes and advocates guidelines for action and resolution. Private ordering and privately organized mechanisms of disputes is the norm rather than the exception since parties recognize themselves as partners for a collective good (March 1962).

*Agent's Preferences*

In contracts, the preferences of the agents are independent of each other and are exogenous to the contract.\(^\text{13}\) Each party attempts to fulfill its own self-interested aims through an interlocking of choices with those of the other party (Stigler and Boulding 1952).

In informal agreements, however, preferences are interdependent in that each party may change its own beliefs and interests to preserve mutuality. Such preferences are modified through common knowledge and experiences (Contractor and Lorange 1988).

In coalitions, preferences of agents are partly dependent on the leader firm. The leader usually inculcates a transformation of preferences but may also be susceptible to transformation by those of followers (Selznick 1957). In the context of political coalitions, March and Olsen observe, "The leadership role is that of educator, stimulating and accepting changing worldviews, redefining meanings, and exciting commitments" (March and Olsen 1989: p. 163). Preferences are pooled in a manner that produces collective choice as the weighted average of individual preferences (March and Olsen 1989: p. 151).

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\(^{13}\) In economic analysis of contracts, it is assumed that preferences do not change as a result of contract implementation. For example, if I buy a pair of X brand shoes and these turn out to be of poor quality, I would seek redress. However, my preferences for the criteria that rated X brand shoes will remain unchanged even when buying the next pair of shoes. It is readily observed that such a view is inconsistent with reality. For some criticisms of the treatment of preferences in economic science, see Duesenberry 1960; Elster 1979, 1983, 1989; and Sen 1983.
Bonding Mechanisms

In contracts, the bonding mechanism is primarily the specification and execution of contractual duties. Contractual obligations serve to ensure commitment by the exchanging parties (MacNeil 1980a).

In informal agreements, however, pledges and guarantees are extensively used (Anderson and Weitz 1990). Obligations are more in the form of promises than an elaboration of rights and duties. Commitment emerges as a pledging of resources and promise of performance (Williamson 1986). As Anderson and Weitz observe: "...pledges, by aligning incentive structures to the parties' outcomes together, convert competitive (win-lose) relationships into cooperative (win-win) relationships" (Anderson and Weitz 1990; p. 7).

In coalitions, there is an asymmetric dependency relation that serves as the bonding mechanism. Firms in the coalition are dependent on the leader firm for resources, leadership, rule making and administration (Benson 1975). Autonomy is forsaken for eliciting gains through collective action.

Enforcement of Obligations

Enforcement of obligations in contracts, while guided by self-interests and voluntary action, is guaranteed by litigation. "Law supports needed interdependence by coercing us to honor obligations to others" (Macaulay 1985; p.467).

In informal agreements, reputational concerns are paramount. Primarily, these concerns arise as a recognition of interconnectedness of business dealings. Thus, one's performance in present dealings colors the reputation for future performances not only within the present relation but also in future business dealings (Macaulay 1963). The bonding achieved is primarily social in nature, though such social sanctions have profound economic consequences. As Macaulay notes: "Social
fields cutting across formal lines exist....creating rich sanction systems....Social networks serve as communication systems. People gossip, and this creates reputational sanctions" (Macaulay 1985; p.468).

In coalitions, by contrast, enforcement of obligations is assured by the arbitration of inappropriate actions and behavior. The criterion is one of determining appropriate routines, sets of rules to be followed or the appropriate course of action that should be taken (March and Olsen 1989). Due to the dependency of preferences, such enforcement occurs not post-facto but before action. Relevant rules are invoked for appropriate action (March and Olsen 1989).

Decision Structure

In contracts, there is a detailed specification of routines and procedures from which decisions are taken or evaluated. Such routines or procedures are anticipated in advance and the decisions taken logically flow from these. The decision structure is formalized in that written rules and codes of conduct are readily available (Hage and Aiken 1967; Hall 1962).

In informal agreements, the cooperative form of the relationship is underscored by participation of one and all in the decision system. Ideas, opinions and outlooks are frequently exchanged informally and the decisions evolve from a collective pooling of cognitive skills (Buckley and Casson 1988).

In coalitions, by contrast, information is frequently exchanged but the decisions are taken by a leader or an elite few. Participation occurs at the stage of inputs to decision-making but the decision-making structure itself is a centralized body (Hall 1962).

The next section illustrates a few case examples of the existence of contractual relations, informal agreements and coalitions in various industries.
Case Examples

*The Contractual Organization of the U.S. Automobile Industry*

The U.S. automobile industry is a case example of the prevalence of short-term, adversarial, and arms-length contracting (Helper 1991; Helper and Levine 1991). Helper and Levine (1991) demonstrate that even as recently as 1985, U.S. automakers and their suppliers had a short-term perspective on their relations such that in the case of disagreements, instead of explicitly resorting to conflict resolution and cooperation, they would just leave. They argue, using Hirschman's (1970) exit and voice terminology, that Japanese automakers had a cooperative or "voice" form of relationship with their suppliers but the U.S. automakers had an adversarial or "exit" form of relation with the suppliers.

As Helper and Levine (1991) further observe: "...U.S. relationships with outside suppliers were for decades characterized by exit; the response to a problem with a supplier such as rising costs or declining quality was to switch to another supplier. To maintain a credible threat to terminate a relationship, the U.S. automakers typically employed many suppliers per part, negotiated only short-term contracts, and communicated very little with their suppliers" (p. 3). Linking input-market (supply) contracting decision to the final-product market structure, it could be argued that the U.S. automakers' choice of short-term contractual relations was a response to the oligopolistic structure of the industry and to the costs of shutting down production (Clark 1989; Helper 1991). Prior to the new competition from Japanese automakers, the U.S. automakers reaped oligopolistic profits. Exit relations reduced the suppliers' ability to bargain for a share of such profits (Helper 1991). Moreover, a typical model of automobile may require around 5000 inputs, and a "strike" or even a slow response to a problem or delivery by the supplier could result in as high as a million dollar expense in the costs of shutting down production (Cline 1978). A supplier clearly aware of his/her monopolistic status could be very credible in threats and very effective in "strikes" (Helper
Thus, potential "hold-up" problems by suppliers were clearly sought to be eliminated through credible threats of termination (Klein 1980; Klein and Leffler 1981; Williamson 1983).

**Informal Agreements between Rail-Freight Carriers and Shippers**

The arrangement between rail-freight carriers and shippers is an example of informal agreements that are utilized in an industry to avoid inefficient government regulation (Palay 1985). The Interstate Commerce Act (ICA) imposed formal rate tariffs on the railroad industry whereby a particular commodity or class of commodities were to be moved at a designated price without regard to volume incentives for any one shipper (Palay 1985). Thus, shippers had neither the incentive nor the obligation to commit themselves to any one railroad or even to use the rail service (Palay 1985). A further restriction was placed on the railroad's service terms by the stipulation of uniform service standards for every rate tariff (Palay 1985).

In this regulatory environment, some contracting difficulties were clearly perceptible (Palay 1985):

1. The problem of lack of shipper's commitment especially for shipments that entailed investment in customized rail cars and equipment thereby exposing the rail carrier's investments to the risks of opportunism by shippers.

2. The problem of providing flexible service due to regulatory constraints made it especially hard for shippers to obtain dependable service or offer incentives to ensure on-time services.

3. Since the tariff imposition itself was characteristic of a spot market transaction with no long-term contract impositions, there were no incentives to develop long-term relations of the sort that are required "to support transactions involving idiosyncratic investments" (Palay 1985; p. 162).
In order to circumvent the problems imposed by a regulatory environment, Palay (1984; 1985) found that informal contracting was used by the parties such that it complemented the ICA rail tariffs effectively and served to align the obligations of the shipper and the carrier to be of the same scope and duration. The "informal, legally unenforceable agreements" provided "...some price flexibility and, more important, helped to arrange, implement, and monitor contractual safeguards. The informal agreements were 'handshake' understandings between the shipper's transportation division and the railroad's marketing or sales department" (Palay 1985; p. 164). Thus, such informal agreements enabled the shippers and the carriers to adapt the existing governance structure imposed by the ICA to the requirements of complex rail-freight transactions (Palay 1985; p. 167).

**Informal Agreements and Coalitions in the Sicilian Mafia**

Any *mafia* is a unique example of a case where a generalized absence of trust and mechanisms of reinforcing distrust yield a relatively stable social structure (Gambetta 1988b). The emergence of the mafia could be traced to the "absence of credible or effective systems of justice and law enforcement" and to the conditions of economic backwardness that reinforce an attitude of prevailing over one's rivals in the same trade or industry (Gambetta 1988b). In such conditions people tend to cluster in groups involving deep-rooted personal ties and take refuge behind powerful and respected people who offer them not only promises of justice but also protection from injustice and harmful actions from rivals (Gambetta 1988b). The mafia turns distrust into a profitable business by relentlessly and in, necessary instances, violently, searching exclusive monopolistic business interests (Gambetta 1988b). The mafia thus, is a coalition of local monopolies that cooperate at certain times, and ignored each other or fought violently at others (Gambetta 1988b).

The mafia elicits cooperation by using a combination of four mechanisms (Gambetta 1988b; Williams 1988):
1. **Coercion.** Fear of sanctions and force of constraints compel people living under the influence of a mafioso network to adhere to its codes. The ability to use violence serves as a credible threat.

2. **Interests.** Cooperation with the mafioso network may allow for the opening of scarce opportunities for furthering one's economic interests.

3. **Values.** For cultural, moral or religious reasons, people may believe that cooperation is good irrespective of the sanctions and rewards.

4. **Personal bonds.** Personal bonds of kin or friendship are often used to minimize distrust and elicit cooperation.

Thus, the satisfaction of economic interests, credible threats of violence, and personal bonds ensure the stability of the mafia as a coalition of local monopolies in a turbulent environment (Gambetta 1988b).

**Coalitions in the Construction Industry**

The construction industry represents a case where inter-firm organization of activity is primarily achieved through subcontracting (Eccles 1981). The loose coupling of the various tasks involved in construction and the project nature of any construction tasks preclude the formation of a well-diversified hierarchical firm (Eccles 1981). At the same time, market contracting involves very high transaction costs since for every construction project, a contractor would have to solicit bids from a number of subcontractors for each task or trade and negotiate contracts with each of them (Eccles 1981; Williamson 1979).
The problems inherent in both market contracting and integration are resolved in the construction industry by recourse to a "quasi-firm" (Eccles 1981). Contractors and subcontractors form a bilateral structure (a coalition) that enables them to engage in recurrent transactions (Eccles 1981). Some degree of adaptability is built-in since the terms of the relationship could be renegotiated for each new project (Eccles 1981). In the empirical study of residential construction in Massachusetts, Eccles (1981) found that despite increases in number of projects in a year, the contractor would not employ more than two or three subcontractors for the same trade.

**Coalitions in the Book Publishing Trade**

The book industry is a case where there is a predominance of social networks which underscores the economic relationship between publishers, editors and authors (Coser, Kadushin and Powell 1982). In their jobs with publishing houses, editors enjoy complete freedom and autonomy in their acquisition and nurture of authors while retaining corporate support for financing, sales and distribution (Powell 1990).

Arguing that such personal networks and bonds of allegiance are more the norm than the exception, Powell (1990) notes, "In trade and scholarly publishing, much of the time editors behave as if they are optimizing not their organization's welfare, but the welfare of the social networks to which they belong. In scholarly publishing, editorial research and evaluation relies extensively on personal networks, which are based on loyalty and friendship, cemented over time" (Powell 1990, p. 307).
Coalitions in the Hollywood Film Industry

The Hollywood film industry is characterized by recurrent small-numbers contracting between the producers, directors, actors, cinematographers, and musicians (Faulkner and Anderson 1987). "Distinct networks crystallize out of a persistent pattern of contracting when particular buyers of expertise and talent (film producers), with given schedules of resources and alternatives, settle into self-reproducing business transactions with distinct (and small) sets of sellers (directors, cinematographers, and fashionable actors and actresses)" (Faulkner and Anderson 1987; p. 907).

Coordination takes place through feedback while encouraging leeway and discretion (Faulkner and Anderson 1987). Moreover, "...power is diffused in uneven ways; those having power are responsive to the expertise needed to guide the solutions at hand and attentive to the availability of people with proved capabilities and performances" (Faulkner and Anderson 1987). Recurrent contracting is ensured through each successive credit earned by the "sellers" and each money-earning production enhances the chances of future contracting.

The above case examples are only a representative sample of the tremendous diversity of institutional mechanisms of coordination. Some other examples include:

(1) The diamond industry where high value goods are exchanged on the basis of kin, friendship, loyalty and allegiance, without even the faintest enforceable contract (Ben-Porath 1980).

(2) The organization of industry in Japan into moralized trading relationships of mutual goodwill, reciprocity, and relational contracting (Dore 1983; Hiroshi 1982).

(3) The sharing of R&D resources and personnel through long-term, stable relationships in Sweden, where coalitions of firms compete with other coalitions on the basis of product development and knowledge accumulation (Hakansson and Johansson 1988).
Institutional Persistence and Efficiency

While the above examples by themselves do not constitute empirical proof for the existence of diverse institutional mechanisms, they clearly serve to demonstrate the following:

(1) Non-market, non-hierarchical institutional arrangements are able to sustain cooperation over the long run (Powell 1990).

(2) Many economic relationships are tempered by reciprocity and trust, and are embedded in a matrix of personal and social ties (Granovetter 1985).

(3) As the case of Japan illustrates, the dynamics of trust and relational exchange, though involving a loss of allocative efficiency, contribute more often than not to enhanced economic performance (Dore 1983).

(4) Finally, institutional arrangements arise as contingent and historical responses to the social and economic conditions present within any industry or cultural context (Lindberg, Campbell and Hollingsworth 1991).

The new institutional economics argues that efficient institutional arrangements are adopted with foresight and rationality and competition serves to eliminate the inefficient institutions (Williamson 1985). However, institutional persistence is more complex than any efficiency explanation may resolve; in fact, suboptimal institutions do persist and inefficient institutions may be subscribed to by rational individuals (Akerlof 1976; Zucker 1986). With respect to the evaluation of comparative modes of governance, the new institutional economics exhibits an air of "optimistic functionalism, a mode of explanation whereby outcomes are attributed to their beneficial consequences" (Kuran 1988; p.144). Instead, Kuran (1988) highlights instances of collective conservatism, an attachment to the past choices made on the part of society as a whole. Such collective conservatism may be attributed to the impact of bounded rationality on the individual's and collectivity's evaluation of new choices. In fact, Heimer (1983, 1986, 1988) gives instances of such collective conservatism in administrative procedures, traditions, and scientific paradigms. Also,
Akerlof (1976) demonstrates how a caste system may be perpetuated by rational individuals fearing ostracism if such norms were not followed.

Such instances of institutional persistence are found in industrial relations as well. Goldberg (1974, 1976) gives instances of the stability of supply contracts even when changing conditions make them less efficient. Thus, a contract $A$ negotiated at time $t$, may persist through the changed conditions of time $t + 1$, even though efficiency considerations may warrant for a new contract to be negotiated. The lethargy of U.S. automobile makers towards institutional change is a case in point. Despite increasing external competition, the U.S. automobile manufacturers did not deviate from their inflexible styles of mass production, hierarchical modes of organization and stringent contractual relations with suppliers and dealers (Helper 1991; Nelson 1991). Such differences may be attributed to the discretionary behavior of firms in the U.S. context, but it could also be argued that a contribution is made by contextual differences as well. For example, in the U.S., the government attitudes towards inter-firm cooperation is one of suspicion while in Japan, the government explicitly fosters such relationships despite the effects of ‘locking-in’ businesses to the detriment of competition (Dore 1983; Hiroshi 1982; Nelson 1991).

This thesis does not support efficiency as a preferred mode of explanation for institutional choice or persistence. Instead, arguments of effectiveness are invoked, with such effectiveness seen as the adaptability of an organization to its environment (Yuchtman and Seashore 1967). Any institutional mechanism that enables the organization to adapt with the environment is an effective institutional mechanism regardless of inefficiency of outcomes. Moreover, institutional differences are explained as arising from differences in context and institutional choice is a response to the idiosyncratic set of environmental forces and discretionary action.

In the next section, we introduce the antecedents contributing to the institutional mechanisms of contracts, informal agreements, and coalitions. These antecedents will be the exogeneous variables in our model building efforts.
Contributing Factors

As discussed earlier, the contributing factors to the prevalence of any institutional mechanism could be seen as a combination of industry/market influences and firm/transaction characteristics. Figure 1 represents the conceptual model that is elaborated below.

Use of Detailed Contracts

Contracts are written promises about future performances by the parties to an agreement and are legally enforceable by a court of law. The major aspects of a contract are the specifications of the promises, assignment of liabilities, damages in the event of injury, and to an extent, some specification of contingent claims. We argue that detailed contracts will be used when the industry and market are characterized by a high extent of regulation of the product market, and when the product complexity is high. Detailed contracts would also be favored when transactions involve a high degree of asset specificity and when there is a high intensity of behavioral uncertainty.

Product market regulations

A high degree of regulation in the product market exposes the firm to the risks of liability claims. From his preliminary findings, Macaulay (1963) found the gains of contract outweighed the costs involved in planning and executing the contract, when there is a potential liability of large losses to the buyer or seller arising out of product malfunction. Such losses would be especially large for the buyer when the market is highly regulated by consumer protection and product safety laws. In order to absolve itself of the liability of the distributor’s negligence or opportunism, as well from the liability arising from consumer ignorance, injury or spite (Leff 1970), the firm would protect itself from downstream legislative actions by resorting to a detailed and well specified contract on liability and damages. Such a contract also serves the interest of the downstream firm(s) since there is now a clarity in terms of duties and responsibilities of both parties.
Figure 2.1: CONTRACTS, INFORMAL AGREEMENTS AND COALITIONS - A Model of Contributing Factors
In regulatory environments, there is a complex interplay of forces affecting the behavior of exchanging parties who stand to gain or lose from different types of regulatory interventions (Joskow and Rose 1989). In such instances, bargaining over the terms such as price and entry will be carried out by exchanging parties. It is argued by Williamson (1985), that parties seeking self-interest under conditions of risk and uncertainty would seek to secure their relationship under a governance umbrella. Such risks and uncertainty are increased under a regulatory environment wherein various political, regulatory and legal groups are capable of affecting processes and outcome (Joskow and Rose 1989). Suitable safeguards may involve resorting to vertical integration since employee duties, obligations and sanctions are more clearly enforceable by the law (Masten 1988). However, vertical integration entails investments available only to a few (Powell 1990).

Moreover, long-term contracts are relatively stable provided they do not entail interpretational or realignment problems (Baird 1990). Such problems may be solved by resorting to detailed specifications and planning of contingencies in the contract (Williamson 1990a). Thus, under conditions of high product market regulations, detailed and well-specified contracts are likely to emerge.

Product complexity

Product complexity refers to the technical complexity of the product. Complex products require detailed technical specifications in their manufacture and marketing. Understanding such specifications requires considerable training and other related investments by the firm, that need to be recovered over time. Use of detailed and specified contracts in such cases serves to commit both parties to the relation (cf. Macaulay 1963). A fairly detailed contract also serves as a communication device in that the firm's production, engineering and financial departments would now be guided by the requirements of the market (Anderson 1982; Macaulay 1963).

When the final product quality cannot be completely and objectively specified, the contract provides the firm with important inspection and monitoring rights of the process as well as the
product of the intermediary firm\textsuperscript{14} (Norton 1988; Rubin 1978). While Williamson (1975) argues that internal organization provides superior auditing rights, contractual commitments may serve to provide the firm with the needed flexibility in the marketing of a range of products. The complexity of the product may detract from one person's acquisition of all relevant product knowledge and in the integrated firm, a multidivisional sales force may be needed, thereby increasing marketing costs to prohibitive levels (Teece 1981). However, use of detailed, long-term contracts with specialized marketing intermediaries provides not only the needed marketing skills at a cheaper cost but also provides intermediaries with incentives for commitment to a particular firm.

The complex nature of the product also detracts from tacit or informal agreements (Passer 1953). Explicit agreements are reached by lengthy and elaborate processes (Passer 1953; Scherer and Ross 1990). Detailed contracts are, thus, more likely to emerge under conditions of product complexity.

\textbf{Behavioral uncertainty}

Behavioral uncertainty refers to the problems in the assessment of the agent's performance (cf. John and Weitz 1988). For Williamson (1985; p.58), this uncertainty is of a strategic kind and is attributable to opportunism. However, even without the explicit assumption of opportunism, it could be argued that in many exchanges, the difficulties in performance evaluation warrant the adoption of a control strategy that is behavior-based, especially when tasks could be easily programmed (Eisenhardt 1985; Ouchi 1979). The possibility of programmability of tasks also implies that performance specifications can be readily incorporated into a legally-binding contract. Behavioral uncertainty poses particular contractual difficulties when transactions are beset by exogenous disturbances. Such exogenous disturbances occur when there are long lags between the agent's actions and the market response (cf. John and Weitz 1988). Due to the time lags, it becomes difficult to identify the actions responsible for the observed outcomes (John and Weitz 1988). In

\textsuperscript{14} As far back as 1921, Frank Knight had noted: "With human nature as we know it would be impracticable or very unusual for one man to guarantee to another a definite result of the latter's actions without being given power to direct his work. And on the other hand the second party would not place himself under the direction of the first without such a guarantee. The result is a 'double contract'..." (p.270).
such cases, it would be difficult to assess whether the contractual obligations have been met. Thus, monitoring and information systems (such as supervision, accounting, and formal reporting) provide for behavioral control (Eisenhardt 1985). The specification of tasks, monitoring and inspection rights and reporting obligations would be obtained from the contract. Thus, wherever behavioral uncertainty poses a degree of potential risk, detailed contracts would be used.

Asset Specificity

Transactions are beset with asset specificity when they entail large investments in idiosyncratic assets that have little or no salvageable value outside the relationship (Williamson 1985; Riordan and Williamson 1985). The investment in specific assets by the firm entails exposure to the risks of opportunism by the downstream partner. While the costs of internal organization may outweigh the benefits, the firm may seek suitable safeguards by specifying a detailed performance contract. Similarly, the investment in specific assets by a downstream partner would be reciprocated by the firm, by providing contractual assurances against unjust terminations. It is in the interest of the party making specific investments in terms of marketing efforts and resource inputs, to attempt to predict future eventualities and negotiate detailed contractual provisions for such eventualities. Moreover, the firm may specify contractual safeguards to protect itself from recovery suits by the distributor in the event of the latter's termination.

Conditions of intermediate asset specificity are particularly relevant for the emergence of hybrids of markets and hierarchies (Williamson 1990a). However, suitable contractual safeguards and cooperation induced by contracts may be stable even under conditions of asset specificity so long as the identity of the contracting parties is preserved and the investment in specific assets by one party signals commitment for the other (Baird 1990; Ben-Porath 1980; Powell 1990; Wiggins 1990). Wherever the long-term nature of the relationship is emphasized without recourse to vertical integration, the presence of highly specific assets and investments in the relationship may be protected with recourse to detailed contracts.
Use of Informal Agreements

In interpersonal relations, informal bonding mechanisms are created on the basis of informal agreements and implicit understandings. In inter-firm relations, however, such bonding mechanisms take the form of promises, guarantees and pledges. Informal agreements, thus, are assurances, declared intentions, pledges, and securities that serve to signal bonding of the relation. In transaction cost terms, idiosyncratic investments serve as pledges or securities given as a guarantee of performance (Anderson and Weitz 1992). However, we argue that not only idiosyncratic investments but also various contextual and discretionary factors are involved in the building of stable cooperative arrangements. These factors are discussed below:

Technological Change

Technological change refers to continuous and unpredictable changes in technology of a product and its manufacture. A high degree of technological change in the product would necessitate various changes in the distribution agreements for the product. Bargaining and writing up detailed contracts for every technical change in the product would not only be costly, but also detract from competitive effectiveness. In such cases, a simple but broad contract outlining only the basic essentials of the relationship supplemented with the use of informal agreements from time to time, serves to provide an efficacious platform for cooperation. Repeated honor of such agreements provides the indicator of success for future agreements and contributes to the development of stable relationships.

While detailed contracts are impossible at the outset due to the transaction costs of frequent negotiations necessitated by rapid technological changes, the advantages derived from vertical integration may not be a) available to all firms due to the higher investments, and/or b) too high compared to the costs since integration would result in a loss of flexibility precisely when it is needed. The solution then, would be to have a reasonably broad structured contract, but leaving the transactions themselves under the umbrella of trust and mutual co-operation.
Technological changes also necessitate frequent re-alignments of marketing strategy and communication of such strategy to intermediaries (Fiocca and Snehota 1989). Such communication is more efficient through informal channels (Buckley and Casson 1988). Moreover, the speed with which strategic changes need to be implemented also calls for a flexible and cooperative relationship (Powell 1990).

Technological change also leads to the problem of profiting from innovations and first firm advantages (Teece 1986). A prior position in the establishment of the innovation in the market (commercialization) is desired (Teece 1986). Appropriability of technological innovations are a source of concern and such may be assured by the presence of flexible marketing arrangements that guarantee executions of informally communicated actions and decisions (Teece 1986). Thus, for efficiency reasons, informal agreements may be more prevalent in an industry beset with technological changes.

Market Diversity

Market diversity refers to the extent of heterogeneity and complexity in the consumer sector (Dwyer and Welsh 1985). Heterogeneity refers to the dissimilarities within the environment and the lack of a unifying structure to the elements in the environment (Dwyer and Welsh 1985; Thompson 1967). Complexity refers to the scarcity of critical information about the market for decision-making purposes (Dwyer and Welsh 1985; Emery and Trist 1965).

Unstructured and diverse environments represent a greater uncertainty of the downstream exchange atmosphere (Dwyer and Welsh 1985; Wilson 1980). Under such conditions, the role of prompt and accurate information is often decisive. Such information is more readily available to the downstream partner, who is also unable to use it (Buckley and Casson 1988). The role of market information exchange in such cases has informal bonding properties, with the party supplying the information supplying also its own general beliefs and moral values, and the party using and disseminating the information, providing the set of values conducive to cooperation (Buckley and Casson 1988).
Market diversity is characterized not only by wide variations of consumer preferences but also by frequent changes in consumer preferences (Achrol and Stern 1988). From their study of retailers in 10 industries, Dwyer and Welsh (1985) conclude that heterogeneous environments are accompanied by decentralization, a high degree of participation and less formalized procedures. In heterogeneous environments, informal agreements are more conducive to the need for frequent informal exchange, flexibility and adaptability.

When critical market information is lacking, mutual dependence and a system of reciprocation develops among trading partners (Wilson 1980). In his study of the New England fresh fish market, Wilson (1980) found that such interdependencies minimized the risks of misallocation of resources and inequities arising from opportunism. Moreover, reciprocation provides for adaptability under conditions when transmittal of market information is often slow and inaccurate (Wilson 1980). Such reciprocity also leads to the development of trust amidst uncertainty (Wilson 1980). Thus, under conditions of market diversity, informal agreements may emerge.

Task Complexity

Task complexity refers to the extent to which the activities required for marketing strategy or policy implementation cannot be broken down into small, communicable and easily delegatable tasks. Certain transactions require extensive planning and frequent exchange of information due to the complexity of tasks (Killing 1988). Thus, the stage is set for intensive two-way communication that serves to enhance trust and dampen conflict (Anderson and Weitz 1989, 1992; Anderson, J.G. and Narus 1990). The non-routine nature of interaction coupled with the high frequency of interaction would by itself, render simpler organizational forms impossible (Killing 1988).

Task complexity poses unique problems in the programmability of the tasks and in the design of adequate control measures (Eisenhardt 1985; Ouchi 1980). Under such circumstances, an efficient response is trust which obviates the necessity of behavior control (Arrow 1974). Frequent communication or recourse to business culture as well as tacit and implicit understandings unravel
the complexity of tasks (Ouchi 1980). Thus, it is argued that when there is a high degree of task complexity, informal agreements will be used to structure the interorganizational relation.

Reputation Efforts

Reputation building efforts are conscious efforts by firms to highlight trust, cooperation, fair dealings and socially conductive behavior in their business dealings. While reputation effects are perceived to be important in business (Macaulay 1963; Richardson 1972), the goals of some firms would be on conscious reputation building. Since reputation is an investment in that it requires parties to forego short-term gains, it also has its advantages in future sales prospects and future businesses with other firms (Buckley and Casson 1988; Macaulay 1963). Especially when the business environment is characterized by high degree of litigations due to lack of trust, reputation for forbearance and quality would be instrumental in business success (Lieberman 1981; Lewis and Weigert 1985; Zucker 1986). Such reputation building efforts presuppose the use of informal, trusting mechanisms and also yield effective co-operation between the interacting parties.

Reputational efforts serve to signal critical information and can serve as a source for competitive advantage especially with respect to product quality (Allen 1984; Rogerson 1983). However, reputations may also enable firms to charge premium prices (Klein and Leffler 1981) and enhance access to markets (Beatty and Ritter 1986). Reputation signals the key attractive features of firms (Spence 1973). Reputation enables the firm to optimize its social efficiency by increasing the potential for future businesses and business dealings (Macaulay 1963, 1985). Whenever reputation concerns are explicit, firms may deliberately forego economic efficiency to achieve socially desirable reactions that are advantageous in the long run (Tirole 1988). Cooperative relations and forbearance are especially ensured by the firm and commitments and continuity of the relation are sought. Such reputation building efforts lead to the establishment of commitments, informality and implicit understandings. Thus, when reputation is perceived to be important, informal agreements are more likely to emerge in the interfirrm relation.
Use of Coalitions

The firm could be viewed as a socio-political conflict system with constituent interest groups making conflicting demands on the system and the goals and/or the allocative decisions of the system made by powerful coalitions of interest groups (March and Simon 1958; March 1962). These notions of coalitions were extended by Pfeffer and Salancik (1978), in their theories of resource dependency and the strategic manipulation of the resource environment by powerful interest groups. A coalition is any group that, despite the multiple conflicting goals of its members, agrees to pursue a superordinate goal, pool its resources into obtaining this goal and arrive at a consensus as to the means and the distribution of the payoff (Gamson 1961; Kelley 1968). Thus the interorganizational relation, when viewed as a coalition, has important strategic and political implications as well. Some of the factors suggesting the formation of downstream coalitions are listed below:

Resource Environmental Uncertainty

The extent to which the environment is perceived to be lacking in critical resources, particularly customers and growth opportunities in sales and profits, is referred to as resource environmental uncertainty (Pfeffer and Salancik 1978). The environment can be viewed as a source of opportunities and constraints for decision makers (Aldrich and Mindlin 1978; Dwyer and Welsh 1985). When such environments are characterized by a high degree of uncertainty, the need for collective action and pooling together of all available information becomes necessary (cf. Dwyer and Welsh 1985). The need to manage dependency on the resource environment would lead to an increasing interdependence between the interacting firms (Aldrich and Mindlin 1978; Pfeffer and Novak 1976; Thompson 1967). Thus, a coalitional mechanism may emerge that would not only enable strategic control of the environment but also lay guidelines for decision-making and communications between the interacting parties (cf. Lawrence and Lorsch 1967).

The variability in the consumer sector warrants a less complex channel configuration (Dwyer and Welsh 1985). Such uncertain environments preclude the agents' ability to make decisions due to lack of information and bounded rationality (March and Simon 1958). In the absence of a re-
cognized hierarchy, rules and procedures may emerge in the administration of the system (Dwyer and Oh 1988). Complex decision rules are broken down into clearly communicable courses of action (March and Simon 1958). Moreover, there are considerable economies of scale in learning by concentrating activity within one entity to serve exchanging firms (Porter and Fuller 1986).

Under conditions of resource uncertainty, partners can benefit from pooling knowledge or ability to perform particular activities (Porter and Fuller 1986). Moreover, competitive pressures and business risks entailed due to uncertainty can be minimized by collusions (Porter and Fuller 1986). Access to critical markets is obtained through collective action (Harrigan 1985; Porter 1981). Under such conditions, coalitions serve in the pooling of resources, permit centralized decision-making and also enable gaining access to markets. For these above reasons, it is argued that high levels of resource environment uncertainty would prompt the firms in vertical relation to each other to form coalitions to achieve their common resource goals.

Complementarity

The degree to which the activity performed by the firm and its down-stream partner are complementary rather than similar in nature is referred to as complementarity. Complementarity determines to a large extent the existence of networks of co-operation and association (Richardson 1972). As Richardson notes: "...[Complementary]...activities cannot be left entirely to direction within firms because the activities are dissimilar, and cannot be left to market forces in that it requires not the balancing of the aggregate supply of something with the demand for it but rather the matching, both qualitative and quantitative, of individual enterprise plans" (p. 892). The need to form a cooperative arrangement is more pressing since each partner realizes that independent action is not strategically or economically advantageous (cf. Alchian 1984; Buckley and Casson 1988). However, coalitional institutions, by structuring communication and authority, enable the partners to add up their efforts in a vertical value-chain in order to obtain a more competitive end result (cf. Porter 1985). Thus, coalitional arrangements while preserving each partner's motivations to continue to engage in business, also serve to produce strategic decision-making by the partner who has
better managerial competence (Porter and Fuller 1986). Thus, coordination of complementary activities calls for a coalitional arrangement.

**Domain Consensus**

Following Benson (1975), domain consensus is defined as the mutual agreement between firms as to the appropriate role and scope of the agency. There is considerable agreement over expectations as to what each organization will or will not do (Thompson 1967). Domain consensus serves to provide a working image of the firm's role within a larger system and thus serves as a guide in the ordering of action (Thompson 1967). Such consensus over the domain results in reduced conflict in the system as a whole (Thompson 1967).

In order to achieve strategic goals in a competitive environment it is not only necessary to legitimize the authority of the dominant partner by creating dependencies (Aldrich and Mindlin 1978; Pfeffer and Salancik 1978; Thompson 1967), but it is also necessary to replace adversarial problem-solving with mechanisms that alleviate grievance without destructive conflict. While mutually agreed-upon superordinate goals are important, what is more important is the degree to which the role and scope of each party is well-defined (Benson 1975; Speckman and Sawhney 1990). Continuous negotiation over the domain of tasks and activities clarifies what needs to be done and this is facilitated by the imputations of power as well as by consensus over goals (March 1962; Speckman and Sawney 1990). Thus, a high degree of domain consensus facilitates the formation of coalitions in the vertical relation.

**Summary**

It was argued in the preceding section that various industry-market factors and firm/transaction factors are matched in a discriminating way. Specifically, product market regulations and product complexity are conjoined with behavioral uncertainty and asset specificity to
provide the platform for the emergence of detailed contracts. Similarly, technological change and market diversity along with task complexity and reputation building efforts predict the use of informal agreements. Finally, resource environmental uncertainty, complementarity and domain consensus call for the utilization of coalitions. The empirical grounding for the various constructs and the methodology for validation are provided in the next chapter.
Chapter III

METHODOLOGY

The theoretical propositions advanced in the previous chapters are empirically validated on data collected from diverse industries using field survey methods. Since applicability of the theory is a more important issue to this research (due to the absence of prior research formulations) than theory-testing, a field survey methodology provides appropriate validation (Calder, Phillips and Tybout 1981). The analysis of data using a simultaneous equations model stems from the imperatives imposed by the research design as well as from the necessity of identification of the *structural form* of the relationships between the constructs.

Aspects of the methodology to be adopted are elaborated in the following pages under the topics research design, research hypotheses, sampling frame, data collection, and hypotheses testing.
Research Design

The propositions and arguments introduced in the preceding chapters attempted to build a model that would predict the various industry/market and firm/transaction factors contributing to the relative dominant use of any one institutional mechanism for coordination. Specifically, the research questions now before us are:

1. Is the presence (or absence) of a high degree of product market regulations, product complexity, behavioral uncertainty and asset specificity significantly related to the predominant use of detailed contracts (or low utilization of detailed contracts) by the focal firm?

2. Is the presence (or absence) of a high degree of technological change, market diversity, task complexity, and reputation building activities significantly related to the predominance of informal agreements (or low use of informal agreements) by the focal firm?

3. Is the presence (or absence) of a high degree of resource environment uncertainty, complementarity and domain consensus significantly related to the predominance of coalitions (low utilization of coalitions) by the focal firm?

Clearly, what is on the research anvil and subject to tempering by “hard facts” is the strength of association between the hypothesized antecedent conditions/factors and the predominance of one institutional mechanism over the others. Thus, what needs to be evaluated is the degree of association of each of the contributing explanatory variables with the institutional form present in the downstream relationship. In other words, each set of independent and dependent variables could be written as a linear regression equation and the set of such equations could be viewed as a simultaneous equations system. These equations are presented after a brief introduction to the various research hypotheses.
Research Hypotheses

Based on the discussions in preceding chapters and as well as the description of the various explanatory variables, the research hypotheses are stated as below:

**H1**: The relative predominance of detailed contracts (CONT) as an institutional mechanism for securing vertical downstream coordination is significantly positively related to:

- **H1a**: product market regulations (regl).
- **H1b**: product complexity (pcom).
- **H1c**: behavioral uncertainty (beha).
- **H1d**: asset specificity (asst).

**H2**: The relative predominance of informal agreements (INFO) as an institutional mechanism for securing vertical downstream coordination is significantly positively related to:

- **H2a**: technological change (tech).
- **H2b**: market diversity (divs).
- **H2c**: reputation efforts (repu).
- **H2d**: task complexity (task).

**H3**: The relative predominance of coalitions (COAL) as an institutional mechanism for securing vertical downstream coordination is significantly positively related to:

- **H3a**: resource environment uncertainty (runc).
- **H3b**: complementarity (comp).
- **H3c**: domain consensus (dman).
Additional Hypotheses

In a vast majority of the relationships between the manufacturers and middlemen, it is reasonable to expect that the size of the manufacturer firm would impact bargaining power and channel leadership. Thus, many aspects of the relationship would be aligned more favorably for the manufacturer. On the other hand, smaller sized manufacturer firms would be more inclined towards arranging informal agreements since they may not be in a position to assume channel leadership or to impose their own bargaining terms. Moreover, in contractual forms, one would expect that there is bargaining parity between the firms regardless of the size of the manufacturer firm. Thus, power considerations, if any, would have already been incorporated into a contract document, the mutual fulfillment of which would negate the dominance of any one party to the contract. Thus, we would expect that:

**H4**: The size of the manufacturer firm would be significantly:

- **H4a**: negatively related to the use of informal agreements; and,
- **H4b**: positively related to the use of coalitions.

Another variable of interest is the age of the manufacturer-middleman relationship. It could be argued that as the relationship matures, the initial terms, conditions and arrangements give way to a more tolerant relationship and to the development of trust and notions of mutual cooperation (Dwyer, Schurr and Oh 1987; MacNeil 1980a; Scanzoni 1979). This may be, in part, due to a recognition of mutual dependence (Scanzoni 1979), as well as due to the development of norms that are often implicitly understood and tacitly implemented (Heide and John 1992; MacNeil 1980a). Predictability of mutual behaviors provides the precondition to cooperative behavior (Heimer 1983, 1986), and such predictability is enhanced when the relationship matures. Also, age of the relationship affects the continuity of the relationship which in turn calls for continuous adaptation to the relationship over time. It is thus argued that:
H5: The age of the relationship between the manufacturer and the middlemen would be significantly:

H5a: negatively related to the use of contracts;

H5b: positively related to the use of informal agreements; and,

H5c: negatively related to the use of coalitions.

The arguments presented both in the earlier chapters and herein culminate in the conclusion that over a period of time, the formation of loyal or identity relationships, i.e., relationships wherein the identity of the transactor is of as much importance as the goods transacted, become a primary matter of concern for firms in their selection of an appropriate institutional mechanism. Thus, one expects a progression of most contractual relationships - whenever industry and market conditions permit - into relationships that are either of a coalitional nature or are characterized by informal agreements.

Also, following the general paradigm of environment --- > strategy --- > performance, it is argued that the choice of any one institutional mechanism given certain firm/transaction and industry/market conditions would enhance the effectiveness of the relationship. While effectiveness is primarily a matter or measure of fit between the environment and the chosen institutional mechanism (Aldrich 1979), the negotiated relationship that is created by institutional choice would affect the general degree of satisfaction over performance as well as other varied aspects of the relationship. Each firm's own independent evaluations would be affected by the degree to which other firms and their middlemen perform within the same industry, thereby providing a comparative framework for evaluating the relationship (Frazier 1983; Frazier and Summers 1986). Also, there will be a tendency to evaluate the effectiveness of the relationship based on the time and effort expended in building it as well as the productivity of the resources so expended on the relationship (Van De Ven and Ferry 1980). The operational definition and domain of the construct so formulated is provided in Appendix B and its measures appear in Appendix C. In the form of a hypothesis, we note that:
**H6a**: The predominant use of contracts in the presence of product market regulations, product complexity, behavioral uncertainty, and asset specificity, will be significantly positively related to effectiveness.

**H6b**: The predominant use of informal agreements in the presence of technological change, market diversity, reputational efforts, and task complexity, will be significantly positively related to effectiveness.

**H6c**: The predominant use of coalitions in the presence of resource environmental uncertainty, complementarity, and domain consensus, will be significantly positively related to effectiveness.

A schematic representation of these hypotheses is presented in Table 3.1.

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**Operational Definitions and Measure Development**

The operational definitions of the various constructs were formulated to capture their discerning aspects. Following Churchill (1979), the domains of the various constructs were identified and some indicators for each construct were extracted logically from the domain. A brief description and specification of the domain for each construct are given in Appendix B. Wherever available and applicable, prior formulation of measures for various constructs were incorporated. For constructs for which established measures were not found in the literature, indicators were formed from the operational definitions using the logical descriptors of the constructs. Prior measures were found for behavioral uncertainty (John and Weitz 1988), asset specificity (Anderson 1985), market diversity (Dwyer and Welsh 1985), resource environmental uncertainty (Achrol and Stern 1988), domain consensus (Van de Van and Ferry 1980) and effectiveness (Van de Ven and Ferry 1980). In these instances, the item measures that had a logical fit with the descriptors for each construct were included. The indicators for each construct were phrased as per the approach suggested by Campbell (1955). Care was taken to ensure that the language used could be understood.
TABLE 3.1: HYPOTHESESIZED EFFECTS

INSTITUTIONAL FORMS

<table>
<thead>
<tr>
<th>ANTECEDENTS</th>
<th>Detailed Contracts</th>
<th>Informal Agreements</th>
<th>Coalitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry/Market</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Market Regulations</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Product Complexity</td>
<td>+</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Technological Change</td>
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<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Market Diversity</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Resource Environmental Uncertainty</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
</tbody>
</table>

| **Transaction/Firm**               |                    |                     |            |
| Behavioral Uncertainty             | +                   | 0                   | 0          |
| Asset Specificity                  | +                   | 0                   | 0          |
| Task Complexity                    | 0                   | +                   | 0          |
| Reputation Efforts                 | 0                   | +                   | 0          |
| Complementarity                    | 0                   | 0                   | +          |
| Domain Consensus                   | 0                   | 0                   | +          |

+ Indicates significant positive effects
0 Indicates non-significant effects
by practitioners and that compromising information were phrased in more general terms (Campbell 1955). The measures for all constructs in the study appear in Appendix C.

Pretesting

The measures developed from the approach outlined above were subjected to a pretest amongst some Ph.D. students and faculty in the marketing department of a large state university. The primary focus of this pretest was to ascertain face validity of the measures as a surrogate indicator of construct validity. The approach taken was to group a number of seemingly related measures under each construct description and have the respondents identify the degree of fit between the construct and each measure item. A total of ten responses were obtained. Items that were indeed developed for a construct and were identified correctly as such were included in the questionnaire, provided these items were not perceived as having a high degree of fit with any other construct. Items that were perceived as having a low degree of fit with the construct as well as those that had a high degree of fit with two or more constructs were eliminated. A final questionnaire so developed was circulated amongst M.B.A. students with prior or current industry experience at a large northeastern business school for their comments and responses. The final refined questionnaire which contains over a hundred items, mostly as a 7-point Likert-type scale, is presented in Appendix D.

Sampling Frame

Since many of the constructs pertain to specific industry and market conditions, a degree of variation in perceptions of such constructs can be obtained only by studying diverse firms within
diverse industries. Moreover, since the theory and hypotheses argue for one institutional mechanism to be predominant in any industry, diverse industries are required for valid empirical results.

Two trade associations out of a number that were contacted agreed to supply their membership lists for questionnaire administration. These were the American Apparel Manufacturers' Association (AAMA) and the National Service Merchandisers Association (NASM). The former is a body addressing the common concerns of apparel manufacturers all over the U.S., while the latter is a national trade body of manufacturers of jewelry, cosmetics, food and other products used by service industries. However, since the total combined membership of the two associations was not sufficient to yield an adequate sample size, an additional list of firms and contact names was purchased from the Dun and Bradstreet Information Services, Inc. This list contained firms from different 4-digit SIC coded industries. An indicative list of industries included in the sampling frame along with other details is provided in Table 3.2.

Prequalification of Responses

A first wave of 120 questionnaires along with a cover letter and a letter from the Director of Marketing for the AAMA was sent to a randomly selected subgroup of the AAMA membership list. A total of 20 questionnaires were received, of which 10 were returned blank. The reason given for the respondents' inability to complete the questionnaire was either that the respondent was a contract manufacturer for whom marketing was not a concern or that the respondent used only direct marketing approaches. Thus, in both instances, there was no relationship with any type or form of middlemen.

Based on these results of the first wave, it was decided to prequalify the firms in the chosen sampling frame. This was done by using a participation form along with a cover letter encouraging participation and offering the results of the survey as an incentive to participate. The options present in the participation form were (i) willing to participate; (ii) unable to participate since no
TABLE 3.2: THE SAMPLING FRAME AND COMPOSITION OF THE SAMPLE

<table>
<thead>
<tr>
<th></th>
<th>Letters Sent</th>
<th>Would Participate</th>
<th>Unable</th>
<th>Responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AAMA</td>
<td>335&quot;</td>
<td>15</td>
<td>25</td>
<td>22&quot;**</td>
</tr>
<tr>
<td>2. NASM</td>
<td>300</td>
<td>55</td>
<td>11</td>
<td>46</td>
</tr>
<tr>
<td>4. Food and Kindred</td>
<td>196</td>
<td>--</td>
<td>--</td>
<td>15</td>
</tr>
<tr>
<td>5. Hardware</td>
<td>55</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>6. Soaps/Detergents</td>
<td>161</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>7. Book Publishing</td>
<td>96</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Chemicals and Plastics</td>
<td>141</td>
<td>9</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>9. Pharmaceuticals</td>
<td>88</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>10. Fertilizers and Agricultural Chemicals</td>
<td>47</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11. Farm and Lawn Equipment</td>
<td>84</td>
<td>7</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>12. Computers and Peripherals</td>
<td>401</td>
<td>42</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

Totals                                                   2,099          158

* Includes 120 questionnaires sent in the first wave.

** This figure is higher than the number in column "Would Participate" due to reason (*) above.
middlemen were used; and, (iii) unable to participate (for whatever reasons). Again, the industry-wise break-ups of the number of initial letters mailed, the number agreeing to participate, and the number unable to participate are provided in Table 3.2. For industries, such as those that were comprised of (i) miscellaneous manufacturing firms; (ii) frozen foods and packaged foods manufacturing firms; (iii) handtools and other hardware manufacturing firms; and, (iv) soaps and detergents manufacturing firms, a questionnaire and cover letter were sent without prequalifications, since it was known that these industries rely on various types of middlemen.

Data Collection

Data were collected using a field survey questionnaire composed of a battery of items as given in Appendix D. As judged from their titles on the participation forms that were returned, the respondents are middle and top level managers, with the most usual designation of respondents being Vice President - Sales and Marketing. Such respondents are clearly deemed to be key informants who possess knowledge about their industry and about the specifics of their firm’s relationship with various middlemen. Thus, it could be said that the respondents are organizational actors who participate in the enactment of the theory in real life.

Apart from the usual incentive of survey results in order to elicit respondent participation, another offer of customized survey results was made. Essentially, this offer was a comparative evaluation of the particular firm’s responses to the survey compared to others participating in the study. A total of 158 completed questionnaires were received from 224 respondents who had initially agreed to participate in the study. While the total number of firms contacted initially was 2099, the final tally of 158 responses is lower than the average reported in other industrial survey based researches. One probable reason is that the initial sampling frame was relatively unknown and almost 65% of that frame was purchased from a firm specializing in selling such mailing lists. It could be argued that the firms in that mailing list would already have been recipients to a plethora
of unsolicited mail from diverse agencies, so that our particular letter may not have received the undivided attention of many of the addressees. However, given that the survey filled six pages of small typed font, and the fact that special incentives or second mailings were largely absent from the study, a total of 158 responses could be considered a decent haul in retrospect.

Hypotheses Testing

The hypotheses H1 through H6 stated earlier in this chapter can be written as a system of equations as in Figure 3.1. Hypotheses H1 through H5 are represented by the first three equations, while the fourth equation introduces H6 as a restriction for effectiveness. Since contracts, informal agreements, and coalitions are represented in this system both as predictors as well as endogenous variables, the system of equations is better estimated using the three-stage least squares estimation procedure of simultaneous equations modeling.

Three-Stage Least Squares Estimation Procedure

Hypothesis H6 introduces the additional condition that not only do the hypothesized set of independent variables affect the choice of a particular institutional mechanism, but also that the institutional mechanism so chosen contributes to the effectiveness of the relationship. Thus, a restriction is now imposed with the implication that the endogenous variables - y1, y2, y3 - each determined by its own set of predictors, now contribute to a fourth endogenous variable y4, which represents effectiveness of the relationship. This restriction can be included in the earlier system as a fourth equation, viz.,

\[ y_4 = B Y + e_4 \]
THE 3SLS MODEL

\[ \text{CONT} = (\text{BEHA}) \beta_{11} + (\text{ASST}) \beta_{12} + (\text{REGL}) \beta_{13} + (\text{PCOM}) \beta_{14} + + (\text{AGE}) \beta_{15} + e_1 \]

\[ \text{INFO} = (\text{TASK}) \beta_{25} + (\text{REPU}) \beta_{26} + (\text{DIVS}) \beta_{27} + (\text{TECH}) \beta_{28} + (\text{AGE}) \beta_{29} + (\text{SIZE}) \beta_{210} + e_2 \]

\[ \text{COAL} = (\text{COMP}) \beta_{39} + (\text{DMAN}) \beta_{310} + (\text{RUNC}) \beta_{311} + (\text{AGE}) \beta_{312} + (\text{SIZE}) \beta_{313} + e_3 \]

\[ \text{EFRE} = (\text{CONT}) \beta_{41} + (\text{INFO}) \beta_{42} + (\text{COAL}) \beta_{43} + e_4 \]

*where,*

- \text{CONT} = use of contracts
- \text{COAL} = use of coalitions
- \text{BEHA} = behavioral uncertainty
- \text{REGL} = product market regulations
- \text{TASK} = task complexity
- \text{DIVS} = market diversity
- \text{COMP} = complementarity
- \text{RUNC} = resource environmental uncertainty
- \text{SIZE} = size of the Manufacturer firm
- \text{INFO} = use of informal agreements
- \text{EFRE} = effectiveness of the relationship
- \text{ASST} = asset specificity
- \text{PCOM} = product complexity
- \text{REPU} = reputational efforts
- \text{TECH} = technological change
- \text{DMAN} = domain consensus
- \text{AGE} = age of the relationship

FIGURE 3.1 : THE HYPOTHEZIZED THREE-STAGE LEAST SQUARES MODEL
where, \( B \) is the vector of coefficients, \( Y \) is the vector of the endogenous institutional mechanisms and \( e_4 \) is the stochastic disturbance term for this fourth equation.

The system of simultaneous equations as depicted in Figure 3.1 contains at least one equation wherein explanatory endogenous variables are present. Estimating each equation separately through ordinary least squares (OLS) regression may not be theoretically and mathematically correct in this case, since the restrictions on the endogenous variables will be ignored and the estimates so produced would be biased. Moreover, the application of OLS techniques to such a system ignores all the information available about variables not included in each equation (Intrilligator 1978).

The three stage least squares (3SLS) is a full information technique in that it utilizes all the identifying restrictions on all the equations in the system (Intrilligator 1978). In the context of our model, each of the institutional mechanisms will be identified using its own set of predictors only given that each institutional mechanism \((y_1, y_2, \text{ and } y_3)\) contributes to effectiveness \((y_4)\). The 3SLS technique, as the name suggests, estimates the parameters in three stages (Zellner and Theil 1962). The first stage involves the estimation of each dependent variable on all the independent variables in the system (Goodwin 1985; Intrilligator 1978). In the second stage, the two stage least squares (2SLS) parameter estimates of each structural equation is obtained. In the third stage, all the coefficients in the entire system of equations are now simultaneously estimated, given the information on all exogenous variables present in the system (Intrilligator 1978). Thus, all exogenous variables are treated as instrumental variables and the parameters now produced explicitly take into account the covariance of error terms across the equations (Hausman 1975, 1977; Intrilligator 1978; Madansky 1964; Sargan 1958). The 3SLS estimator incorporates information on the covariance between the equations and thus, improves the efficiency of the 2SLS estimator. For this reason, it is also known as the "systems analogue" of the 2SLS estimator (Intrilligator 1978; Madansky 1964). In cases where all the equations in the system are exactly identified, the 3SLS estimates are the same as the 2SLS estimates (Lehrer 1986).

The 3SLS estimates are consistent and asymptotically unbiased, i.e., large sample estimates approach normality and are less biased. However, it is not clear as to what constitutes a sufficiently large sample size to guarantee that the estimates are not biased (Zellner 1984). Since asymptotic
justifications do not provide clues as to minimum required sample sizes, a considerable amount of research has been done on obtaining finite-sample distributions of asymptotically justified estimators (see Anderson 1977; Sawa 1972; Sowey 1973). However, as Zellner (1984) notes:

"This ingenious and difficult distributional work unfortunately has shown that the finite sample distributions of estimators, derived in the main from an underlying noncentral Wishart distribution, are rather complicated and involve a number of parameters with unknown values. The latter fact makes the application of these distributional results to concrete problems difficult" (p. 89).

Since there exists no simple formulation of the minimum necessary sample size, one approach would be to see if the parameter coefficients are small in magnitude and significant. This could, by itself, be used as a surrogate indicator of sufficient power in the analyses, since precise power calculations and minimum sample sizes necessary are not available.

A precondition to the use of 3SLS technique (or any other simultaneous estimation technique) is that all the equations in the system must be identifiable. Any equation in the system is just identified if only one set of estimates of the parameters is possible; it is over-identified if multiple estimators can be obtained; and, it is under-identified if it is impossible to obtain a solution for the parameter estimates (Goodwin 1985; Intrilligator 1978). The identification of the system of equations usually implies the satisfaction of two conditions - the order condition and the rank condition (Judge, Hill, Griffiths, Lutkepohl and Lee 1988; Todd 1978). The order condition is a necessary but not sufficient condition for the identification of all the parameters of the system of equations, while the rank condition is a necessary and sufficient condition (Judge, Hill et al. 1988). Thus, the satisfaction of the rank condition may be adequate for the satisfaction of the order condition, but not vice versa. Each of these conditions is discussed below with reference to the system of equations represented in Figure 3.1.
The Order and Rank Conditions

The simplest rule for determining the order condition is stated as "the number of predetermined variables excluded from the equation must be greater or equal to the number of included endogenous variables minus 1" (Pindyck and Rubinfeld 1981; p. 326-7). This manifestation of the order condition is also known as the exclusion restriction or the zero restriction (Judge, Hill et al. 1988; Todd 1978). From Figure 3.1, it can be seen that in equations for CONT as well as for INFO, eight variables present in the system do not appear as exogenous variables, which is greater than (4-1 =) 3. The equation for COAL excludes nine variables present in the system but excluded for the specification of this particular equation, which is greater than 3. The equation for EFRE specifies the restriction on the observed endogenous variables and excludes all other exogenous variables. All equations are, as is usually the case, over-identified, which implies that any solution using indirect least squares estimation techniques will not be unique (Judge, Hill et al. 1988). It may be possible to obtain consistent parameter estimates so long as a careful choice is made among the various competing estimators (Lehner 1986). Moreover, iterative estimation procedures in the 3SLS enable obtaining coefficients that converge in probability to the true parameter values, particularly for larger samples (Todd 1978).

The rank condition is more difficult to ascertain since it requires technical knowledge of the determinant structure which may not exist at the model building stage (Todd 1978). In many instances, the order condition is taken as a surrogate test for the sufficiency condition that is implied by the rank condition (Christ 1966; Todd 1978). The rank condition is satisfied if the following holds true:

For a system of M equations, (i) each of the predetermined variables excluded from any equation enters at least in one other equation; (ii) there exists no possible linear combination that can derive any one equation from any other equation; (iii) no two equations contain the same set of variables; and, (iv) all of the variables excluded from any one equation are not excluded from any other equation as well (following Judge, Hill et al. 1978; p. 361).

Again, it can be noted that the rank conditions for identification are met for the system of equations representing our hypothetical 3SLS model.
Testing Procedure

The tests of the hypotheses introduced earlier is principally the test of the model of simultaneous equations as depicted in Figure 3.1. The testing procedures were as follows:

1. Construction of unidimensional scales based on the prevalent methods of scale development and confirmatory factor analysis.
2. Estimation of the 3SLS model using iterative procedures.
3. Testing alternative models using simultaneous equations techniques as well as structural equations modeling techniques.

Summary

The preceding pages derived and presented some testable hypotheses from the conceptual model elucidated in Chapter 2. Definitions and domains for each construct were provided. The sampling plan adopted and the characteristics of the sampling frame were described in detail. The analytical methodology was described while recasting the hypothetical model as a system of simultaneous equations. The specific details of the analytical procedures adopted and results are presented in the next chapter.
Chapter IV

ANALYSIS AND RESULTS

This chapter discusses the analytical procedures adopted on the data collected from the field survey as well as the results of the various tests of hypotheses formulated in the earlier chapter. Discussions are presented as Scale Development, Model Testing, and Alternate Models.

Scale Development

The measures for each construct are provided as Appendix C. Data collected were coded and entered as a data input file for use with the SPSS computer package. Summated rating scales were constructed for each of the construct as per the standard procedures identified by Churchill (1979). As noted earlier, the item measures given in Appendix C were drawn from the specifications of the domain of each construct as in Appendix B. Except for AGE (age of the relationship) and SIZE (size of the manufacturer firm) multiple-item Likert-type scales were used for all the constructs. AGE and SIZE were measured by single item scales, wherein AGE was number of years the man-
ufacturer firm had used the particular type of middlemen in question and SIZE was the actual or estimated dollar sales for the year 1991 for the manufacturer firm.

An examination of item intercorrelations and exploratory factor analysis were used for scale purification. In addition, a confirmatory factor analysis was performed on the three dependent variables - contracts (CONT), informal agreements (INFO) and coalitions (COAL). The items comprising the final scale for each construct as well as the internal consistency measure (Cronbach’s Alpha) are provided in Table 4.1. The results of the confirmatory factor analysis appear in Table 4.2.

The practice of assessing unidimensionality of scales through confirmatory factor analysis has been recommended by Gerbing and Anderson (1988). In their updated paradigm for scale development, the unidimensionality of preliminary scales formed by using the traditional methods of coefficient alpha, item-total correlations, and exploratory factor analysis, is assessed using confirmatory factor analysis (Gerbing and Anderson 1988). This approach yields a stricter interpretation of unidimensionality and serves to delineate clear specific domains of content (Gerbing and Anderson 1988).

The initial confirmatory factor analysis on CONT, INFO, and COAL demonstrated a lack of fit for the items of each construct included as a result of analysis merely of alpha, item-total correlations and exploratory factor analysis. Evaluation of the modification indices and normalized residuals and eliminating some items on these criteria, yielded the confirmatory factor analysis results as in Table 4.2. This model provides an acceptable goodness-of-fit, thereby demonstrating that unidimensional measurement as well as external consistency have been achieved (Gerbing and Anderson 1988). The coefficient alpha for these unidimensional scales are the ones reported for CONT, INFO and COAL in Table 4.1.

From Table 4.1, it is readily apparent that scales for all constructs, except those for informal agreements (INFO), coalitions (COAL) and resource environmental uncertainty (RUNC) have alpha values that are above the 0.7 criteria recommended by Nunnally (1978) for exploratory research. The alpha values for INFO, COAL and RUNC are 0.6656, 0.5710 and 0.6579, respectively. Even though Churchill and Peter (1984) report reliability values lower than 0.5 for about 15% of
<table>
<thead>
<tr>
<th>Variable</th>
<th>Scale</th>
<th>Scale items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contracts</td>
<td>CONT</td>
<td>C1 C2 C4</td>
<td>0.7925</td>
</tr>
<tr>
<td>Informal Agreements</td>
<td>INFO</td>
<td>I2 I3 I4</td>
<td>0.6656</td>
</tr>
<tr>
<td>Coalitions</td>
<td>COAL</td>
<td>L3 L4 L6</td>
<td>0.5710</td>
</tr>
<tr>
<td>Asset Specificity</td>
<td>ASST</td>
<td>A3 A4 A5</td>
<td>0.7833</td>
</tr>
<tr>
<td>Behavioral Uncertainty</td>
<td>BEHA</td>
<td>B2 B3 B4 B5</td>
<td>0.7757</td>
</tr>
<tr>
<td>Product Market Regulations</td>
<td>REGL</td>
<td>PMR4 PMR5 PMR10 PMR11</td>
<td>0.8440</td>
</tr>
<tr>
<td>Product Complexity</td>
<td>PCOM</td>
<td>PC1 PC2 PC4</td>
<td>0.8928</td>
</tr>
<tr>
<td>Task Complexity</td>
<td>TASK</td>
<td>T1 T2 T3 T4</td>
<td>0.8615</td>
</tr>
<tr>
<td>Reputation Efforts</td>
<td>REPU</td>
<td>R1 R2 R4 R5</td>
<td>0.8484</td>
</tr>
<tr>
<td>Market Diversity</td>
<td>DIVS</td>
<td>MD2 MD3 MD4 MD5</td>
<td>0.8125</td>
</tr>
<tr>
<td>Technological Change</td>
<td>TECH</td>
<td>TC2 TC3 TC4</td>
<td>0.9063</td>
</tr>
<tr>
<td>Complementarity</td>
<td>COMP</td>
<td>M1 M3 M4</td>
<td>0.7270</td>
</tr>
<tr>
<td>Domain Consensus</td>
<td>DMAN</td>
<td>D3 D5 D6 D7</td>
<td>0.7616</td>
</tr>
<tr>
<td>Resource Environmental</td>
<td>RUNC</td>
<td>REU2 REU3 REU5 REU6</td>
<td>0.6579</td>
</tr>
<tr>
<td>Uncertainty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>EFRE</td>
<td>EF5 EF6 EF7 EF8</td>
<td>0.8828</td>
</tr>
</tbody>
</table>
all reliability values in their sample of 101 published studies in marketing, the low reliabilities for INFO, COAL and RUNC remain a matter of concern. The presence of random measurement errors, attenuation of correlation coefficients, and low magnitudes of observed effects cannot be underscored.

The Pearson correlation coefficients for all scales are reported as Table F.1 of Appendix F. The absolute magnitude of the coefficients in many cases are lower than 0.1 possibly indicating the presence of random measurement errors. Low reliabilities for the scales themselves may be the result of pooling heterogenous industries into one sample. However, such diversity in industries was necessitated due to the inclusion of industry-specific factors in this study and for obtaining variance in the independent variables representing these industry/market constructs.

Model Testing

Tests of the hypotheses H1 through H6 involved the estimation of the 3SLS model as in Figure 3.1. This estimation was facilitated by the PROC SYSLIN procedure of the SAS/ETS program (SAS Institute 1986). Successive iteration procedures were adopted to improve the efficiency of the results. The estimates so obtained are presented in Table 4.3 and these results are discussed below.

From Table 4.3, it can be seen that support is found for the effect of product complexity (PCOM) on the use of contracts (Hypotheses H1b; p < 0.1); the effect of task complexity (TASK) on the use of informal agreements (H2d; p < 0.01); the effect of market diversity (DIVS) on the use of informal agreements (H2b; p < 0.01); and, the effects of complementarity (COMP) and domain consensus (DMAN) on the use of coalitions (H3b and H3c, respectively; p < 0.01 for both). Additionally, SIZE had a significant (p < 0.01) and negative effect on the use of informal agreements as per hypothesis H4a. All three institutional mechanisms - CONT, INFO and COAL - had a significant and positive effect on the effectiveness of the relationship (EFRE) as hypothesized.
TABLE 4.2

CONFIRMATORY FACTOR ANALYSIS ON DEPENDENT MEASURES

Maximum Likelihood Estimates

<table>
<thead>
<tr>
<th></th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>.810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>.556</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>.904</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2</td>
<td></td>
<td>.497</td>
<td></td>
</tr>
<tr>
<td>I3</td>
<td></td>
<td>.599</td>
<td></td>
</tr>
<tr>
<td>I4</td>
<td></td>
<td>.822</td>
<td></td>
</tr>
<tr>
<td>L3</td>
<td></td>
<td></td>
<td>.518</td>
</tr>
<tr>
<td>L4</td>
<td></td>
<td></td>
<td>.660</td>
</tr>
<tr>
<td>L6</td>
<td></td>
<td></td>
<td>.510</td>
</tr>
</tbody>
</table>

Total Coefficient of Determination : 0.982

Chi-Square with 24 degrees of freedom : 31.60
(p = .137)

GFI Index : 0.956
Adjusted GFI Index : 0.917
RMSR : 0.063
In addition to the hypothesized results, behavioral uncertainty (BEHA), technological change (TECH), and resource environmental uncertainty (RUNC) had significant effects on CONT, INFO and COAL, respectively, though the effects were in the opposite (negative) direction. These negative coefficients deserve some elaboration.

The negative effect of behavioral uncertainty on the use of contracts, though apparently in contradiction to the original hypothesis, may in fact lend support to the use of contracts in the instance of high behavioral uncertainty. The clear specification of performance that is afforded by the use of contracts may follow the possibility of assessment of such performance or behaviors, in which case the use of contracts is prompted by the desire to render expected performances and/or behaviors more certain. Thus, if contracts were indeed adopted for the explicit purpose of reducing behavioral uncertainty, one would find a significant negative effect of BEHA on CONT. Absent explicit tests, these motives for the use of contracts, though in line with classical contract theory, can only be assumed to be present for the firms included in our study.

The unanticipated results for technological change (TECH) indicates that informal agreements may be preferred even in stable technological environments. The result is not too surprising, given that only a small proportion of the sample represent industries (e.g. computers and peripherals, and to an extent, pharmaceuticals), wherein the technological environments are rather volatile. The implications of the reverse sign of the coefficient, however, may be far-reaching since existing literature is preponderantly biased towards the study of informal contracting, strategic alliances, and joint ventures in the high-tech industries only. The fact that such informal agreements can be a preferred institutional mechanism even in technologically stable environments can also be traced to the prescient but much ignored observations of Stewart Macaulay (1963).

The negative effect of resource environmental uncertainty (RUNC) on the use of coalitions (COAL) is counter-intuitive albeit not difficult to rationalize. Resource environments that are stable and certain may in themselves provide an incentive to form coalitions to exploit the resource base. Such resource environments could be viewed as a “filled vault” that may attract different specialists who may pool-in their skills and employ careful strategems to exploit the resources and share the “spoils”. In fact, while turbulent environments do certainly prompt the sharing of skills,
## Table 4.3: 3SLS Model Results

### Endogenous Variables

<table>
<thead>
<tr>
<th>Predictors</th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
<th>EFRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHA</td>
<td>-.308**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.804)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASST</td>
<td>.066</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.914)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGL</td>
<td>.018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.348)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCOM</td>
<td>.077*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.356)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td></td>
<td>.314**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.738)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REPU</td>
<td></td>
<td>.116</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.116)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVS</td>
<td></td>
<td>.153**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.821)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td></td>
<td>-.103*</td>
<td></td>
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<tr>
<td></td>
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<td>(-2.254)</td>
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<tr>
<td>COMP</td>
<td></td>
<td></td>
<td>.304**</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(4.724)</td>
<td></td>
</tr>
<tr>
<td>DMAN</td>
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<td></td>
<td>.294**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(3.530)</td>
<td></td>
</tr>
<tr>
<td>RUNC</td>
<td></td>
<td></td>
<td>-.087*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-1.606)</td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>-.080</td>
<td>-.010</td>
<td>-.026</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-.693)</td>
<td>(-.111)</td>
<td>(-.349)</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-.243**</td>
<td></td>
<td>.092</td>
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<tr>
<td></td>
<td>(-2.647)</td>
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<td>(1.140)</td>
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</tr>
<tr>
<td>CONT</td>
<td></td>
<td></td>
<td></td>
<td>.420*</td>
</tr>
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<td></td>
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<td>(2.022)</td>
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<tr>
<td>INFO</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.450)</td>
</tr>
<tr>
<td>COAL</td>
<td></td>
<td></td>
<td></td>
<td>.867**</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td>(4.621)</td>
</tr>
</tbody>
</table>

System Weighted $R^2 = .3388$

* $p < .10$  ** $p < .01$

*Ratio of Coefficient to Standard Error in parentheses*
resources and information (Achrol 1991), the strategy of team-building and resource-pooling characteristic of coalitions, may be employed not only in the presence of external mitigating circumstances, but also when initiated by a channel leader (see Magrath 1989).

Age of the relationship (AGE) had no significant impact on any of the three institutional mechanisms, viz. CONT, INFO and COAL. Moreover, hypotheses involving Asset Specificity (ASST), Product Market Regulations (REGL) and Reputation Efforts (REPU), were largely unsupported by the empirical results.

The overall model had a system weighted $R^2$ of 0.3358. The system weighted $R^2$ in the 3SLS model is the $R^2$ of the entire system as if all parameters were part of one equation. A model explaining 34% of the variance in the endogenous variables is acceptable given the use of behavioral constructs. A revised model eliminating variables found insignificant was estimated and these results are provided in Table 4.4. The loss in explained variance due to elimination of many parameters is less than 2%.

Alternate Models

For any data, alternative models may fit the data equally well or sometimes, even better. In this case, two alternate approaches to model building are adopted. The first - Seemingly Unrelated Regressions - attempts to obtain estimates for parameters without the inclusion of the endogenous variable EFRE, while the second attempts to fit a model to the data by structural equations modeling using LISREL (Joreskog and Sorbom 1989). These Seemingly Unrelated Regressions (SUR) results along with an introduction to SUR are provided in Appendix E. Essentially, the two SUR models estimated are tests of hypotheses H1 through H5 as if effectiveness of the relationship was not of concern (see Figure E.1). The SUR models provided some support for the effect of AGE on the use of contracts and coalitions and for the effect of product market regulations on the use of contracts, but in comparison to the 3SLS model, these failed to detect significant effects for product complexity and resource environmental uncertainty.
### TABLE 4.4: THE REVISED 3SLS MODEL RESULTS

#### Endogenous Variables

<table>
<thead>
<tr>
<th>Predictors</th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
<th>EPRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHA</td>
<td>-.250*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.309)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCOM</td>
<td>.084*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.848)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>.307**</td>
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</tr>
<tr>
<td></td>
<td>(4.698)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVS</td>
<td>.164**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.060)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td>-.099*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.252)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMP</td>
<td></td>
<td>.306**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.793)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMAN</td>
<td></td>
<td>.290**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.210)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUNC</td>
<td></td>
<td>-.073*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.401)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td></td>
<td>-.263**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-3.297)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONT</td>
<td></td>
<td></td>
<td>.668*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2.276)</td>
<td></td>
</tr>
<tr>
<td>INFO</td>
<td></td>
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<td>.279*</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(1.493)</td>
<td></td>
</tr>
<tr>
<td>COAL</td>
<td></td>
<td></td>
<td>.827**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(3.265)</td>
<td></td>
</tr>
</tbody>
</table>

System Weighted $R^2 = .3211$

---

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

Ratio of Coefficient to Standard Error in parentheses

ANALYSIS AND RESULTS
Structural equations estimation packages such as LISREL enable the researcher to more meaningfully adapt their theoretical model to the data on hand. In this case, this was done by starting with the model identified as the 3SLS model. While this model was rejected significantly by LISREL, further examinations of the modification indices and reruns enabled the estimation of the model as presented in Table 4.5. In each case, only those paths that made the most theoretical sense and for which the modification indices were high, were estimated first. This process was continued about 5 times until the resultant model had a chi-square that was non-significant and acceptable. This process of model-building, though essentially empirical, did not lose sight of the theoretical meaningfulness of the model.

In the final model generated through LISREL, product market regulations (REGL), reputation efforts (REPU) and age of the relationship (AGE) are eliminated since the only paths connecting them to any dependent variable had coefficients that were low and all other possible but fixed paths had modification indices that were also low. The LISREL output reveals a positive coefficient for TECH on INFO, as was our original hypothesis, and BEHA and RUNC continue to have negative effects on CONT and COAL, respectively.

Additional insights from the LISREL model are the absence of significant effects of asset specificity (ASST) on contracts (CONT); the positive impact of ASST on informal agreements (INFO); and, the negative effects of ASST on coalitions (COAL). Moreover, market diversity (DIVS) now has a positive effect on COAL as well.

The positive effect of ASST on INFO, while not originally proposed as a hypotheses, makes sense especially given the empirical results of Anderson and Weitz (1992). It has been argued that investments in specific assets operate as pledges and guarantees that build trust and assure performance in interfirm relationships (Anderson and Weitz 1992). Thus, absent explicit contractual safeguards, the willingness of either or both parties to assume risk by investing in specific assets signals a degree of seriousness in the continuity of the relationship. Since informal agreements as an institutional mechanism foster coordination with little or no explicit contractual safeguards against non-performance, investments in specific assets may provide the necessary "hostages" that assure performance (Anderson and Weitz 1992; Williamson 1983).
### TABLE 4.5: LISREL MAXIMUM LIKELIHOOD RESULTS

#### Endogenous Variables

<table>
<thead>
<tr>
<th>Predictors</th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
<th>EFRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHA</td>
<td>-.271</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(-3.861)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ASST</td>
<td>.102</td>
<td></td>
<td>-.114</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.629)</td>
<td></td>
<td>(-2.110)</td>
<td></td>
</tr>
<tr>
<td>PCOM</td>
<td>.160</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.206)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>.278</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.297)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVS</td>
<td>.172</td>
<td>.130</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.731)</td>
<td>(2.467)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td>.098</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.872)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>COMP</td>
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<td>.272</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(4.289)</td>
<td></td>
</tr>
<tr>
<td>DMAN</td>
<td></td>
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<td>.212</td>
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</tr>
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<td></td>
<td></td>
<td></td>
<td>(3.547)</td>
<td></td>
</tr>
<tr>
<td>RUNC</td>
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<td></td>
<td>-.113</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-2.245)</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td></td>
<td>-.216</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-3.497)</td>
<td></td>
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</tbody>
</table>

CONT          | .515  |      |      |      |
|              | (1.558) |      |      |      |
INFO          | .340  |      |      |      |
|              | (1.815) |      |      |      |
COAL          | 1.010 |      |      |      |
|              | (4.306) |      |      |      |

Chi² with 24 df = 26.65 (p = .321)

GFI = .977     AGFI = .900     RMSR = .032

Ratio of Coefficient to Standard Error in parentheses
The negative effect of ASST on COAL is also not surprising given recent advances in coalition formation in the marketing literature (see Achrol 1991). Achrol argues that the marketing coalition company is usually a temporary arrangement to achieve certain functional objectives and hence, can be conceived of as "functional alliance" rather than a broader "strategic alliance". Achrol's (1991) discussion of the marketing coalition company is similar to our discussion on coalitions; the main difference, however, is that we conceive of coalitions as merely an institutional mechanism rather than an entity with a clearly demarcated form as Achrol does. The substance of the argument, however, is not affected and, given the functional objectives behind the use of coalitions, it is readily apparent that these are envisioned over a specific time duration and hence, incentives to invest in specific assets may be absent. Thus, the negative effect of ASST on COAL, though not originally proposed, seems acceptable in rationale and retrospection.

Empirical results from LISREL suggest that in the presence of market diversity (DIVS), firms may choose between informal agreements and coalitions as the dominant institutional mechanism. The demarcation of choice between INFO and COAL in the presence of DIVS are, however, less clear. One could argue that if the firm's specific functional objectives are the management of diversity, then coalitions may be the preferred institutional option. If, however, the firm's concern is the continuity of the relationship with its current middlemen in the face of heterogeneous and complex markets, then informal agreements may be the preferred institutional option. It must, however, be reiterated that this is merely a post facto explanation that needs to be further empirically and explicitly tested.

**Summary**

Item measures for each construct in the hypothesized model were introduced in the beginning of this chapter, scales developed, and the models were tested using both simultaneous equations methods and structural equations methods. The results of the hypotheses testing was mixed, with some hypotheses finding clear support from the data, while others were rejected. Some parameters
were found to be significant in the direction opposite to that suggested by the theory and hypotheses, and explanations for these were provided. The next chapter concludes this thesis by summarizing and interpreting the methodological results in the context of theory.
Chapter V

CONCLUSIONS

This chapter provides a brief overview of the thesis presented in the preceding pages, discusses the empirical outcomes of theory testing procedures adopted, and elaborates on some limitations of the study as well as indicative ideas for future research.

Overview of the Study

The institutional environment of the downstream relation for firms is portrayed as one wherein the choice of an appropriate institutional mechanism for coordination is both facilitated as well as constrained by various factors specific to the nature of the transaction or to the particulars of market conditions. It is argued that the contract is merely one form of coordination and thus, is one of many different types of institutional mechanisms available to firms seeking to structure their marketing activities with other firms. The contract, in many cases, is the first-best alternative and probably the best mechanism to be adopted in cases where the parties are unsure of the performance and other characteristics of each other. Also, the contract is the first-best alternative in
a stable and non-volatile environment and when there are no substantial deviations from anticipated actions and outcomes. However, reality is never a never-changing phenomena and many changes are often unpredictable and unforeseen. The contract is the best mechanism to protect self-interest in an individualistic world and, especially in the absence of trust, it is the best safeguard against opportunism (Shell 1991; Williamson 1975). However, even as a safeguard against unrestrained self-interest, contracts, in many cases, give way to more flexible and/or cooperative and trusting relations. Thus, informal agreements, where identity of the exchanging parties as well as a longer horizon of exchanges are prime considerations, and coalitions, wherein team-building and resource and profit sharing considerations are paramount, were advanced as two other alternative institutional mechanisms to stand along with the traditional contract.

Unlike Gilmore (1974), who rather cynically called his treatise "The Death of the Contract", and for whom the empirical realities described by Macaulay (1963) held little theoretical relevance (see also Macaulay 1985), our thesis holds that contracts are important; however, they are only one among a host of institutional options that could be adopted in the inter-firm relation. And unlike some recent scholars who view arms-length market transactions and informal contracting and vertical integration as following along the same, or some, dimension, we hold that the institutional mechanisms of contracts, informal agreements and coalitions differ in kind rather than in degree.

While contracts as an institutional mechanism were identified as formal, court-enforceable working rules for structuring the downstream relation, informal agreements were viewed as arrangements wherein there is little or no formal planning and where trust, cooperation, communication, and expectations about continuity shape the institutional environment of the downstream relation. Coalitions are conceptualized as a group wherein the firm by operating as the "central office" enables the group members to bring in specialized skills and information, and share resources and profits. The assumed cooperation as in informal agreements gives way here to a form of functional collaboration.

The study further attempts to identify the conditions that are favorable to the adoption of any one amongst the three institutional mechanisms identified as above. It was argued that a number of factors specific to the firm as well as to the market conditions were important in the choice
among competing institutional mechanisms. Specifically, it was argued that under conditions of behavioral uncertainty, asset specificity, a high degree of regulations in the product market and product complexity, contracts would be the dominant institutional mechanism used to structure the marketing relation. Under conditions of task complexity, reputation building efforts by the firm, market diversity and technological change, informal agreements would be the preferred institutional mechanism. And, finally, when the firm and the channel member perform tasks that complement one another, and when there is considerable domain consensus between the firm and its channel member and when there is considerable uncertainty in the resource environment, it was argued that one would witness a relative predominance of coalitions. Moreover, since in informal agreements, identity of the parties is a prerequisite for building informality, cooperation and trust, such considerations are met when the relationship matures (Dwyer, Schurr and Oh 1987). Thus, it was argued that the age of the relationship would have a bearing on the use of informal agreements. Also, in cases where the parties haven’t had time to evaluate or even anticipate the other’s performance, i.e., when the relationship is still in its infancy, contracts and coalitions provide suitable approximations for effective coordination.

Smaller firms do not have the same resources for bargaining and negotiating as do larger ones, hence these would show a higher desire in forming informal networks with their marketing intermediaries. Besides, the smaller size and thus, possibly, the non-bureaucratic form of the organization would lend itself to informal communication and networking. It was for this reason that size was posited to be inversely related to the use of informal agreements. However, in order for the firm to occupy the central position in a resource pooling and sharing network, size could play an important role; hence, size was argued to be positively related to the use of coalitions.

Mere adoption of an institutional mechanism is not enough; the adopted institutional mechanism should be the best given the circumstances. Here is where, despite varied constraints as regards the transactions and the market conditions, institutional choice manifests itself. In order for the institutional choice to be right, it must be effective; and, in order for it to be effective, the institutional mechanisms must meet the varied performance and relational expectations. This concept of effectiveness operates as a restraint on the arbitrary adoption of any institutional mechanism;

CONCLUSIONS
however, on the other hand, it signifies the fit between the institutional mechanism adopted and the circumstances prompting it. Thus, it was argued that given any identified set of firm and market conditions, the correct institutional choice would have a high bearing on effectiveness. Or conversely, institutional mechanisms that are effective are adopted in particular hypothesized conditions as regard the transaction atmosphere and market conditions.

**Empirical Results**

The preceding discussions were stated in the form of hypotheses and conceptualized as a system of simultaneous equations, the solution for which could lend credence to the theory developed. Data were collected from 158 middle- to top-level managers (in fact, a very substantial proportion of the sample were Vice Presidents of Sales and Marketing in their companies). Diverse industries were represented in the sample to capture an adequate range of responses on the scales for industry/market antecedents. Most of the firms in the sample were manufacturing enterprises, save for a small percent of member firms of the NASM.

Industry heterogeneity, though desirable for the obtaining variations in the industry/market set of independent variables, could also be a source of unreliable measures found in the study. The specific reason for this unreliability could be the different interpretations of the same items by respondents in different industries. However, absent a single industry wherein all the industry/market conditions could be present to varying degrees, this heterogeneity was necessary, albeit at a loss of reliable measures for some of the constructs.

The general empirical results find a degree of support for the existence of three distinct institutional mechanisms of contracts, informal agreements and coalitions. The results of the confirmatory factor analysis delineate some important domains of each construct. These empirical results suggest that clearly written and comprehensive contracts serve to structure the relationship, afford control over various marketing activities and enable the identification of functions and responsibilities for the middlemen. In contrast, informal agreements are loosely structured, flexible
and cooperative with control over marketing activities as well as the identification of functions and responsibilities for the middlemen determined and communicated informally. In coalitional arrangements, the firm operates as a "central office" that regulates information, coordinates activities, resolves disputes and enables the firm and its middlemen to act as a team in an effort to win over potential customers from competitors.

Hypotheses were tested primarily through three-stage least-squares (3SLS) procedures. The results are depicted as Figure 5.1 and details on the performance of each hypothesis is provided below.

**The Use of Contracts**

It was argued in the preceding chapters that the use of contracts would be significantly influenced by behavioral uncertainty and asset specificity in the transaction and by the industry conditions of a high degree of product market regulations and highly complex products. The empirical influence of each of these predictors is discussed below.

**Behavioral Uncertainty and the Use of Contracts**

It was argued that the problems associated with performance evaluation primarily resulting from difficulties in the unambiguous statement of performance specifications as well as from performance measurement, could aptly be described as conditions where there is considerable behavioral uncertainty. In these cases, the agents' actions cannot be known precisely by the principal and thus, outcome control approaches may not be appropriate (Eisenhardt 1985). Instead, behavioral control, primarily through the control of processes, will be sought and the authority to impose such behavioral restraints may be obtained from the contract document.

However, empirical results indicate a significant but negative impact of behavioral uncertainty on the use of contracts. However, as discussed in the earlier chapter, this opposite sign, though
Figure 5.1: Summary of Results
contrary to the stated hypothesis, is acceptable given the argument that when behaviors are certain, performance expectations could be certain, and since contracts are heavily oriented towards performance criteria, one could expect behavioral uncertainty to have a negative impact on the use of contracts.

Asset Specificity and the Use of Contracts

It was argued that investments in specific assets that cannot be redeployed or salvaged when the relationship terminates expose the party making the investment to risks of opportunism by the other party. In order to safeguard against this exposure, the party making the investment would insist on a legally-enforceable contract that would specify conditions and redress.

Empirical results find only mixed support for this hypothesis. While the 3SLS estimations do not support this hypothesis, the LISREL output reveals a positive association of asset specificity with informal agreements and a negative association of asset specificity with coalitions. While the former association is in line with the empirical results of Anderson and Weitz (1992), the latter association is as yet untheorized.

Product Market Regulations and the Use of Contracts

It was hypothesized that a high degree of regulations in the product market would prompt the firm to resort to the use of contracts primarily to absolve itself of liabilities arising out of consumer or middlemen ignorance or self-interest. A written and completely specified contract and its implementation would provide the firm with a clear course of actions that could be tenable even under strict laws and litigations.

This hypothesis was largely unsupported, even though the SUR Model 2 (see Appendix E) detects a positive impact ($p < .10$) of REGL on CONT.
Product Complexity and the Use of Contracts

It was argued that complex products require detailed specifications that preclude the use of more informal forms of institutional mechanisms. Moreover, incorporation of such specifications into the contract itself provides the necessary basis of unambiguous communication both in the downstream relation as well as within the firm.

The hypothesis was supported at a significance level of 0.10 by the 3SLS results. The use of a significance level of 0.10 is justified given the small sample with unreliable measures as well as the possibility that effects detected in this exploratory study may spark an interest in future research in this area. The LISREL model identifies product complexity (PCOM) as having a significant and positive impact on the use of contracts.

The Use of Informal Agreements

It was argued in the preceding chapters that when transactions are characterized by considerable task complexity and the transactions themselves take place in an atmosphere of reputation building, informal agreements would be institutional mechanism adopted. Moreover, when there is considerable market diversity and technological change in the specific markets and industry for the firms, informal agreements would be used to structure the downstream relation. The empirical results for each hypothesis is discussed below.

Task Complexity and the Use of Informal Agreements

If the tasks cannot be broken down into smaller, manageable units, then clear specification of these tasks is often a problem. In such cases, the frequent communication and trust fostered by informal agreements enables the firms not only to ultimately convey necessary information but also
dampen any potential conflicts and difficulties through extensive communications and trust. Thus, task complexity would be positively related to informal agreements.

This hypothesis was supported significantly by all the estimation procedures. The confirmation of this hypotheses could also be extended to the theoretical notions of joint ventures, wherein it is frequently argued that transactions requiring extensive planning and frequent exchange of information are better handled by creating newer, more collaborative organizational forms (Killing 1988).

Reputational Efforts and the Use of Informal Agreements

Absence explicit safeguards as in the contract, one of the major deterents to opportunism is the reputation of the firms as signalled by their performance in current transactions (Shell 1991). Thus, due to a reputation spillover, non-performance and opportunism in the current transaction may affect future business dealings and ultimately affect the firm more adversely. Since informal agreements are exchanges conducted in, "the shadow of the law", so to speak, it was argued that reputation efforts would have a direct impact on the formation of informal agreements.

Empirical results do not support this hypothesis. While the hypothesis retains its intuitive appeal despite this empirical rejection, no counter arguments are clearly evident as to why reputation efforts should not be significantly and positively related to informal agreements. Given the significant correlation of this variable with effectiveness, it may be possible, however, that reputation efforts, regardless of the institutional mechanism chosen, would contribute to the effectiveness of the relationship.

Market Diversity and the Use of Informal Agreements

In cases where there is considerable heterogeneity in the consumer sector and when there is a lack of information about the finer details of the market, the firm often finds a need to tap informational sources close to the market. Precise and reliable information can be obtained from the
middlemen, so long as the right incentives are provided. Usually, such incentives are not clearly spelled out but rather, take the form of frequent exchanges of information and other resources and skills. These exchanges of information by themselves bond the firms together into more committed relationships involving the trust and cooperation characteristic of informal agreements.

This hypothesis is unambiguously supported. Further credence to the original source of this hypothesis, i.e. market diversity is positively related to participative forms of organization, is also obtained from our empirical results.

**Technological Change and the Use of Informal Agreements**

Rapidly changing technological environments call for frequent adaptations to marketing relationships. Such frequent adaptations cannot be efficiently and costlessly handled when contracts are the dominant institutional mechanism. Rather, such frequent adaptations call for frequent exchanges of information, changes in marketing strategy and its implementation, rapid execution of certain actions, etc., all of which are generally facilitated when the downstream relation is characterized by informal agreements.

While the hypothesis of positive relationship between technological change and informal agreements is rejected, data reveals a significant negative impact of technological change on informal agreements. These results suggest that informal agreements may be chosen even in stable technological environments.

**The Use of Coalitions**

It was argued in the earlier chapters that complementarity in transactions and domain consensus between firms would be conducive to the use of coalitions in structuring the downstream relation. It was further hypothesized that uncertainty in the resource environments would prompt
the use of coalitions as a preferred institutional mechanism. The empirical conclusions for each of these hypotheses is presented below.

Complementarity and the Use of Coalitions

For many marketing activities, it is expected that the firm and its middlemen perform tasks that are not independent of each other, but rather complement each other in the pursuance of the same objective. This tandem nature of activities performed call not only for closer collaboration between the firm and its middlemen, but also for the creation of some form of a vertical value-chain wherein the tasks are sequentially arranged for execution by different firms and carried out under the general supervision of the focal firm. Thus, the manufacturing firm could act as a channel captain overseeing the performance of all tasks in accordance with a broader strategic plan and also issue directives on execution and responsibility. Complementarity in the nature of the tasks that need to be performed call for a more directed institutional mechanism that is provided by coalitions.

Empirical results support this hypothesis. Thus, coalitions, by mimicking the vertically integrated firm, may provide for the same benefits of creating a value-chain of directed activities (Porter and Fuller 1986), but also retain considerable flexibility in their organization (Achrol 1991).

Domain Consensus and the Use of Coalitions

When the role and scope of each agency is well-defined within a network of firms, the conditions for collaboration and as well as for sequential and directed actions are also facilitated. These conditions obtain better fruition when coalitions are the preferred institutional mechanism.

The above argument is well supported by the analyzed data, thereby lending credence to other similar propositional frameworks wherein domain consensus is argued to predict centralization in organizational structuring (Van de Ven and Ferry 1980).

CONCLUSIONS
Resource Environmental Uncertainty and the Use of Coalitions

It was argued that when the resource environment exhibits considerable uncertainty, firms interested in common goals and mutually beneficial outcomes would bind together, pool resources and skills, and thus minimize competitive pressures and business risks. Thus, it was argued that under conditions of resource environmental uncertainty, the form of team-building, resource pooling and benefit-sharing arrangements facilitated by coalitions would be evident.

Empirical results find effect of resource environmental uncertainty on the use of coalitions to be significant though in the direction opposite (negative) to that hypothesized. An interpretation of this result was provided in the earlier chapter, primarily resorting to the argument that even certain but resource rich environments could prompt the formation of functional coalitions to exploit munificent resource environments.

Effects of Age and Size

It was argued that as the relationship between the manufacturer and the middleman matures, both contractual and coalitional institutional forms would be supplanted - transaction and market conditions permitting - by informal agreements. As such it was hypothesized that the age of the relationship would be negatively related to both contracts and coalitions and positively related to the use of informal agreements. Empirical results reveal that the coefficients for age of the relationship (AGE) on CONT, INFO and COAL are in the same direction as hypothesized but largely insignificant.

It was also argued that larger firms would be more prone to coalitional activities since they have the requisite ability to provide direction to the entire network, while smaller firms would be more inclined towards using informal agreements because, absent bargaining or negotiating power ex ante, as well as adequate resources ex post, they may not be able to strike either good beneficial contracts or form coalitions with middlemen. Data reveals that size is indeed negatively related to
informal agreements and bears a significant coefficient, while the effect of size on coalitions, though positive, is largely insignificant.

Effectiveness of the Relationship

Under hypothesized conditions, it was argued that the preferred institutional mechanism would also be very effective, with effectiveness itself being measured as the degree to which the firms perceived their relation with middlemen as worthwhile, satisfying, and productive as well as degree to which the middlemen met their performance expectations. In empirical testing, effectiveness was used as the identifying restriction on the estimation procedure such that the parameter estimates for other exogenous variables in the models were constrained by the relation between each institutional mechanism and effectiveness. Empirical results were largely supportive of the relation between institutional choice and as well as between some of the preconditions for institutional choice and the adoption of a particular institutional mechanism.

Given the above discussion of results, it could be said that product complexity supports the use of contracts; task complexity and market diversity predict the use of informal agreements; and, complementarity and domain consensus favor the use of coalitions. Also, small firms are more likely to form informal agreements with their downstream partners. Further, it is interpreted from the empirical results that contracts may be motivated with a desire to reduce behavioral uncertainty; informal agreements may be effective even in Technologically stable industries; and, coalitions may be formed even in resource environments that lack uncertainty.

CONCLUSIONS
Methodological Limitations and Future Research

A number of methodological limitations of the study are presented below along with, wherever applicable, suggestions as to how future research could overcome these limitations.

1. Many of the variables in this study, including the key dependent variables of contracts, informal agreements and coalitions, were measured for the first time in this study. Absent prior scales, the processes of scale development as well as model testing were done using the same sample. Even though many of scales exhibit a high reliability, and thus, high internal consistency, the construct validity of each construct remains in doubt. Low reliabilities for some of the scales were a matter of concern. Further studies that have as their prime focus the development of measures of some of the key variables, primarily the institutional mechanisms of contracts, informal agreements, and coalitions, are needed. Such studies would also yield many substantive insights into the nature of these institutional mechanisms as well as to the exact demarcation between them along certain common dimensions.

2. A primary assumption underlying the conceptual model and testing of hypotheses drawn from this model was that apart from the discretionary behavior of firms in the selection of any institutional mechanism, the conditions within the particular industry or market in which each firm operates would also facilitate or constrain institutional choice. While diverse industries represented in the sample provide for instances wherein all the industry/market antecedents could be said to vary, it is not clear how the model holds for each specific industry. To ascertain this requires model testing for groups of firms within each industry, an approach that was precluded in this study by the inadequate number of firms sampled in each industry. However, the Pearson correlation coefficients for industries for which more than 10 firms responded, are provided as Appendix F. These industries are: (1) the Apparel Manufacturing, (2) Service Merchandising, (3) Firms denoted as Miscellaneous Manufacturing Firms as per their SIC Classification, (4) Food and Kindred Products, and (5) Computers and Peripherals
manufacturers. However, as can be discerned, the pattern of coefficients do not yield clear special insights, even though some of the variables that were found to have a significant effect on any institutional mechanism for the overall sample have a significant correlation coefficient with that particular institutional mechanism within some industries. It may be possible for future research, given its own budget restraints, to replicate the study using similar industry respondents and thus, contribute to a sufficiently large sample size to enable sub-group analysis as well as to enhance generalizability. However, such replications may only be wishful thinking since practical incentives are absent for researchers other than the current ones.

3. The testing procedures used simultaneous equations modelling techniques. The use, misuse and caveats for the adoption of such techniques, primarily developed for econometric analysis wherein contemporaneous correlations (such as between demand and supply) and time series analysis are a regular application, are not as yet fully known. Even though simultaneous equations techniques such as the ones used in our study have been recommended for use in such diverse applications as in geography (Todd 1978) and family research (Goodwin 1985), only two marketing study employ these studies for behavioral constructs (see Anderson and Weitz 1989; 1992). While the nature of the constructs themselves do not create the problem, interpretation of the coefficients, judgment calls as to sample size adequacy, largeness of the $R^2$, etc. are clearly affected. Further investigation is necessary in the use and misuse of such techniques for the models of the kind proposed by herein.

4. Finally, it should be noted that any causal interpretations from this study should be avoided, in part due to the methodology employed, but more so due to the pragmatic approach of holding in abeyance any conclusive causal interpretations from exploratory studies such as this one.

In conclusion it must be noted that despite the methodological limitations outlined above, which are largely due to constraints imposed by budgets, sample sizes and availability of adequate and appropriate samples, there is potential for significant theoretical advances based on the con-

CONCLUSIONS
ceptual integration in this study of interrelated streams of research from diverse disciplines such as marketing, organization theory, economics, contract law, sociology, and political science. Such combined impetus to theory building may lend itself to further theoretical extensions and conceptual advances that may perhaps be obtained from the brief note on the substantive implications of the study as noted below.

**Institutional Mechanisms and Coordination of Marketing Activities**

Some past and current perspectives on the coordination of downstream activities in marketing - an area of study referred to as "Marketing Channels" - were identified in Chapter 1. It was noted that while historically, economic, behavioral and relational paradigms have held a dominant position in academic thought in the area of Marketing Channels, a more integrative theoretical position may afford meaningful insights. The current study provides the stimulus to an inter-disciplinary theoretical integration and theory-building, wherein current advances in organization theory, economics, contract law, sociology, and political science are combined to develop a theory of marketing coordination. Also, in contrast to theoretical models that limit their explanation and prediction of marketing coordination to either one of economic, strategic, transactional, or relational considerations, the current theory recognizes all the relevant motivations impinging on coordination right at the outset. Moreover, rather than the study of economic, behavioral or relational dynamics of interaction between the firm and its middlemen, the current theory recasts such dynamics into a more comprehensive and broader problem of coordination itself.

The structural dynamics and alternatives for coordination have been, in the past, studied as production functions, governance structures, contractual forms, organizational forms, decision-making structures etc.. However, implicitly or explicitly, prior formulations of the problem of coordination have always given undivided attention to discretionary behavior of firms and to a rational human decision-making calculus in the adoption of any alternative mechanism for achieving coordination. The forces of customs, norms and rules that are inherent in particular
markets and industries were largely ignored except in cross-cultural or cross-national explanations of organizational activity. It is now apparent, at least amongst the institutionalists and the socioeconomists, that norms matter, tradition is relevant, and institutions persist despite inefficiencies, since efficiency itself may be derive its meaning only from the particular context (Goldberg 1980; Granovetter 1992). Neither market explanations nor cultural explanations may suffice by themselves, since the basis of exchange agreements is, as Hodgson (1988) notes, "not simply the rational calculation of abstract individuals with a view to their perceived costs and benefits," but rather, "a combination of both formal legislation and legitimation, and inherited custom and tradition of a less formal kind" (p. 156). It could be argued that markets, firms, governance structures and organizational forms do not take shape primarily because in specific rational contexts, these may be the best or the most efficient or impose the least costs or provide the greatest benefits, as has been the preferred explanations in both economics and contract law. Rather, any number of historic evolutionary forces and individual constraints may be responsible for unique structures of exchange. In explaining such a process of historical evolution, Granovetter (1992) focuses his attention on personal networks arguing that:

"In the case of the evolution of an industry, as for the development of firms and business groups, stable economic institutions begin as accretions of activity patterns around personal networks. Their structure reflects that of the networks, and even when those are no longer in place, the institutions take on a life of their own that limits the forms future ones can take; they become 'locked in'. Thus, economic problems and technology do not call forth organizational outcomes in some automatic and unconditional way. Instead, these economic conditions restrict what the possibilities are. Then, individual and collective action, channeled through existing personal networks, determine which possibility actually occurs" (p. 9).

The notion of institutional mechanisms advanced in this study does justice to the view that rational decision-making and cultural constraints are both intertwined in complex ways such that institutional choice is guided both by the possibilities of repeated exchanges as well as by the constraints of normative behavior. The management of interdependence becomes a crucial issue in coordination and the guiding principles to exchange are both adopted from norms present within industries and markets as well as created anew. Drawing similarities between the form of transactional security afforded by marriages and by commercial repeated exchanges, Kronman (1985) notes:

CONCLUSIONS
"Unlike the bond between parents and children, the marriage bond does not exist by nature and must therefore be artificially created. But the object of marriage, and its effect, is to establish between the parents an identity of interest that makes it increasingly difficult for either to view the other at arm's length .... Warring clans and commercial competitors, for example, may through intermarriage be able to increase each other's confidence in their future willingness to abide by the terms of whatever cooperative agreements they have made. Eventually, it is hoped, the distrust and suspicion inevitable in an arm's-length relationship will be replaced by the solidarity of a household community, making breach unthinkable. In a state of nature, intermarriage is one way to tap the springs of intimacy for the sake of contractual exchange" (p. 21-2).

Thus, what was once a clear-cut specific relationship evolves into a complex intermesh of forbearance, social rules and customs, loyalty, and even politics, and these in turn structure the diversities of organizational forms and processes around us. Description of these empirical realities is, as we have attempted to show, better afforded by recourse to the study of the underlying institutional mechanisms.

Marketing Channels is only one area within marketing which can gain by this notion of institutional mechanisms of coordination between firms and their marketing intermediaries. Such intermediaries are but only one constituency within the immediate environment of the firm with whom the firm seeks repeated exchanges; others being consumers, shareholders, suppliers, and even competitors (the last more true in Japan where "tie-ins", "cartels" and other "cooperative arrangements" are scarcely restricted by the government). The study of the institutional basis of securing coordination with consumers, especially in the translation of their needs into products bearing satisfaction, is at the core of marketing. Yet while the need to create long-term relations with one's customers and provide satisfaction to consumer needs have been much-touted, existing conceptualizations have either been of a narrow focus (such as studies attempting to explain and predict brand loyalty), or have been too broad to have a focus (such as the newly-emerging paradigm of "relationship marketing" with its inclusion of all things relevant to both relationships as well as to marketing!). In this context, the study of institutional mechanisms provides a much needed integrative focus of analysis, one that is devoid of both rational-substantive as well as functional-teleological explanations. It is hoped that institutional analysis of the kind presented in this study would, in the years to come, yield a fruitful arena of research activity not only for understanding and analyzing marketing channels and business-to-business relationships but also the firm's relationship with its suppliers, competitors and consumers.
REFERENCES


Anderson (1992), "The Use of Pledges to Build and Sustain Commitment in Distribution Channels", Journal of Marketing Research, 29 (February), 18-34.


Arndt, Johan (1979), "Toward a Concept of Domesticated Markets", Journal of Marketing, 43 (Fall), 69-75.


REFERENCES


(1990), “Common Knowledge and the Coordination of Economic Activities”, in Masahiko Aoki, Bo Gustafsson, and Oliver E. Williamson, eds., The Firm as a Nexus of Treaties. London: SAGE Publications, 53-76.


REFERENCES


Frazier, Gary L. and Charles O’Neal (1986), "Perceptions of Inter-firm Power and its Use within a Franchise Channel of Distribution", Journal of Marketing Research, 23 (May), 169-76.


REFERENCES


Hage, Jerald and Michael Aiken (1967), "Relationships of Centralization to Other Organizational Properties", *Administrative Science Quarterly*, 12 (June), 72-92.


REFERENCES


Kuhn, Thomas (1962), The Structure of Scientific Revolutions. Chicago, Ill: Chicago University Press.


REFERENCES
and Sidney G. Winter (1982), An Evolutionary Theory of Economic Change. 
Cambridge, MA: Harvard University Press.


North, Douglass C. (1990), Institutions, Institutional Change and Economic Performance, 
Cambridge, UK: Cambridge University Press.

of Business, 61 (April), 197-218.


(March), 120-42.

Contracting", Journal of Legal Studies, 13 (June), 265-88.


University Press.


11-45.


Pfeffer, Jeffrey and Gerald Salancik (1978), The External Control of Organizations: A Resource 

Pindyck, Robert S. and Daniel L. Rubinfeld (1981), Econometric Methods and Econometric Forecasts. 

Polanyi, Michael (1958), Personal Knowledge: Towards a Post-Critical Philosophy. Chicago, IL: 
The University of Chicago Press.

New York: Free Press.


REFERENCES
References


Sawa, Takamitsu (1972), "Finite Sample Properties of the k-Class Estimators", Econometrica, 40 (July), 653-80.


Shavell, Steven (1979), "Risk Sharing and Incentives in the Principal and Agent Relationship", Bell Journal of Economics, 10 (Spring), 55-73.


____________ (1957), Models of Man. New York: John Wiley and Sons.


Stigler, George J. (1951), "The Division of Labor is Limited by the Extent of the Market", *Journal of Political Economy*, 59 (June), 185-93.


Warren, Roland L. (1967), "The Organizational Field as a Focus for Investigation", *Administrative Science Quarterly*, 12 (December), 397-419.


Appendix A

THEORETICAL PERSPECTIVES ON ORGANIZATION

There is neither any consensus amongst the proponents of the various theories of the firm nor is there a set of objective criteria for the assessment of individual theories. What ultimately emerges is a coalesced mass of theories, each burdened with a set of biases reflecting the theorists’ orientation (cf. Machlup 1967). The “theory of inter-organizational relations”, on the other hand, suffers from the lack of even a single cogent formulation, while at the same time, remaining inconsistent with any theory of the firm. The lack of adequate theoretical development precludes a unifying “paradigm” or metastructure under which the individual theories could be organized. At the same time, the absence of fit between the theory of the firm and a corresponding theory of interorganizational relations, places the question of what determines the boundaries of the firm away from an immediate tractable resolution.

15 As Barney and Ouchi (1986) rue: “Whereas microeconomics has many of the attributes of a discipline approaching a paradigmatic shift, organization theory has many of the attributes of a discipline in search of a paradigm” (p. 11).
The review presented herein attempts to identify some key constituents or building blocks common to conceptions on organizations from diverse fields such as economics, contract law, sociology and political science. It is hoped that such an attempt may shed some valuable insights to the institutional structure of the downstream relation. Also, the theoretical history of the various concepts introduced in Chapter 2 of the text should be clear from this Appendix.

The organization of this long Appendix is as follows. First, the insights from the field of micro-economics, particularly, the neo-classical view of the firm are presented along with its criticisms. Other micro-economic theories that follow include perspectives on the Coasian firm, transaction cost economics, agency theory, ownership-as-control framework, self-enforcing contracts and multilateral transactions framework. The purpose of this section is to highlight the theoretical history of formal and informal contractual relations.

In the next section, some recent developments in contract law are discussed primarily to demonstrate the developments within contract law, of the notions of relational norms and long-term relations based on trust and commitment.

Varied insights from sociology are reviewed in the following section. Such insights have found their way in management and organization theory literature as resource dependence perspective, social network theory and institutionalization theory. Such sociological insights point to the embeddedness of economic relations in a broader social context.

Finally, some insights from political science are distilled to emphasize relations of power and the role of interest groups and coalitions in and among organizations. The Appendix ends with a very brief discussion on an integrated view of the organization of economic activity.
Insights from Microeconomics

Theories of the firm abound, both in number and within such categories as the neo-classical, managerial, behavioral and institutional. While a detailed review of the various theories of the firm is tangential to the present exercise, the review presented herein identifies only the central problems of organization and inter-organizational relations. It is hoped that the emergent issues may not only shed insights to an integrated and multi-disciplinary approach to theory-building but also uncover some key inputs to the institutional bases of inter-firm coordination.

The Neo-Classical Firm

The firm in neoclassical economics has been called the “representative firm” and can be simply characterized by a production function transforming inputs into outputs according to some law of increasing returns (Best 1990; Marshall 1920; Machlup 1967). Marshall’s partial equilibrium theory, unlike the Walrasian general equilibrium framework, attempted to integrate a theory of exchange with one of production, thereby concentrating on the costs of production (Marshall 1920). The goal of the firm was to counter nature’s tendency of diminishing returns by an improved organization with low production costs and thus, increasing returns (Marshall 1920). Increasing returns resulted from increased inputs of labor and capital and the relation of these inputs to the output were specific to each industry (Best 1990; Marshall 1920).

To counter the problems in the Marshall-ian formulation Pierro Sraffa suggested two alternatives (Best 1990; Sraffa 1926). The first was the adoption of Walrasian general equilibrium theory with the firm as a “shadowy figure” operating in a perfectly competitive market with determinate

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16 The content of parts of this section is an adaptation from Best (1990).
prices (Best 1990; Hahn 1981; Sraffa 1926). The second was to undermine the assumption of perfect competition and assume that firms can set prices at the margin (Best 1990; Sraffa 1926). Both approaches have led to popular neo-classical variants to the theory of the firm. Disregard of the assumption of competitive markets has led to the analysis of monopolies, duopolies and oligopolies (Chamberlin 1933; Robinson 1931) while the indeterminacy of price due to either market failure considerations or due to transaction costs and externalities have found themselves in some "institutionalist" and "eclectic" notions of the firm (Arrow 1974; Williamson 1971). The notions of substitution and marginal analysis have not only resulted in the marginalist theory of the firm, but also to the transaction cost theory of the firm as propounded initially by Coase (Coase 1937; Machlup 1967).

Marginalist theories of the firm are rooted in price theory and competition.\textsuperscript{17} Under the traditional price theory, it is argued that the purpose of the model of the firm is not the explanation and prediction of the behavior of real firms, but instead, "it is designed to explain and predict changes in observed prices...as effects of particular changes in conditions" (Machlup 1967; p. 9). "In this causal connection the firm is only a theoretical link, a mental construct helping to explain how one gets from the cause to the effect" (Machlup 1967; p. 9).\textsuperscript{18}

Thus, what is central to the neo-classical approach to the theory of the firm is its focus on the hypothetical entrepreneur who makes optimal profit-maximizing choices given any environment (Moe 1984). The firm is merely a "black-box" or a "shadowy figure", with concern for efficiency, optimality, and equilibrium (Hahn 1981; Moe 1984). In fact, there is no "organization" in neo-classical theory, since all transactions are carried out with perfect information, unlimited knowledge and a series of efficient contracts across the market.

A summary of the basic tenets of neo-classical theory are noted in Table A.1. Each of the basic tenets have been challenged by various theorists and the seminal contributors to a dissenters'

\textsuperscript{17} Machlup (1967) asserts that, "to explain and predict price reactions under monopoly and oligopoly we need more than the construct of a profit-maximizing reactor" (Machlup 1967; p. 10-11).

\textsuperscript{18} However, ironic though it may seem, this idea of marginal analysis combined with the notion of "substitution" lie at the core of the Coasian firm as well, though the firm is no longer the fictitious marginal abstraction but a real marginal entity!
view of the firm is noted alongside each of the neo-classical tenet. While many of the arguments of the neo-classical view have been revised and some assumptions modified, the neo-classical approach has largely withstood the onslaught of the varied alternate theoretical approaches (cf. Williamson 1990a).

The Coasian Firm

While the Marshall-ian firm arranged all economic activities across the market, Coase (1937) attempts to answer the question: "Why do firms exist?". Specifically, Coase presents an alternative mode of organizing economic activities, namely, the firm (Coase 1937). The market and the firm are two distinct modes of coordination of economic activities and the preference for any one is guided by transaction cost considerations (Coase 1937).

In Coase’s seminal argument on the nature of the firm, the combination of an abstract marginal analysis along with the reality of the existence of firms is achieved remarkably by assuming that economic activities could be coordinated either by the price mechanism in the market or by the authority relationship within the firm (Coase 1937).19 “Outside the firm, price movements direct production, which is coordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur co-ordinator, who directs production” (Coase 1937; p. 333). Thus emerge firms in which the employment contract replaces the product contract, the latter being difficult to specify over the future since future demands and supplies are uncertain (Coase 1937).20 Coase argues that coordination, whether by the market or within the firm, involve costs of organizing the transaction. Where such costs are higher in the market due reasons

19 Thus, as Coase quotes D.H. Robertson, firms are like “islands of conscious power in this ocean of unconscious cooperation like lumps of butter coagulating in a pail of buttermilk” (Coase 1937; p. 333).

20 Coase (1937) asserts that “it seems improbable that a firm would emerge without the existence of uncertainty” (p. 338).
### TABLE A.1: THE NEO-CLASSICAL VIEW AND ITS DISSENTERS

<table>
<thead>
<tr>
<th>THE NEO-CLASSICAL VIEW</th>
<th>SOME DISSENTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Agents are Rational.</td>
<td>Economic Agents are only boundedly rational due to limits on their language</td>
</tr>
<tr>
<td>Economic Agents seek self-interest.</td>
<td>and cognitive processing abilities (Simon 1957).</td>
</tr>
<tr>
<td>Profit Maximization is the sole aim of the firm (entrepreneur).</td>
<td>Economic Agents are not only self-interested seekers but also opportunistic,</td>
</tr>
<tr>
<td>Due to external competition, only profit maximizing firms will survive.</td>
<td>i.e., they seek self-interest with guile whenever such behavior is feasible</td>
</tr>
<tr>
<td>The entrepreneur (firm) is endowed with perfect information.</td>
<td>and profitable (Williamson 1975).</td>
</tr>
<tr>
<td>Sales maximization with a minimum acceptable level of profits is the realistic aim that</td>
<td>Firms that are well-suited to their environments survive - a form of natural</td>
</tr>
<tr>
<td>is pursued by firms (Baumol 1959); Managers maximize their own perquisites and</td>
<td>selection of efficient organizational alternatives occurs (Alchian 1950).</td>
</tr>
<tr>
<td>discretionary resources (Williamson 1964); The firm is concerned with persistent,</td>
<td>Decision makers are not perfectly informed - they engage in optimal search</td>
</tr>
<tr>
<td>sustainable growth and managers attempt to enhance the market value of the firm in</td>
<td>(Stigler 1961), optimal risk-sharing (Arrow 1971), and resort to adaptive</td>
</tr>
<tr>
<td>order to avoid take-overs and ensure their own security (Marris 1964); Organizational</td>
<td>search mechanisms (Cyert and March 1963).</td>
</tr>
<tr>
<td>goals emerge and vary over time (March and Simon 1958; Cyert and March 1963).</td>
<td></td>
</tr>
<tr>
<td>THE NEO-CLASSICAL VIEW</td>
<td>SOME DISSENTERS</td>
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<td>------------------------</td>
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<tr>
<td>Decision makers have complete objective knowledge and planning can be centralized.</td>
<td>Knowledge is idiosyncratic and thus planning involves cooperation (Hayek 1945); Knowledge is also experiential with individuals possessing knowledge that cannot be objectively transmitted (Penrose 1959); Firms learn by doing with productivity improvements occurring through repeated production (Arrow 1962).</td>
</tr>
<tr>
<td>All exchange is voluntary and carried across the market.</td>
<td>Some exchanges are hierarchically coordinated (Coase 1937).</td>
</tr>
<tr>
<td>Transactions are efficient, i.e., without special costs.</td>
<td>All transactions have associated costs and these could be significantly high (Coase 1937; Williamson 1975).</td>
</tr>
<tr>
<td>Markets are efficient in the transformation of inputs to outputs according to some pre-determined production function.</td>
<td>Markets are innovative in their ability to set up new production functions through changes in products, processes, and organizational forms</td>
</tr>
<tr>
<td>Efficient, complete contracting is possible since relevant prices can always be negotiated.</td>
<td>Contracting is beset with problems since relevant prices cannot be determined - contracting, thus, may not be possible (Coase 1937); Contracts are always incomplete due to uncertainty and human bounded rationality (Hart and Holmstrom 1987; Williamson 1975).</td>
</tr>
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</table>
of uncertainty as well as the costs of discovering relevant prices, negotiation and administration of the contract, government regulatory action (such as sales tax), and differential risk attitudes, the firm may evolve and provide coordination at greatly reduced costs. It is in the identification of activities that are to be left to coordination mechanisms of the market versus ones that are to be included within the firm, that Coase acknowledges his debts to Marshall. Utilizing Marshall's notion of substitution at the margin, Coase argues that "a firm will tend to expand until the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm" (Coase 1937; p. 341).

Thus, the Coasian firm is an institution that economizes on transaction costs by resorting to alternative contractual structures (Faith, Higgins and Tollison 1984). While in the erstwhile neoclassical view, the firm was a "black-box" or a hypothetical entrepreneur, in the Coasian version, the firm, though still an abstract entity, is characterized by "contractual arrangements that differ from ordinary product markets" (Chueng 1983).

It could be argued that since Coase's aim was to elaborate on the *raison d'être* of firms, a number of questions were left unanswered. Questions such as "What are the relevant transaction costs associated with alternative economic organizations?", "How are the various transactions operationalized?", "How does one account for the self-interests of contracting parties in order to achieve efficient organization?", and some others are the distinct focus of post-Coasian theoretical approaches such as transaction cost economics and agency theory.

**Transaction Cost Economics**

While the Coasian firm is evolved out of marginalism with respect to transaction costs, Williamson (1971; 1975) takes a slight departure in propounding a neo-classical institutional theory of the firm that has as its origins contractual analysis and assessment of comparative efficiency of
alternative modes of organization (Williamson 1988a). Drawing from Coasian insights on comparative forms of organization, and from Simon’s elaboration of the authority relation and the notion of bounded rationality, Williamson provides a theoretical framework that addresses issues such as vertical integration, franchise bidding, credible commitments, multi-divisional structures and organization of work (Williamson 1975, 1979, 1980, 1985, 1986, 1988a).

Williamson (1975) attempts to analyze the reasons why some activities by firms are undertaken across a market interface while others are carried out within the firm. Williamson (1975) argues for the importance of a microanalytical approach to the study of comparative institutional economics, an approach that has been alternatively labelled “new institutional economics” or “transaction costs economics”. Central to the understanding of Transaction costs economics is the notion of transaction costs themselves. These costs are, as Arrow (1969) put it succinctly, the “costs of running the economic system” and these “in general impede and in particular cases completely block the formation of markets” (p.48). Williamson (1985) identifies two types of transaction costs - ex ante and ex post. Ex ante transaction costs are the costs of drafting, negotiating, and safeguarding an agreement. Ex post transaction costs are of several forms. These costs are the costs of sustaining a contractual relationship and include a) maladaptation costs; b) haggling costs of bilateral efforts to correct contractual misspecifications; c) set up and running costs of governance structures; and, d) the bonding costs of securing effective commitments (Williamson 1985).

Following Coase (1937) who asserted that transaction costs are the economic basis of organizations, Williamson (1985) argues that neither technology nor ownership is determinative of economic organization. Instead, the examination of incentives and governance afforded by making transactions as the basic unit of analysis provides a better perspective on the decision to choose between the market and the firm as the mode of economic organization21 (Williamson 1985, p.393).

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21 As Leblebici (1985) points out, in Commons’ (1924, 1934) institutional analyses, transactions were the basic unit of analysis, but there is a difference in the approach adopted by Commons and the one followed by Williamson. One unit of transaction, for Commons (1924), was a product of the collective action of five distinct entities (p. 67). “A transaction ..... involving the minimum of five persons, and not an isolated individual, nor even only two individuals, is the ultimate unit of economics, ethics and law” (Commons 1924; p. 68). By contrast, Williamsons’ (1975) analysis deals primarily with the case of transactions beset by a condition of bilateral monopoly. Accepting the definition offered by Commons (1924), Leblebici (1985) argues that both Williamson (1975) and Ouchi (1980) define a transaction imperfectly.
However, even after recognizing the varying transactions costs associated with each mode of organization, the decision of choice between the two is further complicated under conditions that Williamson (1975) refers to as "organization failure".22 Williamson (1975) however, probes the underlying causes of failure and traces it to human attributes of bounded rationality and opportunism combined with the specific environmental condition of uncertainty and small numbers bargaining. The specific manifestation of organization failure is information impactedness, a condition whereby the true state-of-nature is "known to one or more parties but cannot be costlessly discerned by or displayed for the others" (Williamson 1975, p.31). The increase in transactions costs now places enormous restrictions on the occurrence of market transactions due to the complexity of the exchange atmosphere. Williamson's solution is, then, to move the transactions from the market to a more facilitating and efficient mode, that of internal organization. Table A.2 provides the form of each of the factors of organization failure under both markets and hierarchies.

Williamson (1979, 1988a) argues that in order to operationalize the transaction cost economics framework, a three-stage program is necessary. The first stage involves the adoption of a microanalytic comparative contractual perspective that has the transaction as the basic unit of analysis and recognizes the behavioral assumptions for contract assessment (Williamson 1988a). Allowing for the combined presence of bounded rationality and opportunism in the study of economic organization, it is evident that any trading would require the support of "spontaneous or crafted safeguards" (Williamson 1988a). Thus, the main concern for economic organizations are stated as - "organize economic activity so as to economize on bounded rationality while simultaneously safeguarding the transaction in question against the hazards of opportunism" (Williamson 1988a, p. 68).

The second stage in the transaction cost economics program entails the dimensionalizing of transactions and providing a discriminating match between the distinct classes of transactions and the alternative forms of governance so that the resulting economic organization is also the efficient

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22 Williamson (1975) admits that the underlying phenomena of organization failure and what had been erstwhile referred to in economics literature as "market failure" are the same except for the context and the details. Broadly defined by Bator (1958), market failure is, essentially, the same condition as organization failure. Market failure occurs, when the "more or less idealized system of price-market institutions" fail to "sustain 'desirable' activities or to stop 'undesirable' activities" (Bator 1958, p.351).
**TABLE A.2**

**SOME CONTRASTS BETWEEN MARKETS AND HIERARCHIES**

<table>
<thead>
<tr>
<th>MARKETS</th>
<th>HIERARCHIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BOUNDED RATIONALITY</strong></td>
<td>Specialization of decision-making and economizing on communication expense</td>
</tr>
<tr>
<td>Neurophysiological and language limits on human ability to receive, store, retrieve, and process information without error</td>
<td></td>
</tr>
<tr>
<td><strong>OPPORTUNISM</strong></td>
<td>Additional incentive and control methods imposing selective curbs</td>
</tr>
<tr>
<td>Strategic manipulation of information and misrepresentation of information</td>
<td></td>
</tr>
<tr>
<td><strong>UNCERTAINTY</strong></td>
<td>Independent units are coordinated to &quot;absorb&quot; uncertainty</td>
</tr>
<tr>
<td>Approximation replaces exactness in decision-making</td>
<td></td>
</tr>
<tr>
<td><strong>SMALL NUMBERS</strong></td>
<td>Bargaining indeterminacies resolved by fiat</td>
</tr>
<tr>
<td>Absence of competitive forces to drive the parties into competitive equilibrium</td>
<td></td>
</tr>
<tr>
<td><strong>INFORMATION IMPACTEDNESS</strong></td>
<td>Constitutional powers permit an audit to narrow the information gap between autonomous agents</td>
</tr>
<tr>
<td>Inequitable distribution or availability of information precludes information parity and creates hazards to exchange</td>
<td></td>
</tr>
<tr>
<td><strong>EXCHANGE ATMOSPHERE</strong></td>
<td>Less calculative</td>
</tr>
<tr>
<td>Calculative relations of a transaction-specific sort is encouraged and carefully metered</td>
<td></td>
</tr>
</tbody>
</table>

Created from Williamson (1975)
one (Williamson 1979, 1988a). The principal dimensions on which the transactions differ are (i) the frequency with which they recur, (ii) the degree and type of associated uncertainty, and (iii) the degree to which assets that are idiosyncratic to the transaction are deployed, i.e., the degree to which the assets deployed are specific to the transaction. The alternative forms of governance - markets and hierarchies - are comparatively efficient for each class of transaction so long as transaction costs involved are the lowest and there is a program for adaptive, sequential decision making (Williamson 1975, 1979). It is argued that recurrent transactions, and high degrees of uncertainty and asset specificity favor internal organization as the most efficient mode of economic organization (Williamson 1975, 1985).

The third stage in the transaction cost program is the examination of intertemporal process differences among the modes of economic organization (Williamson 1988a). Specifically this entails attention to the microanalytic details of the contract as well as the ex post contracting environment (Williamson 1988a). Thus, it is necessary to show that an ex post condition of bilateral monopoly obtains and that the decision makers are "sensitized to secondary consequences" (Williamson 1988a).

The Coasian distinction between coordination across the market and coordination via planning within the firm is given an explicit contractual focus by Williamson in elaborating on the specifics of transaction costs and the efficiency properties of markets and hierarchies. A host of studies exist, wherein researchers have, implicitly or explicitly, accepted Williamson's assumptions and his model and have empirically validated some parts of the model or its behavioral assumptions (Anderson 1985; John 1984; Masten 1984; Palay 1984; Walker and Weber 1984; and Weakliem 1989, to name a few representative studies). While a detailed review of each such study is tangential to the present exercise, what is of relevance for us is the identification of other major theoretical perspectives on the nature and dimensions of coordination of economic activities.
Agency Theory

An agency relation arises whenever there is a separation of ownership and control. Thus, in an agency relationship, one individual called the principal depends on the action of another individual, the agent, whose action and information cannot be costlessly and perfectly monitored (Pratt and Zeckhauser 1985). The principal enters into a contractual relation with the agent in the expectation that the agent will perform tasks or choose outcomes that are desired by the principal (Moe 1984). Since agents know more about the state of nature and their own decisions and tasks, the principal’s interests are safeguarded only if all the information were costlessly shared or if there were no additional costs to ensure that the incentives of the principal and the agent were aligned (Pratt and Zeckhauser 1985). However, in the real world, it is improbable that there is any costless information flow - hence, any contractual solution would remain only a second-best one (Pratt and Zeckhauser 1985).

The design of an efficient agency structure involves the minimization of agency loss or agency costs and usually utilizes a combination of inducements and enforcements (Pratt and Zeckhauser 1985). The specific solutions sought in the design of a suitable incentive and monitoring structure is the minimization of moral hazard and adverse selection (Arrow 1985; Moe 1984; Shavell 1979). Moral hazard refers to the case where the agent’s actions are hidden from the principal and the latter has no way of costlessly determining if the agent’s actions were in his (the principal’s) interests (Arrow 1985). Adverse selection refers to the case where the principal has no way of costlessly determining if the agent has used any information available solely to him in the principal’s interests (Arrow 1985).

Thus, the issues that agency theory raises are central to the understanding of hierarchical relations in the presence of information asymmetry. Agency theory views the firm as a nexus of contracts (Jensen and Meckling 1976) and is concerned with "the technology of monitoring and
bonding on the form of...contracts and organizations* (Jensen 1983; p. 334). While both the agency theory and transaction cost economics use similar assumptions and address some common issues, there are some important respects in which they differ (Williamson 1988b). These are outlined as Table A.3. Both agency theory and transaction cost approaches are concerned with a contractual perspective on hierarchical organizations. While the transaction cost approaches explicates the conditions wherein an hierarchical mode of coordination of economic activities would be superior to the market, agency theory is concerned with the specifics of the hierarchical contract. The latter identifies incentive alignment and monitoring as key inputs to a contract. More generally, it could be obtained from the above review that inducements and enforcements are necessary for efficient coordination between economic agents.

Ownership as Control

Whereas transaction cost economics recognizes vertical integration as the most efficient mode of economic organization for safeguarding specific assets in the event of ex post bilateral monopoly, a recent view proposes selective integration as an efficient alternative (Grossman and Hart 1986; Hart and Holmstrom 1987; Holmstrom and Tirole 1989). Grossman and Hart (1986) define the firm as composed of assets that it owns. Ownership itself is the purchase of residual rights of control (Grossman and Hart 1986). Since complete contracts can neither be written nor costlessly enforced (Williamson 1971, 1983; Williamson, Wachter and Harris 1975), the firm exists as a set of incomplete contracts that owns all residual rights except those specified in the contract (Grossman and Hart 1986). Since ex post benefits are negotiated on the basis of ex ante investment and the distribution of authority, control refers to the situation wherein one party obtains the right to make the ex post decision (Grossman and Hart 1986; Tirole 1988). Thus, integration is the case where one party has the residual rights of control while non-integration is the case wherein each
Table A.3

AGENCY THEORY AND TRANSACTION COST ECONOMICS
SOME CONTRASTS

<table>
<thead>
<tr>
<th></th>
<th>AGENCY THEORY</th>
<th>TCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of Analysis</td>
<td>Individual</td>
<td>Transaction</td>
</tr>
<tr>
<td>Focal Dimension</td>
<td></td>
<td>Asset specificity</td>
</tr>
<tr>
<td>Focal cost concern</td>
<td>Residual loss</td>
<td>Maladaptation</td>
</tr>
<tr>
<td>Contractual Focus</td>
<td>Ex ante</td>
<td>Ex post</td>
</tr>
<tr>
<td></td>
<td>Alignment</td>
<td>Governance</td>
</tr>
</tbody>
</table>

Source: Williamson (1988b)
party has authority over at least one of the dimensions of the decision space (Grossman and Hart 1986; Tirole 1988).

The Grossman and Hart (1986) analysis is important for at least two reasons. First, it makes no distinction between ownership and control as in agency theory, but defines ownership itself as the power to exercise control. Second, while it explicitly admits that contracting is incomplete, as in transaction cost theory, it goes further by elucidating that the ownership of residual rights (e.g. provisions not included in the contract) will reside with the firm that owns the asset. The Grossman and Hart analysis has important implications for vertical relations. Since ownership is a second-best solution to protect one’s specific investment, a retail outlet that has created a base of loyal customers for the firm’s product, “owns” the customers (in the Grossman and Hart sense of the term), and could exhibit considerable control over the allocation of decision rights (Grossman and Hart 1986; Tirole 1988).

The contractual perspectives reviewed have one common thread - since contracts cannot be costlessly devised and enforced, a hierarchical economic organization is more efficient. Moreover the incomplete nature of contracting is stressed in all the perspectives. They, however, differ in the exact specification of contractual rights and obligations to gain the power to coordinate (or integrate) the specialized activities of organizational units and economic actors. The above approaches could be termed the formal contracting branch in economics since an explicit contract coordinates the activities of the economic agent, be they employers and employees or producers and suppliers. However, given the long-run nature of the economic relations herein described, many contracting adjustments to contingencies are guided by some implicit contracting arrangements. The role of such implicit contracts in assuring coordination of economic activities is traced in the next section.
Self-Enforcing Contracts

It is now recently argued that while most recurrent transactions take place under the "shadow of the law", such explicit legal sanctions may not be the only enforcement mechanism available to contracting parties (Ben-Porath 1980; Galanter 1981; Macaulay 1963). In fact, it has been noted that non-contractual relations are the norm rather than the exception in the daily business world (Macaulay 1963). Since all contracts are incomplete and thus, unenforceable without costs by the law, then recourse of enforcement must be "internal" to the contracting parties (Hart and Holmstrom 1987). Such contracts are often termed "self-enforcing contracts" (Hart and Holmstrom 1987).

The fundamental premise behind self-enforcement is the balance between the need for flexibility in contract specifications and the need for avoiding costly transaction costs of legal enforcement. The arguments for informal agreements challenge the extant "legal centrism" view in contract law and economics (Galanter 1981; Williamson 1988a). The legal centrism view is based on the tenet that third-party or legal adjudication is always possible and that court resolution is an efficient enforcement mechanism (Galanter 1981). This tradition has been challenged in economics both within the transaction cost analysis as well as in recent contractual analyses (Hart and Holmstrom 1987; Williamson 1975, 1988a). It is argued that most contracts are deliberately incomplete and that a proper adjudication process requires considerable knowledge and information that judges or juries do not possess (Hart and Holmstrom 1987). However, the theory of self-enforcing contracts, though evolving in economics, has been studied only in the context of labor contracting and dynamic principal-agent models (Flanagan 1984; Hart and Holmstrom 1987; Radner 1981).

It has been argued that reputation is a major intangible asset that affords enforcement in the absence of courts (Cremer 1986; Macaulay 1963; Radner 1981). Transaction costs are lowered and contractual voids rendered non-significant if contracting parties have sufficient faith in the "corpo-
rate culture” or the firm’s reputation (Cremer 1986; Holmstrom and Tirole 1989). Such reputation could be built or enhanced through repeated transactions (Rädner 1981). Moreover, reputation in the present transaction affects the identification and exchange with future trading partners (Azariadis 1987; Macaulay 1963). However, for reputation considerations to operate, there should be sufficient information symmetry between the contracting parties and it should be in the self-interest of parties to treat promises and implicit understandings as binding (Hart and Holmstrom 1987).

The notion that transaction costs are akin to friction in economic systems and that trust between transacting parties is an efficient lubricant has been noted in the economic analyses of firms (Arrow 1974). It has also been argued that trust is a very unstable mechanism and cannot be subject to formalization in economic analyses (Williamson 1975). However, the strategic importance of reputation, custom and corporate culture and the transaction cost reducing properties of trust are now being increasingly recognized in the search for efficient contractual alternatives (Arrow 1985; Hart and Holmstrom 1987). The need for evaluating economic relations within the broader social context are now being stressed in most treatments that go under the rubric of “economic sociology” and “socio-economics” (Etzioni and Lawrence 1991; Granovetter 1985; Swedberg 1990).

For self-enforcing contracts to be adopted by the transacting parties, there are some primary requirements (Hart and Holmstrom 1987; Holmstrom and Tirole 1989). These include: (i) considerable psychic costs in breaking implicit agreements; (ii) sufficient repetition of transactions and observability of behavior; and, (iii) sufficient self-interests involved for parties to accept and adhere to implicit contracts.

It can be readily observed that it would be a challenge for economists to accept such principles within the standard microanalytic analysis of contractual relations. In fact, it has been observed that the design of self-enforcing contracts is primarily sociological with technological considerations playing only a secondary role (Hart and Holmstrom 1987).

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23 For example, it has been argued that IBM’s policy of not laying off employees in the absence of misdemeanor is part of its corporate culture and a principle that has been established by historic record (Holmstrom and Tirole 1989). Such a policy is neither a written or an oral contract but is still crucial for IBM’s reputation of providing reliable employment even under adverse external circumstances (Holmstrom and Tirole 1989).
Multilateral Transactions

The task of constructing a bridge between economic and strategic analyses in the realm of contracting is carried out by Cremer and Riordan (1987). It is argued that the notion of bilateral contracts in economic theory is restrictive since it fails to capture the reality of a firm signing bilateral contracts with each of its heterogeneous customers or labor force (Cremer and Riordan 1987). Thus, instead of conceiving the firm as a hierarchy of authority relationships, the firm is more realistically pictured as a vertical tree-like structure of transactions, each governed by a separate bilateral contract (Cremer and Riordan 1987). Such a conception of multilateral transactions is not restricted to internal organization only; it can be applied to multilateral transactions between firms in a vertical chain, joint ventures and cartels, and to multilateral transactions occurring without a hierarchical structure (Cremer and Riordan 1987).

Production or consumption complementarities and asymmetric information between any two parties are major driving forces in the prevalence of a set of bilateral contracts rather than one all-encompassing contract (Cremer and Riordan 1987). Efficient organization of multilateral transactions is obtained by a "central office" for coordinating and monitoring transactions (Cremer and Riordan 1987). This central office may be the manager within the firm or it may be the firm in relation to its various suppliers and customers (Cremer and Riordan 1987).

The analysis of overlapping contracts as in Cremer and Riordan (1987) above could also be treated as side contracts or coalitions (Tirole 1986). Here, agents sign a contract not only with the principal but also among themselves (i.e. side contracts) to form coalitions (Cremer 1990; Tirole 1986). Such interrelationships are due not only to incentive considerations of obtaining positive

\[24\] For a review on the importance of combining strategic insights and economic analysis, see Caves (1978) and Porter (1981).

\[25\] For a detailed review of coalition formation in economics, see Lee (1988).
pay-offs but are also due to the presence of bounded rationality (Cremer 1990). It is argued that
certain common ways of doing things or codes or rules have the efficiency properties of transmitting
information and improving coordination (Arrow 1974; Cremer 1987, 1990). Interrelationships be-
tween agents or coalitions lead to common knowledge of facts, rules and codes and thus enable
efficient coordination of economic activities (Cremer 1990).

A summary of the above reviews is provided in Table A.4 with specific mention of the
dominant conception of firms and the major coordination mechanism and institutional structure.
From the above review within economics it is clear that the contractual perspective couches some
essential features of contracts, informal agreements and coalitions. Relaxation of the notions of
completeness, formal specifications and court enforcement in bilateral contracts enables the study
of informal agreements between transaction parties. Similarly, dispensing with the idea of a single
bilateral contract between heterogeneous agents allows for the study of coalitions between and
among the various transacting parties. However, formal development of these notions await further
elaboration from contract law, sociology and political science, a task that is undertaken in the next
few sections.

Recent Developments in Contract Law

In contrast to the standard microeconomic treatment of the contract, the recent advances in
contract law take into explicit focus the entire relation between the contracting parties (Goldberg
1976; Macneil 1974, 1980a). Thus, instead of conceiving exchange as a discrete transaction, what
is clearly stressed is the analysis of complex, long-term and even multiparty contractual or
contract-like relationships (Goldberg 1980).
<table>
<thead>
<tr>
<th>Dominant View of Firms</th>
<th>Coasian Firm</th>
<th>TCE</th>
<th>Agency Theory</th>
<th>Ownership as Control</th>
<th>Self-enforcing Contracts</th>
<th>Multilateral Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority relation</td>
<td>Governance Structure</td>
<td>Nexus of contracts</td>
<td>Ownership of assets</td>
<td>Agreements</td>
<td>Hierarchical multilateral contracts</td>
<td></td>
</tr>
<tr>
<td>Markets; Firms</td>
<td>Markets; Hybrids; Hierarchies</td>
<td>Fiduciary relations</td>
<td>Incomplete contracts ownership</td>
<td>Unwritten policies</td>
<td>Central office</td>
<td></td>
</tr>
<tr>
<td>Price; Authority</td>
<td>Price; Authority</td>
<td>Incentives; Control</td>
<td>Control due to ownership</td>
<td>Reputation; Custom</td>
<td>Common knowledge</td>
<td></td>
</tr>
<tr>
<td>Reduction of transaction costs</td>
<td>Safeguarding specific assets</td>
<td>Incentive alignment</td>
<td>Obtaining decision rights</td>
<td>Securing efficient adaptations</td>
<td>Coordinating heterogenous agents</td>
<td></td>
</tr>
</tbody>
</table>
Economists hold that market forces would align the contracting parties to adhere to the contract through the operation of competitive mechanisms and credible threats (Klein and Leffler 1981). In contrast, however, the relational exchange branch of contract theory recognizes that sheltering the relationship from market forces is not only inevitable but also functional (Goldberg 1980). For this end, exit barriers are erected and a diverse array of institutional forces are devised to make it difficult or costly for any party to leave the relationship26 (Goldberg 1980).

Given that economic relationships are usually long-run or have long-run consequences (Macaulay 1963), the parties place considerable emphasis on establishing rules to govern the relationship (Goldberg 1976). Such rules may be explicit or may be based on tacit assumptions, and act as guidelines for adjusting to factors arising in the course of the relationship as well as for terminating the relationship (Goldberg 1976; Macneil 1974). It is argued that parties secure mutual advantages by building relationships with reciprocal content (Gouldner 1960; Lawry 1976; Macneil 1980a). Thus, instead of a bargaining approach to transactions, relations emerge as social phenomenon that can only be deduced from a primary commitment to social values (Lawry 1976; p. 16ff). Recent advances in legal theory recognize this social phenomenon wherein long-term planning objectives of the parties are recognized along with their concern for structuring relational arrangements that ensure stability and reciprocal mutuality (Lawry 1976).

Instead of an isolated analysis of the two-party contract, Macneil (1980a) argues that the contract itself is embedded and intertwined in society. The contract, thus, is the base of society and emerges due to specialization of labor and need for exchange, a sense of choice and a consciousness of the future (Macneil 1980a). Contract is interpreted as the "relations among parties to the process of projecting exchange into the future" (Macneil 1980a). Thus, the discreteness, presentation and legal sanctions so favored in discrete analysis of the contract as in economic theory are now underplayed (Macneil 1980a). Instead, the emphasis of relational contracting is the stress on (a) role integrity; (b) preservation of the relation; (c) harmonization of conflict through flexibility,

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26 Identifying the agenda for the relational perspective to contracting, Prof. Goldberg (1980) notes: "...relational perspective leads to a rather different set of questions than those raised by standard economic analysis: (a) what determines the structure of a relationship? (b) how will the structure and outcomes change as time passes? (c) what will be the impact of these structuring decisions beyond the relationship..." (p. 95).
procedural regularity and societal intervention, and; (d) the establishment of supracontract norms that are not particularly contractual (Macneil 1980a; p. 64-70).

The development of relational norms themselves have their sources in trust, mutuality, tacit assumptions, restraint of power, and more importantly the recognition of interdependence (Macneil 1978, 1980a). Instead of presentation, planning adjustments occur over throughout, and instead of discrete transactions, the duties and performances are complex and extend over an infinite time period (Macneil 1978, 1980a). Exchange clearly is multidimensional and rich in institutional mechanisms to achieve mutual goals (Macneil 1980a). Since the institutional mechanisms themselves are couched in a social matrix (Macneil 1980a), efficiency itself depends on the social context (Goldberg 1976). And if such social context were different, the efficient structure would also differ (Goldberg 1976). Clearly, the differences in institutional mechanisms would lead to a different structure that could be deemed efficient (cf. Goldberg 1976; Macneil 1980a).

*Insights from Sociology*

The primary difference between the conceptualization of organizations in economics and their sociological counterparts in the field that is now known as organization theory, is in the consideration of the broader social context in which firms exist. Organization theory is primarily a sociological and social psychological perspective applied to the study of organizations and inter-organizational relations. The major issues studied by organization theory are on the management and control in and between organizations; interactions of the organization and its environments; exchange, interdependence and power between organizations; evolution and decline of organizations, and; innovation and change in organizations. The field as such is large and interdisciplinary, with its primary conceptual as well as methodological inputs coming from sociology.
While the primary concern in microeconomic theories of organization as reviewed earlier, has been "internal" to the organization, the sociological approaches to organization focus also on the conditions "external" to the organization. While for the former, coordination between economic agents (both individuals and firms) is driven primarily by efficiency considerations (i.e. maximizing internal control), the latter favors the study of effectiveness of coordination (i.e. adaptability and acquisition of resources) between the firm and its environment (cf. Yuchtman and Seashore 1967).

The microeconomic formulation treats economic agents as purposive and rational and firms as "closed" systems in an environment that has no or little influence on the behaviors of agents and firms. In organization theory, by contrast, organizations are conceived of as "open", adaptive systems that interact with the environment (Emery and Trist 1965; Lawrence and Lorsch 1967; Thompson 1967).

The present section reviews some key perspectives on firms and interfirrm relations that, while having clear origins in sociology, comprise important domains of a field that is better known as organization theory. While a number of classification schemes may exist to group the individual theories and perspectives, the approach adopted here reviews some key theories within three major areas. In the first area, organizations are conceptualized as externally constrained and socially controlled (Pfeffer 1982). In the second area, organizations are adaptive systems that are capable of innovation and change through exchange with other organizations in a broader social environment (Cook 1977). Finally, in the third area, organizations are institutions that emerge or change in a wider social context (Zucker 1983). The major perspective in the first area is that of resource dependence. Social exchange and network theories dominate the second area, while institutionalization theory is the major exponent of the third area (See Table A.5).

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The field of industrial organization and strategic management, however, consider specific environmental characteristics such as market structure and industrial structure as affecting the firm's performance (Bain 1959; Porter 1980). It could be argued that no attempt is made by individual studies in such fields to link market and industrial structures to control efficiencies within firms. Moreover, another version of the same literature argues that such structure and inter-industry differences arise from differences in relative firm efficiencies (Demsetz 1973).
## Table A.5

### SOCIOLOGICAL PERSPECTIVES ON ORGANIZATIONS

<table>
<thead>
<tr>
<th>EXTERNAL CONSTRAINTS AND CONTROLS</th>
<th>INTERACTIONS WITH ENVIRONMENT</th>
<th>EVOLUTION IN SOCIAL CONTEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dominant View on Organizations</strong></td>
<td>Organizations manage or strategically adapt to their environment</td>
<td>Organizations are a network of exchange relations</td>
</tr>
<tr>
<td><strong>Dominant Theories</strong></td>
<td><strong>Resource Dependence; Population Ecology</strong></td>
<td><strong>Social Exchange; Relational Networks</strong></td>
</tr>
</tbody>
</table>

*Adapted from Pfeffer (1982). Only theories in bold characters are reviewed in text.*
The Resource Dependence Perspective

The crux of the resource dependence perspective is that organizations are not self-sufficient but are dependent on the external environment for obtaining critical resources necessary for organizational survival (Pfeffer and Salancik 1978). The external elements of the environment with control over such critical resources exert influence over the various activities and structure of the organization (Pfeffer and Salancik 1978). Thus, "the underlying premise of the external perspective on organizations is that organizational activities and outcomes are accounted for by the context in which the organization is embedded" (Pfeffer and Salancik 1978; p. 39).

The interdependence with key suppliers of critical resources cause the organization to respond more to the pressures and influence attempts from those groups (Pfeffer and Salancik 1978; Pfeffer 1982). A distinction is made between interdependence of outcomes of two or more social actors and the interdependence of the behavior of the two actors (Pfeffer and Salancik 1978). Interdependence of outcomes refers to the extent to which outcomes and social action may be competitively (with zero-sum results) or symbiotically (with complementary inputs and outputs) interconnected. Thus, for example, a firm may compete with other firms for a scarce resource from the environment (competitive interconnectedness) or a firm may be interconnected with its customers in one vertical relation such that the firm's output is the customers' inputs (symbiotic interconnectedness). Behavioral interdependence, by contrast, refers to activities that are by their very nature complementary, e.g. playing poker or assembly-line operations (cf. Pfeffer and Salancik 1978).

Competitive pressures for scarce resources necessary for survival lead the organization to form symbiotic interdependencies through interorganizational linkage activities (Pfeffer and Salancik 1978). Moreover, an attempt is made to restructure the internal political processes of the organization in order to better cope with environmental pressures and constraints (Pfeffer and Salancik 1978).
The resource dependence perspective argues for the formation of coalitions of either organizational actors or firms in order to manage resource dependence (Anderson 1982; Pfeffer and Salancik 1978; Pfeffer 1978). Thus, interfirm coordination is achieved by recourse to political processes. Since such political processes operate independently of the environmental factors, the resource dependence view envisages "a looser coupling between organizations and their environments than that implied by economics..." (Pfeffer 1982; p. 203).

The resource dependence view recognizes the importance of coordination only under conditions of environmental uncertainty and competitive interdependence (cf. Pfeffer and Salancik 1978). In order to alter the pattern of interdependence (i.e. from competitive to symbiotic) or to create a negotiated environment, organizations seek stable exchange relations with other organizations in the same environment (Pfeffer 1982). While the resource dependence view focuses on the exchange relation only as a strategy for managing dependence (cf. Pfeffer 1982), the other dominant view within the sociology of organizations - the social network theory - conceives organizations themselves as consisting of patterned, repeated exchanges among social actors (Pfeffer 1982; Weick 1969).

Social Networks: A Relational Approach

Social networks are treated in the sociological literature in two distinct ways. The substantial area focuses on the theoretical issues in the structuring of interorganizational relations (Benson 1975; Cook 1977; Emerson 1972; Evan 1966; Powell 1990). The methodological perspective treats networks as mere constructs created by the researcher in order to study the ties among individual entities as well as the processes of exchange occurring between them (Aldrich 1979; Tichy and Fombrun 1979). The latter conception, also known in literature as network analysis, is not reviewed here; instead, the structural properties of the relations within an interorganizational field or organization set is the focus of our concern (Evan 1966; Warren 1967).
The major premise of the relational network approach is that organizations are not isolated entities but are tied or embedded to the broader social context around them (Cook 1977; Powell 1990). Central to the conceptions of networks is the exchange relation (Cook 1977). It is argued that organizations engage in exchange relations to achieve negotiated environments (Cook 1977). Such organizational interactions are organized to achieve two key scarce resources - money and authority (Benson 1975). Thus, organizational networks are formed primarily for resource acquisition (Benson 1975).

Relational networks involve a series of indefinite and sequential transactions that are governed by normative sanctions or legitimations rather than legal sanctions (Benson 1975; Powell 1990). The core idea behind networks is the interdependence between varied parties controlling specific resources and the notion that collective gains can be obtained by pooling of the resources rather than by competitive actions (Powell 1990). Thus, parties to a network would sacrifice self-interest in order to attain collective action (Powell 1990). Such consensus over goals and activities are achieved through processes of communication and cooperation (Benson 1975). Such repeated communication and interactions also helps in the achievement of standardization of activities and formation of routines and rules (Benson 1975; Cook 1977).

The interactions between the network and its environment not only leads to redistribution of power relations within the network but also in the establishment of bonding mechanisms that serve to protect the network from damaging external influences (Powell 1990). Power dependence relations thus, serve not the individual actor but collective interests (Galaskiewicz 1985).

In contrast to the economic structures of markets and hierarchies, relational networks achieve coordination through legitimization, free communication, reciprocal actions, cooperation and strategic actions (Benson 1975; Powell 1990). Resource availability and power could often be centralized within networks leading to concentric circles of influence rather than the unilateral command chain in economic conceptions of internal organizations (Galaskiewicz 1985). Moreover, interorganizational networks possess a latent structure that could be mobilized into a coalition to meet certain instrumental or strategic goals (Barnard 1937; Turk 1977). This last feature of interorgan-
izational networks is the sharpest point of departure from the standard economic model of organization in which both strategic considerations as well as power considerations are largely absent.

While network theories are organized around the principal of collective action and the notion of pooling of resources for strategic ends, what is largely absent is a clear conceptualization of the institutional processes used to obtain collective action (Galaskiewicz 1985). Institutionalization processes and institutional change are the focus of institutionalization theory reviewed below.

\textbf{Institutionalization Theory}

The institutional aspects of organization theory focus on the identification of persistent and perpetuating features of organizations. It is argued that if organizations were instrumental or goal-seeking entities, they should disappear after the goals were achieved (Pfeffer 1982). However, organizations when conceived as institutions refer not only to the pressures of the institutional environment but also to the infusion of "value beyond the technical requirements of the task at hand" (Selznick 1957, p. 17; 1947; Zucker 1983). Institutions themselves refer to "rule-like, social fact quality of an organized pattern of action" as well as to "an embedding in formal structures, such as formal aspects of organizations" (Zucker 1987, p. 444). More commonly, institutionalization "involves the processes by which social processes, obligations, or actualities come to take on a rulelike status in social thought and action" (Meyer and Rowan 1977; p. 341).

In contrast to the self-interest propelled behavior in standard economic models, or the purposive model of action in most social sciences or even the coercive power models of sociology, institutionalization theory projects actions as emanating from the "taken-for-granted aspects of everyday life" (Zucker 1977, 1987). When institutionalization occurs from the environment, common practices are adopted that resemble the "purposes, positions, policies and procedural rules" characteristic of formal organizations (Meyer and Rowan 1977; p. 346). Such conformity of the organization to the collective normative order increases the organization’s "long run survival prospects"
(Meyer and Rowan 1977; p. 252). However, in such cases the activities of the organization are decoupled from each other as well as from the structure, thus leading to considerable task-related efficiencies (DiMaggio and Powell 1983; Zucker 1987). However, the technical activities are now more effectively coordinated leading to efficient production but the tasks themselves are inefficiently performed due to the dysfunctional effects of society and organizational goals may get deflected (Perrow 1986; Zucker 1987).

On the other hand, organizations themselves could generate institutional elements that favor effective coordination. Such institutional elements arise from small group and organizational level processes through the development of routinized action and formal roles, both of which are relatively stable and permanent (Zucker 1987). Thus, routines are created that not only enhance performance but are also communicable to new comers who reproduce the institutional elements further within the organization (Zucker 1977, 1987). A negotiated institutional order results. As Zucker (1987) notes: "Because institutional elements (structures, actions, roles) are authorized to legitimate other elements, institutional aspects are simultaneously highly stable and responsible for creating new institutional elements" (Zucker 1987; p. 446).

The institutionalization theory is thus concerned with patterns of values, that when implanted on the organization or when arising from within the organization, could lead to organizational re-structuring. While institutional theory is notably silent on the issue of how any social actor is affected by institutionalization, recent developments in political science treat institutions themselves as actors that need to be changed or mobilized (March and Olsen 1984). Such political conceptions are reviewed in the next section.

To recapitulate, sociological models of organizations are explicitly concerned with the goals of the organization. Such goals are multiple and also constantly under revision due to pressures from the environment. In general, the environment plays a major role in organizational goal formation as well in the pursuance of a suitable strategic course of action. Not only processes but also structures are changed with alternative social structures providing for efficiency and effectiveness. An evaluation of the three sociological perspectives from organization theory is presented as Table
A.6 with the comparative features explicated in terms of goals, strategic actions and social structures.

**Perspectives from Political Science**

While sociologists and organization theorists in general, tend to view organizations as normatively integrated holistic entities, they, by and large, ignore the political perspective of organizations (Bacharach and Lawler 1980). Organizations are conceived of as harmonious cooperative systems that attempt to establish social order in a given environment (Bacharach and Lawler 1980). Even the political economy and resource dependence perspectives, while studying intra- and inter-organizational power have largely ignored the political context in which such power is built and exercised (Bacharach and Lawler 1980).

A political perspective to organizations calls for the study of intra- and inter-organizational groups that are formed on the basis of interests, activities and ambitions (Dahrendorf 1959). Drawing from the work of Dahrendorf (1959), Bacharach and Lawler (1980) argue that work groups, interest groups and coalitions should be explicitly studied in organizations. Work groups are formed on the basis of departmental activity, or they may be formed due to organizational hierarchy (Bacharach and Lawler 1980). Interest groups are collectives of people within an organization who have similar goals and interests beyond the interdependencies of their work (Bacharach and Lawler 1980). Coalitions are a collection of interest groups striving towards a common goal (Bacharach and Lawler 1980).

In contrast to the sociological view, the political perspective treats power as having relational, dependence and sanctioning dimensions (Bacharach and Lawler 1980). Thus, power is not an attribute of any single person, group or organization; it is embedded in the social relation itself (Bacharach and Lawler 1980). Coalition politics are influenced by the authority relationship within
<table>
<thead>
<tr>
<th>RESOURCE DEPENDENCE</th>
<th>RELATIONAL NETWORKS</th>
<th>INSTITUTIONALIZATION THEORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOALS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtain key scarce resources from environment</td>
<td>Obtain key scarce resources from environment</td>
<td>Facilitate task related efficiencies</td>
</tr>
<tr>
<td>STRATEGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of interdependencies to reduce the constraints from environment</td>
<td>Pooing resources to facilitate joint action for obtaining scarce elements</td>
<td>Establish rules and routines for procedural and communication efficiencies</td>
</tr>
<tr>
<td>STRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coalitions</td>
<td>Networks</td>
<td>Customs</td>
</tr>
</tbody>
</table>
organizations with greater centralization of authority yielding lower coalitional activity within organizations (Bacharach and Lawler 1980). Other factors influencing coalition formation are scarcity of resources, routinized technology, low uncertainty, low conflicts of interest, good communication between the interest groups, and potential retaliation by opposing coalitions (Bacharach and Lawler 1980). Thus, the political view identifies more specific conditions for the formation of coalitions than the organization theory approaches which primarily focus on resource scarcity as the major determinant of coalitions.

Conceiving power as consisting of both domination and influence, the authority relationship is exemplified in the structural approach to politics (Knoke 1990). However, absent influence, power tends to be of a coercive nature and absent domination as well, the structural aspect of the relationship is truly egalitarian (Knoke 1990). Absent domination and with only influence, power is primarily persuasive in nature (Knoke 1990). Thus, the study of authority as the major coordinating mechanism in organizations, is only one aspect of the role power could play in organization theory!

**Organization: An Integrated View**

An integrated conception of organization has to include relational, sociological and political considerations along with the economic dimension. The major inputs towards an integrated view of organization from among the theoretical perspectives reviewed here are summarized as below:

1. The economic formulation of the contract overlooks important long-term and relational aspects of the relationship that would move its governance away from legal sanctions to other alternative structure(s).
2. The sociological analysis of organization present the reality that economic exchanges are embedded in a broader social context and that the development of bargaining and exchange norms are not merely restricted to the self-interests of the parties, but could emerge from the society and the environment.

3. The political perspective to organization make power and interests their explicit focus and predict group formations among economic agents (individuals as well as firms).

It is clear that the notions of contracts, informal agreements and coalitions are the dominant contributions of economics, sociology and political science, respectively, to the study of coordination within and between organizations.
Appendix B

DEFINITIONS AND DOMAINS
Table B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS

CONTRACTS

Definition The extent to which most aspects of day-to-day interactions are derived from complex working rules that are formal and written.

Domain Contracts are institutions that bind two firms in a legal relation. Such relations permit explicit safeguards to each party's self-interests. In contractual relations, rules for everyday working relations are obtained from the contract document which specifies price, quantity, quality, contingencies and redress. Contractual relations are usually inflexible and changes in the terms of the exchange call for contractual modifications ratified by legal considerations and terminology. In contractual relations, conflict resolution techniques often adopt references to the terms and clauses of the contract document as well as to legal threats and sanctions. Issues of self-interest are often invoked.

INFORMAL AGREEMENTS

Definition The extent to which the relation is characterized by little or no formal planning or rules, extensive use of promises, informal communication, pledges and guarantees, even when the relation is exposed to serious risks.

Domain Informal agreements are institutions that bind two firms in a flexible, cooperative relation. Parties using informal agreements usually forego immediate gains in favor of profitable long-term relations. Under informal agreements, rules for everyday working relations are obtained from promises, pledges, communications and consents that are made informally or are implicitly assumed. Informal agreements are extremely flexible and changes in the terms of the exchange are done informally and are rarely ratified. Under informal agreements, conflict resolution techniques often adopt references to common ideological concerns and to the gains from long-term relational continuity. Issues of cooperation are often invoked.
TABLE B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS (contd.)

COALITIONS

Definition The extent to which the various intermediaries are networked with the firm as the focal organization specifying tasks, recommendations and adjudication for the intermediaries.

Domain Coalitions are institutions that bind several firms together in a strategic partnership. Coalitions enable securing important resources or competitive advantages for its member firms. In coalitions, rules for everyday working relations are obtained from various marketing policy statements circulated by the firm. Such policy statements identify strategies and tasks for the achievement of various functional objectives. Coalitions are moderately flexible and changes in the terms of exchange are done through policy changes and memorandums that provide clearly written statements to which future references could be made. In coalitions, conflict resolution techniques often adopt references to common superordinate goals and to the gains from strategic partnership. Issues of collective concerns are often invoked.

BEHAVIORAL UNCERTAINTY

Definition The degree to which the agent’s actions cannot be completely accounted for or monitored due to problems in the measurement of agent’s performance or the costs of performance measurement.

Domain Behavioral uncertainty refers to the problems of observation, measurement, and evaluation of an agent’s performance. Such monitoring problems usually arise due to the nature and locale of the work performed. Monitoring and supervision tasks are especially compounded due to the non-availability of objective performance evaluation systems as well as due to the prohibitive costs of setting up a comprehensive control system. Information on the agent’s actions and decisions may not be easily and costlessly available to the firm, thereby exposing the firm to the risks of opportunism by agents.
TABLE B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS (contd.)

TASK COMPLEXITY

*Definition* The extent to which the activities required for marketing strategy or policy implementation cannot be broken down into small, communicable and easily delegatable tasks.

*Domain* Tasks are sometimes rendered complex by difficulties in analyzability and programmability. Analyzability refers to the ease and clarity of knowing the nature and order of various tasks to be performed. Predictability refers to the ease of determining in advance the outcome of any task or sequence of tasks. Task complexity exists when analyzability and predictability of tasks are very low, and hence, such tasks are usually left to individual discretion and guesswork. The opposite case, one of high analyzability and predictability lend easy programmability and routinization of tasks.

ASSET SPECIFICITY

*Definition* The degree to which idiosyncratic investments that are non-salvageable and non-redeployable outside of the relation are required for the implementation of marketing strategy.

*Domain* Asset specificity refers to investments that are made specifically for a particular exchange relation. Such investments, which may be physical or human, among other kinds, have little or no salvageable value outside of the exchange relation for which they are initially employed. This is due to the fact that exactly similar transactions may not be available in other exchange relations. The implication is that when the exchange relation is terminated, these physical assets or human skills possess no further practical use or liquidity.
REPUTATION EFFORTS

Definition The extent to which the company through various policies and personnel training emphasizes fair and protracted business dealings with its downstream firms.

Domain In many inter-firm relations, reputation-building efforts take the form of conscious actions by the firm and its personnel to build trust, cooperation and commitment in their external relations with other firms. Fair business dealings, protracted horizons over which most transactions are contemplated, and a very clear goal-directed agenda of creating and sustaining an image of the firm as a worthy business partner, are some such reputational efforts. Concern for continuity and commitment are paramount and the firm is clearly aware of the impacts of the present relation on future transactions with the same or other new exchange partners.

COMPLEMENTARITY

Definition The extent to which the firm and its downstream partner(s) perform activities that are not similar but complement each other.

Domain Separate and distinct, but nevertheless interconnected activities may be necessary for the achievement of a particular goal or strategic aim. While the performance responsibilities for such such activities may be split between the firm and its middlemen, the activities themselves are subsets of a larger domain of tasks necessary for successful execution of marketing strategy. The specialized knowledge, information, resources and skills that are necessary for the complementary activities performed by the firm and the middlemen may not be easily acquired by firm alone or the middlemen alone.
TABLE B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS (contd.)

DOMAIN CONSENSUS

*Definition* The extent of mutual agreements on expectations regarding the role and scope of agency.

*Domain* The convergence of expectations on what each firm will or will not do is referred to as domain consensus. Both parties concur on matters such as services, goals, roles, and solutions to needs or problems. A shared appreciation of the superordinate goals is present and there is an agreement on an agenda of patterned action.

PRODUCT MARKET REGULATIONS

*Definition* The extent to which the final product market is regulated by government agencies and consumer groups.

*Domain* The final product market is regulatory and subject to concerns about litigations and consumer legal actions. There is frequent intervention by the government in product issues, pricing, advertising and distribution issues. Moreover, some of these regulated industries also exhibit a high level of concerns and activities from various consumer and special interest groups.

PRODUCT COMPLEXITY

*Definition* The extent to which the product possesses numerous and diverse features that are technical in nature and complex in description.

*Domain* Product complexity exists whenever the product requires specialized skills in marketing and manufacture. Acquisition of such skills requires investments in education and training. Sales of the product require extensive communication of technical details.
TABLE B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS (contd.)

MARKET DIVERSITY

Definition  The extent to which there is heterogeneity and complexity in the consumer sector. Heterogeneity refers to the extent to which the environmental entities facing the decision-makers are dissimilar to one another and the minimal extent to which these entities are coordinated or structured. Complexity reflects the lack of information available to the decision maker with respect to the environment.

Domain  The market reflects tremendous differences in consumer characteristics and requirements. Information on consumers is difficult to obtain and analyze.

TECHNOLOGICAL CHANGE

Definition  The extent to which there is continuous and unpredictable change in the technology of a product and its manufacture.

Domain  A high level of technological change exists whenever there are numerous and rapid technological innovations, high levels of product and components obsolescence, frequent changes in designs and manufacturing techniques, and frequent changes in marketing techniques and practices.
TABLE B.1: DEFINITIONS AND DOMAINS OF THE CONSTRUCTS (contd.)

RESOURCE ENVIRONMENTAL UNCERTAINTY

Definition The extent to which the environment is perceived to be lacking in critical resources, primarily customers, as well as the decline or absence of marketing growth opportunities.

Domain Resource environmental uncertainty reflects the inability of the firms to identify prospective customers and market and sales opportunities. Such uncertainty may be due to broader business environment fluctuations (macro-economic and political changes) or from competitive pressures or from sharp changes in customer needs and preferences either for the product or its specific features or the quality levels of the product.

EFFECTIVENESS

Definition Simply put, effectiveness is the degree to which there is a "fit" between an action and its consequence. In the context of the theory developed in this thesis, effectiveness is the degree to which any institutional mechanism adopted provides the intended consequences of coordination with the middlemen.

Domain Effective institutional mechanisms are ones that lead to anticipated performance outcomes and relationship outcomes. Performance outcomes that are superior from those of competitors are the desired consequences of adopting the right institutional mechanism given the specific firm/transaction and industry/market conditions. Relationship outcomes are ones that ensure not only proper coordination but also relationships that are worthwhile, productive and satisfactory.
Appendix C

ITEM MEASURES
### TABLE C.1: MEASURES FOR ALL CONSTRUCTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEPENDENT VARIABLES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Contracts</strong></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>A clearly written and comprehensive contract provides the basic structure for our relationship with our middlemen</td>
</tr>
<tr>
<td>C2</td>
<td>Control over various marketing activities pertaining to promotions, sales, and customer relations is very clearly specified in the contract with our middlemen</td>
</tr>
<tr>
<td>C3</td>
<td>What keeps our firm and our middlemen together is that each party recognizes and upholds its own contractual obligations</td>
</tr>
<tr>
<td>C4</td>
<td>Specific functions and responsibilities for our middlemen are drawn from the contract document</td>
</tr>
<tr>
<td>C5</td>
<td>Disputes with our middlemen are resolved by references to contractual terms or through legal threats and sanctions</td>
</tr>
<tr>
<td>C6</td>
<td>Our firm often threatens to withdraw special benefits with respect to products, prices and exclusivity in order to obtain performances and conformity from our middlemen</td>
</tr>
<tr>
<td><strong>Informal Agreements</strong></td>
<td></td>
</tr>
<tr>
<td>i1</td>
<td>Clearly understood promises and guarantees, though made informally, are the basic underpinnings of our relationship with our middlemen</td>
</tr>
<tr>
<td>i2</td>
<td>Control over various marketing activities pertaining to promotions, sales, and customer relations are often determined and communicated informally</td>
</tr>
<tr>
<td>i3</td>
<td>Our firm’s relationship with our middlemen is loosely structured, flexible and cooperative</td>
</tr>
<tr>
<td>i4</td>
<td>Specific functions and responsibilities for our middlemen are often determined and communicated informally</td>
</tr>
<tr>
<td>i5</td>
<td>Disputes with our middlemen are resolved by reference to mutual benefits from the relationship or shelved for the sake of continuing the relationship</td>
</tr>
<tr>
<td>i6</td>
<td>Changes in prices, quantities and other distributional arrangements with our middlemen are often done informally</td>
</tr>
<tr>
<td><strong>Coalitions</strong></td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>Clear policy guidelines outlining strategic goals and functions is central to our relationship with our middlemen</td>
</tr>
<tr>
<td>L2</td>
<td>What keeps our firm and our middlemen together is that we all recognize that we need each other for fulfilling our common marketing goals and strategies</td>
</tr>
<tr>
<td>L3</td>
<td>In case of disputes and grievances, our middlemen accept the firm’s decisions as binding</td>
</tr>
<tr>
<td>L4</td>
<td>Our firm and our middlemen operate as a team to win potential customers from our competitors</td>
</tr>
<tr>
<td>L5</td>
<td>If a middleman is not meeting the performance responsibilities, we provide him/her with various short-term assistance as prescribed by our policy</td>
</tr>
<tr>
<td>L6</td>
<td>In our relations with our middlemen, our firm operates as a &quot;central office&quot; that regulates information and coordinates the various activities of the middlemen</td>
</tr>
</tbody>
</table>
### TABLE C.1: MEASURES FOR ALL CONSTRUCTS (CONTINUED)

#### Independent (firm/transaction) Variables

**Behavioral Uncertainty**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>There is a considerable time lag between the implementation of our marketing strategies by our middlemen and our evaluation of their performance.</td>
</tr>
<tr>
<td>B2</td>
<td>It is difficult for us to monitor the activities of our middlemen.</td>
</tr>
<tr>
<td>B3</td>
<td>The nature of the work performed by our middlemen is such that we cannot have an objective performance evaluation system in place.</td>
</tr>
<tr>
<td>B4</td>
<td>It is not easy for us to know if our middlemen are doing their work correctly.</td>
</tr>
<tr>
<td>B5</td>
<td>We cannot tell if our middlemen have been doing their best by merely looking at their sales performance.</td>
</tr>
</tbody>
</table>

**Task Complexity**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>It is difficult for us to specify clear-cut actions that we require from our middlemen.</td>
</tr>
<tr>
<td>T2</td>
<td>The marketing directives that we give to our middlemen cannot be completed and simply written.</td>
</tr>
<tr>
<td>T3</td>
<td>It is not possible to foresee in advance all the major tasks needed to be performed by our middlemen.</td>
</tr>
<tr>
<td>T4</td>
<td>Our middlemen frequently face difficult problems in their work for which there are no immediate or apparent solutions.</td>
</tr>
</tbody>
</table>

**Asset Specificity**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Our company has spent a lot of time and effort in learning about the local operations, markets, and methods of our middlemen.</td>
</tr>
<tr>
<td>A2</td>
<td>We have made a substantial investment in building up a specific marketing network with most of our middlemen.</td>
</tr>
<tr>
<td>A3</td>
<td>We cannot terminate our present middlemen without a major loss of financial and effort investments that we have made.</td>
</tr>
<tr>
<td>A4</td>
<td>It would be difficult for us to recover all the investments made in our marketing networks if our major middlemen decide not to work with us.</td>
</tr>
<tr>
<td>A5</td>
<td>Training and developing new middlemen in our company’s products, services, norms and practices would require considerable time, effort and money.</td>
</tr>
</tbody>
</table>

**Reputation Efforts**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Our firm consciously seeks to acquire a reputation for fair business practices with our middlemen.</td>
</tr>
<tr>
<td>R2</td>
<td>Our personnel spend extra time and effort in creating and maintaining good and trustworthy relations with our middlemen.</td>
</tr>
<tr>
<td>R3</td>
<td>Our firm understands that the nature of our relationship with our current middlemen plays an important part in getting other good middlemen to work for us.</td>
</tr>
<tr>
<td>R4</td>
<td>Our firm believes in having a long and healthy relationship with our middlemen.</td>
</tr>
<tr>
<td>R5</td>
<td>Our firm takes actions designed to build trust and cooperation in the relationship with our middlemen.</td>
</tr>
</tbody>
</table>
TABLE C.1: MEASURES FOR ALL CONSTRUCTS (CONTINUED)

INDEPEDENT (FIRM/TRANSACTION) VARIABLES (CONTINUED)

Complementarity

<table>
<thead>
<tr>
<th>Item</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>A majority of the marketing tasks performed by our middlemen complement those done by our marketing staff</td>
</tr>
<tr>
<td>M2</td>
<td>Our firm cannot obtain directly the kind of knowledge of local markets and customers that our middlemen possess</td>
</tr>
<tr>
<td>M3</td>
<td>We pool specialized knowledge, resources and skills with our middlemen in order to accomplish marketing tasks</td>
</tr>
<tr>
<td>M4</td>
<td>The inputs of our middlemen is crucial for the achievement of our marketing goals and objectives</td>
</tr>
<tr>
<td>M5</td>
<td>The marketing activities of our middlemen are so different from ours that if we were not to use the services of our middlemen, many marketing tasks would remain incomplete</td>
</tr>
</tbody>
</table>

Domain Consensus

Our firm and our middlemen are in agreement on issues such as

- each other's goals and responsibilities
- each other's functions and services
- solutions for various problems
- exact natures of the tasks to be performed
- conflict resolution techniques
- product assortments and handling of disputes on assortments
- territory assignments and handling of disputes on assignments
### TABLE C.1: MEASURES FOR ALL CONSTRUCTS (CONTINUED)

#### INDEPENDENT (INDUSTRY/MARKET) VARIABLES

**Product Market Regulations**

In many of the states in which we market our products through our middlemen, _____

- **PMR1** - there are strong and active consumer groups
- **PMR2** - there are numerous state laws that directly affect our marketing programs
- **PMR3** - there have been numerous instances of legal action against competitive firms by consumers and the government

The primary industries for which our firm uses middlemen is subject to considerable government regulations on _____

- **PMR4** - product quality
- **PMR5** - product constituents and features
- **PMR6** - packaging
- **PMR7** - pricing
- **PMR8** - distribution arrangements
- **PMR9** - vertical inter-firm cooperation
- **PMR10** - consumer safety
- **PMR11** - consumer health and hygiene

**Market Diversity**

Our final markets comprise of a number of diverse groups of consumers with each group being very different from others with respect to their _____

- **MD1** - demographics such as income, education, and social status
- **MD2** - preferences for product features, quality and credit requirements
- **MD3** - benefits sought from the use of our products
- **MD4** - ways of arriving at the purchase decision
- **MD5** - number and type of individuals involved in the purchase decision
- **MD6** - needs of appropriate marketing communications and contact

Information on the needs, buying processes, and other similar information on our potential and prospective customers _____

- **MD7** - is very difficult to obtain
- **MD8** - is very costly to obtain
- **MD9** - involves a lot of time and effort in collection and analyses
<table>
<thead>
<tr>
<th>ITEM MEASURES</th>
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<tbody>
<tr>
<td>TABLE C.1: MEASURES FOR ALL CONSTRUCTS (CONTINUED)</td>
</tr>
<tr>
<td>INDEPENDENT (INDUSTRY/MARKET) VARIABLES (CONTINUED)</td>
</tr>
<tr>
<td>Resource Environmental Uncertainty</td>
</tr>
<tr>
<td>For markets for which we use our middlemen, we are of the opinion that _____.</td>
</tr>
<tr>
<td>REU1 - future demand will follow a favorable pattern as in the past</td>
</tr>
<tr>
<td>REU2 - prediction of consumer demand and preferences is now easier than in the past</td>
</tr>
<tr>
<td>REU3 - it will be more difficult to identify marketing opportunities in the future</td>
</tr>
<tr>
<td>For the markets for which we use our middlemen, we feel that during the past three years _____.</td>
</tr>
<tr>
<td>REU4 - it has been difficult for us to identify prospective end-users</td>
</tr>
<tr>
<td>REU5 - our business has been affected by recession and unemployment in the economy</td>
</tr>
<tr>
<td>REU6 - our product lines have been under repeated competitive pressures</td>
</tr>
<tr>
<td>REU7 - our market potential has declined</td>
</tr>
<tr>
<td>REU8 - our final customers have shown a distinct change in their preferences for product quality, features and prices</td>
</tr>
<tr>
<td>Technological Change</td>
</tr>
<tr>
<td>The industries for which we use our middlemen is subject to _____.</td>
</tr>
<tr>
<td>TC1 - frequent manufacturing and marketing changes</td>
</tr>
<tr>
<td>TC2 - a high level of technical competition</td>
</tr>
<tr>
<td>TC3 - continuous technological developments</td>
</tr>
<tr>
<td>TC4 - a high risk of technological obsolescence</td>
</tr>
<tr>
<td>In the last two years, many of our products marketed through middlemen have undergone _____.</td>
</tr>
<tr>
<td>TC5 - substantial design changes</td>
</tr>
<tr>
<td>TC6 - substantial manufacturing process changes</td>
</tr>
<tr>
<td>TC7 - substantial changes in marketing efforts</td>
</tr>
</tbody>
</table>
TABLE C.1: MEASURES FOR ALL CONSTRUCTS (CONTINUED)

INDEPENDENT (INDUSTRY/MARKET) VARIABLES (CONTINUED)

Product Complexity

The products that we market through our middlemen ______

PC1 - are technical products
PC2 - require technical knowledge for sales
PC3 - are often customized for individual customer requirements
PC4 - require technical communications in manufacture and marketing
PC5 - require special education and training of our middlemen

PERFORMANCE VARIABLE

Effectiveness

As compared to other middlemen in the same industry, our middlemen are clearly better in ______

EF1 - their fulfillment of promises and obligations
EF2 - carrying out the initially agreed upon commitments
EF3 - their performance of various tasks, duties and responsibilities
EF4 - their ability to act in concurrence with our firm's goals and interests

EF5 We believe that the time and effort spent in developing and maintaining the relationship with our middlemen has been worthwhile
EF6 Our firm is satisfied with the relationship we have with our current middlemen
EF7 Our firm is satisfied with the performance of our current middlemen
EF8 We believe that the relationship with our middlemen has been productive
Appendix D

THE QUESTIONNAIRE
MANUFACTURER-MIDDLEMEN RELATIONSHIPS SURVEY

When responding to this questionnaire please consider your company's relationship with the middlemen who contribute most to your company's sales. For each of the items, please indicate the extent to which you agree or disagree with the statement. If you completely agree with the statement, please circle the "7"; if you completely disagree with the statement, please circle the "1". For responses that are intermediate, please circle an appropriate number from "2" to "6". If you are unsure about your response to any statement, please give your best estimate; it is important not to leave any item blank.

If you feel you are not well-informed to fill out this questionnaire, please pass it along with the cover letter to the person best placed within your company to answer the questions. All responses will be kept confidential and known only to the researchers.

I. Please indicate the type of middlemen who contribute most to your company's sales (circle one)

Dealers  Distributors  Retailers  Wholesalers  Commission agents

All questions will now refer to your firm's relationship with the type of middleman circled above.

II. The following statements refer to the general nature of your firm's relationship with the middlemen. If you completely disagree with a statement, please circle "1"; if you completely agree, please circle "7"; for all intermediate responses, please circle an appropriate number from "2" to "6".

Clearly understood promises and guarantees, though made informally, are the basic underpinnings of our relationship with our middlemen

A clearly written and comprehensive contract provides the basic structure for our relationship with our middlemen

Clear policy guidelines outlining strategic goals and functions is central to our relationship with our middlemen

Control over various marketing activities pertaining to promotions, sales, and customer relations is very clearly specified in the contract with our middlemen

Control over various marketing activities pertaining to promotions, sales, and customer relations are often determined and communicated informally

What keeps our firm and our middlemen together is that each party recognizes and upholds its own contractual obligations

What keeps our firm and our middlemen together is that we all recognize that we need each other for fulfilling our common marketing goals and strategies

THE QUESTIONNAIRE 182
Our firm's relationship with our middlemen is loosely structured, flexible and cooperative.  

In case of disputes and grievances, our middlemen accept the firm's decisions as binding.  

Specific functions and responsibilities for our middlemen are often determined and communicated informally.  

Specific functions and responsibilities for our middlemen are drawn from the contract document.  

Our firm and our middlemen operate as a team to win potential customers from our competitors.  

Disputes with our middlemen are resolved by references to contractual terms or through legal threats and sanctions.  

Disputes with our middlemen are resolved by reference to mutual benefits from the relationship or shelved for the sake of continuing the relationship.  

If a middleman is not meeting the performance responsibilities, we provide him/her with various short-term assistances as prescribed by our policy.  

In our relations with our middlemen, our firm operates as a "central office" that regulates information and coordinates the various activities of the middlemen.  

Our firm often threatens to withdraw special benefits with respect to products, prices and exclusivity in order to obtain performances and conformity from our middlemen.  

Changes in prices, quantities and other distributional arrangements with our middlemen are often done informally.  

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

II. The following statements refer to the nature of your firm's every-day working relationships with your middlemen and the actions of both your firm as well as your middlemen. If you completely disagree with the statement, please circle "1"; if you completely agree, please circle "7"; for all intermediate responses, please circle an appropriate number from "2" to "6".

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

There is a considerable time lag between the implementation of our marketing strategies by our middlemen and our evaluation of their performance.

It is difficult for us to monitor the activities of our middlemen.

The nature of the work performed by our middlemen is such that we cannot have an objective performance evaluation system in place.

It is not easy for us to know if our middlemen are doing their work correctly.

We cannot tell if our middlemen have been doing their best by merely looking at their sales performance.

It is difficult for us to specify clear-cut actions that we require from our middlemen.
The marketing directives that we give to our middlemen cannot be completely and simply written ..........................................................

It is not possible to foresee in advance all the major tasks needed to be performed by our middlemen ..........................................................

Our middlemen frequently face difficult problems in their work for which there are no immediate or apparent solutions ..........................................................

Our company has spent a lot of time and effort in learning about the local operations, markets, and methods of our middlemen ..........................................................

We have made a substantial investment in building up a specific marketing network with most of our middlemen ..........................................................

We cannot terminate our present middlemen without a major loss of financial and other kinds of investments that we have made ..........................................................

It would be difficult for us to recover all the investments made in our marketing networks if our major middlemen decide not to work with us ..........................................................

Training and developing new middlemen in our company's products, services, norms and practices would require considerable time, effort and money ..........................................................

Our firm consciously seeks to acquire a reputation for fair business practices with our middlemen ..........................................................

Our personnel spend extra time and effort in creating and maintaining good and trustworthy relations with our middlemen ..........................................................

Our firm understands that the nature of our relationship with our current middlemen plays an important part in getting other good middlemen to work for us ..........................................................

Our firm believes in having a long and healthy relationship with our middlemen ..............

Our firm takes actions designed to build trust and cooperation in the relationship with our middlemen ..........................................................

A majority of the marketing tasks performed by our middlemen complement those done by our marketing staff ..........................................................

Our firm cannot obtain directly the kind of knowledge of local markets and customers that our middlemen possess ..........................................................

We pool specialized knowledge, resources and skills with our middlemen in order to accomplish marketing tasks ..........................................................

The inputs of our middlemen is crucial for the achievement of our marketing goals and objectives ..........................................................

The marketing activities of our middlemen are so different from ours that if we were not to use the services of our middlemen, many marketing tasks would remain incomplete
Our firm and our middlemen are in agreement on issues such as:

- each other's goals and responsibilities .................................................. 1 2 3 4 5 6 7
- each other's functions and services .......................................................... 1 2 3 4 5 6 7
- solutions for various problems .................................................................... 1 2 3 4 5 6 7
- exact nature of the tasks to be performed ................................................ 1 2 3 4 5 6 7
- conflict resolution techniques ................................................................... 1 2 3 4 5 6 7
- product assortments and handling of disputes on assortments .................... 1 2 3 4 5 6 7
- territory assignments and handling of disputes on assignments .................. 1 2 3 4 5 6 7

III. The following statements refer to the industries and markets for which you use your major middlemen. If you completely disagree with the statement, please circle "1"; if you completely agree with the statement, please circle "7"; for all intermediate responses, please circle an appropriate number from "2" to "6".

In many of the states in which we market our products through our middlemen:

- there are strong and active consumer groups .......................................... 1 2 3 4 5 6 7
- there are numerous state laws that directly affect our marketing programs ... 1 2 3 4 5 6 7
- there have been numerous instances of legal action against competitive firms by consumers and the government ................................................. 1 2 3 4 5 6 7

Our final markets comprise of a number of diverse groups of consumers (end-users) with each group being very different from others with respect to their:

- demographics such as income, education, and social status .................. 1 2 3 4 5 6 7
- preferences for product features, quality and credit requirements ........... 1 2 3 4 5 6 7
- benefits sought from the use of our products ........................................... 1 2 3 4 5 6 7
- ways of arriving at the purchase decision ................................................ 1 2 3 4 5 6 7
- number and type of individuals involved in the purchase decision ........... 1 2 3 4 5 6 7
- needs of appropriate marketing communications and contact ................. 1 2 3 4 5 6 7

Information on the needs, buying processes, and other similar information on our potential and prospective customers:

- is very difficult to obtain ....................................................................... 1 2 3 4 5 6 7
- is very costly to obtain ........................................................................... 1 2 3 4 5 6 7
- involves a lot of time and effort in collection and analyses ...................... 1 2 3 4 5 6 7

For markets for which we use our middlemen, we are of the opinion that:

- future demand will follow a favorable pattern as in the past ................... 1 2 3 4 5 6 7
- prediction of consumer demand and preferences is now easier than in the past ... 1 2 3 4 5 6 7
- it will be more difficult to identify marketing opportunities in the future ..... 1 2 3 4 5 6 7
The primary industries for which our firm uses middlemen is subject to considerable government regulations on:

- product quality .......................................................... 1 2 3 4 5 6 7
- product constituents and features ..................................... 1 2 3 4 5 6 7
- packaging ................................................................. 1 2 3 4 5 6 7
- pricing ...................................................................... 1 2 3 4 5 6 7
- distribution arrangements .............................................. 1 2 3 4 5 6 7
- vertical inter-firm cooperation ....................................... 1 2 3 4 5 6 7
- consumer safety ........................................................ 1 2 3 4 5 6 7
- consumer health and hygiene ........................................ 1 2 3 4 5 6 7

For the markets for which we use our middlemen, we feel that during the past three years:

- it has been difficult for us to identify prospective end-users ........................................ 1 2 3 4 5 6 7
- our business has been affected by recession and unemployment in the economy ................ 1 2 3 4 5 6 7
- our product lines have been under repeated competitive pressures .................................. 1 2 3 4 5 6 7
- our market potential has declined .................................. 1 2 3 4 5 6 7
- our final customers have shown a distinct change in their preferences for product quality, features and prices ........................................ 1 2 3 4 5 6 7

The industries for which we use our middlemen is subject to:

- frequent manufacturing and marketing changes .......................................................... 1 2 3 4 5 6 7
- a high level of technical competition ........................................................................ 1 2 3 4 5 6 7
- continuous technological developments .................................................................... 1 2 3 4 5 6 7
- a high risk of technological obsolescence ............................................................... 1 2 3 4 5 6 7

In the last two years, many of our products marketed through middlemen have undergone:

- substantial design changes ......................................................................................... 1 2 3 4 5 6 7
- substantial manufacturing process changes ................................................................. 1 2 3 4 5 6 7
- substantial changes in marketing efforts ..................................................................... 1 2 3 4 5 6 7

The products that we market through our middlemen:

- are technical products ................................................................................. 1 2 3 4 5 6 7
- require technical knowledge for sales ................................................................. 1 2 3 4 5 6 7
- are often customized for individual customer requirements .................................. 1 2 3 4 5 6 7
- require technical communications in manufacture and marketing ......................... 1 2 3 4 5 6 7
- require special education and training of our middlemen ....................................... 1 2 3 4 5 6 7
IV. The following statements refer to your assessment and evaluation of your firm's relationship with your current middlemen. If you completely disagree with the statement, please circle "1"; if you completely agree with the statement, please circle "7"; for all intermediate responses, please circle an appropriate number from "2" to "6".

As compared to other middlemen in the same industry, our middlemen are clearly better in:

- their fulfillment of promises and obligations ................................................................. 1 2 3 4 5 6 7
- carrying out the initially agreed upon commitments ......................................................... 1 2 3 4 5 6 7
- their performance of various tasks, duties and responsibilities ....................................... 1 2 3 4 5 6 7
- their ability to act in concurrence with our firm's goals and interests ............................. 1 2 3 4 5 6 7

We believe that the time and effort spent in developing and maintaining the relationship with our middlemen has been worthwhile ................................................................. 1 2 3 4 5 6 7

Our firm is satisfied with the relationship we have with our current middlemen .................. 1 2 3 4 5 6 7

Our firm is satisfied with the performance of our current middlemen .................................. 1 2 3 4 5 6 7

We believe that the relationship with our middlemen has been productive ......................... 1 2 3 4 5 6 7

V. The following questions are intended to provide classificatory categories for performing micro-analyses on smaller groups and to study the impacts of extraneous business variables on the manufacturer-distributor relationships. Your responses are crucial for a complete analysis of all data.

1. The 4-digit SIC Codes for the two industries for which you use middlemen:

<table>
<thead>
<tr>
<th>Name of the industry</th>
<th>Name of the industry</th>
</tr>
</thead>
</table>

2. The percentage of your firm's total sales contributed by the type of middlemen you referred to in the earlier questions (please check one category):

<table>
<thead>
<tr>
<th>1 - 20 percent</th>
<th>51 - 80 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 - 50 percent</td>
<td>Over 80 percent</td>
</tr>
</tbody>
</table>

3. How long has your firm been using the above type of middlemen:

<table>
<thead>
<tr>
<th>1 - 3 years</th>
<th>8 - 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 - 7 years</td>
<td>Over 10 years</td>
</tr>
</tbody>
</table>

4. Total 1991 (actual or estimated) total sales of your firm (U.S. dollars):

<table>
<thead>
<tr>
<th>Less than $1 million</th>
<th>$1 - 5 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.1 - 15 million</td>
<td>Over $15 million</td>
</tr>
</tbody>
</table>

5. Total number of employees in your firm (actual or estimated) for 1991:

<table>
<thead>
<tr>
<th>1 - 50</th>
<th>51 - 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 - 500</td>
<td>501 - 1000</td>
</tr>
<tr>
<td>1001 - 2500</td>
<td>Over 2500</td>
</tr>
</tbody>
</table>

Thank you for your time and patience. We are sure that your contributions to this research will benefit both the academic community and practitioners like yourself. For customized results of this study, please write your name and affiliation on top of the questionnaire. Please send to:

Prof. Gopal Iyer
Department of Marketing - Box 508
Baruch College - CUNY
17 Lexington Avenue
New York, NY 10017
Appendix E

SEEMINGLY UNRELATED REGRESSIONS

Mathematically, the endogenous variables, the y’s, are assumed to be linearly interdependent and the random disturbances of each equation are assumed to be contemporaneously correlated. This implies that there exists a linear relation between the endogenous variables, whereby the change in one of the endogenous variables will cause the others to change. In other words, the choice of any one institutional mechanism among contracts, informal agreements, and coalitions will produce an equivalent non-availability of choosing the remaining institutional mechanisms.

The appropriate technique for estimating simultaneously such a system of equations wherein no explanatory endogenous variables are present in any equation (i.e. none of the y variables enter in any equation as a regressor), is the seemingly unrelated regression (SUR) as introduced in econometrics by Zellner (1962, 1963). The SUR method, which is merely a special case of the more sophisticated three stage least squares technique, involves the application of Aitken’s generalized least squares to the entire system of equations (Wildt 1974). In cases where the variance-covariance matrix (Sigma) is known, the Aitken’s generalized estimator is the best linear unbiased estimator. And, given the assumption that the stochastic distribution term is distributed normally, it is a maximum likelihood estimator (Intrilligator 1978; Wildt 1974). In cases where all the equations in
the system involve the same set of explanatory variables (i.e. the same set of $x$ variables are regressed on each of the $y$'s), or when the variance-covariance matrix (Sigma) is a diagonal, the Aitken's generalized least squares estimator is identical to the OLS estimator (Lehrer 1986; Wildt 1974). Thus, the Aitken's generalized least squares estimator used in the SUR technique is merely an extended special case of the multiple regression, though only for a system of equations that has its stochastic disturbance terms contemporaneously correlated.

Hypotheses H1 through H3 are written as the SUR Model 1 in Figure E.1 and Hypotheses H1 through H5 are written as the SUR Model 2 in the same Figure. The estimation results are provided as Tables E.1 and E.2.
THE SUR MODEL 1

\[ \text{CONT} = (\text{BEHA}) \beta_{11} + (\text{ASST}) \beta_{12} + (\text{REGL}) \beta_{13} + (\text{PCOM}) \beta_{14} + e_1 \]

\[ \text{INFO} = (\text{TASK}) \beta_{21} + (\text{REPU}) \beta_{22} + (\text{DIVS}) \beta_{23} + (\text{TECH}) \beta_{24} + e_2 \]

\[ \text{COAL} = (\text{COMP}) \beta_{31} + (\text{DMAN}) \beta_{32} + (\text{RUNC}) \beta_{33} + e_3 \]

THE SUR MODEL 2

\[ \text{CONT} = (\text{BEHA}) \beta_{11} + (\text{ASST}) \beta_{12} + (\text{REGL}) \beta_{13} + (\text{PCOM}) \beta_{14} + (\text{AGE}) \beta_{15} + e_1 \]

\[ \text{INFO} = (\text{TASK}) \beta_{21} + (\text{REPU}) \beta_{22} + (\text{DIVS}) \beta_{23} + (\text{TECH}) \beta_{24} + (\text{AGE}) \beta_{25} + (\text{SIZE}) \beta_{26} + e_2 \]

\[ \text{COAL} = (\text{COMP}) \beta_{31} + (\text{DMAN}) \beta_{32} + (\text{RUNC}) \beta_{33} + (\text{AGE}) \beta_{34} + (\text{SIZE}) \beta_{35} + e_3 \]

where,

\begin{align*}
\text{CONT} & = \text{use of contracts} \\
\text{COAL} & = \text{use of coalitions} \\
\text{ASST} & = \text{asset specificity} \\
\text{PCOM} & = \text{product complexity} \\
\text{REPU} & = \text{reputational efforts} \\
\text{TECH} & = \text{technological change} \\
\text{DMAN} & = \text{domain consensus} \\
\text{AGE} & = \text{age of the relationship} \\
\text{INFO} & = \text{use of informal agreements} \\
\text{BEHA} & = \text{behavioral uncertainty} \\
\text{REGL} & = \text{product market regulations} \\
\text{TASK} & = \text{task complexity} \\
\text{DIVS} & = \text{market diversity} \\
\text{COMP} & = \text{complementarity} \\
\text{RUNC} & = \text{resource environmental uncertainty} \\
\text{SIZE} & = \text{size of the Manufacturer firm} 
\end{align*}

FIGURE E.1: THE HYPOTHEZED MODELS AS SEEMINGLY UNRELATED EQUATIONS
### TABLE E.1: SUR MODEL 1 RESULTS

#### Endogenous Variables

<table>
<thead>
<tr>
<th>Predictors</th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHA</td>
<td>-.331**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASST</td>
<td>.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGL</td>
<td>.056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCOM</td>
<td>.075</td>
<td></td>
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</tr>
<tr>
<td>TASK</td>
<td></td>
<td>.321**</td>
<td></td>
</tr>
<tr>
<td>REPU</td>
<td></td>
<td>.075</td>
<td></td>
</tr>
<tr>
<td>DIVS</td>
<td></td>
<td>.126**</td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td></td>
<td></td>
<td>-.121**</td>
</tr>
<tr>
<td>COMP</td>
<td></td>
<td></td>
<td>.186**</td>
</tr>
<tr>
<td>DMAN</td>
<td></td>
<td></td>
<td>.458**</td>
</tr>
<tr>
<td>RUNC</td>
<td></td>
<td></td>
<td>-.007</td>
</tr>
</tbody>
</table>

**System Weighted R^2 = .1472**

---

* p< .05  ** p< .01

Ratio of Coefficient to Standard Error in parentheses

---

SEEMINGLY UNRELATED REGRESSIONS 191
### Table E.2: SUR Model 2 Results

**Endogenous Variables**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>CONT</th>
<th>INFO</th>
<th>COAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHA</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.756)</td>
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<td></td>
</tr>
<tr>
<td>ASST</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.911)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGL</td>
<td>.090*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.365)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCOM</td>
<td>.030</td>
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<tr>
<td></td>
<td>(.654)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
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<td>.295**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.376)</td>
<td></td>
</tr>
<tr>
<td>REPU</td>
<td>.059</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.548)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVS</td>
<td></td>
<td>.144**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.615)</td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td></td>
<td>-.121**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-2.598)</td>
<td></td>
</tr>
<tr>
<td>COMP</td>
<td></td>
<td></td>
<td>.201*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.111)</td>
<td></td>
</tr>
<tr>
<td>DMAN</td>
<td></td>
<td></td>
<td>.465**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.189)</td>
<td></td>
</tr>
<tr>
<td>RUNC</td>
<td></td>
<td></td>
<td>-.026</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-.333)</td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>-.228*</td>
<td></td>
<td>-.140*</td>
</tr>
<tr>
<td></td>
<td>(-1.777)</td>
<td></td>
<td>(-1.398)</td>
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<td>SIZE</td>
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<tr>
<td></td>
<td></td>
<td>(-2.565)</td>
<td>.082</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.734)</td>
</tr>
</tbody>
</table>

System Weighted $R^2 = .1803$

* + p<.10            * * p<.05            ** p<.01

Ratio of Coefficient to Standard Error in parentheses
Appendix F

PEARSON CORRELATION COEFFICIENTS
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CONT</td>
<td>-</td>
<td></td>
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### TABLE F.2: PEARSON CORRELATION COEFFICIENTS FOR THE APPAREL MANUFACTURING INDUSTRY

|     | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13      | 14      | 15      | 16      | 17      | Means   |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CONT | 1.648   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | 3.500   |
| INFO | -0.315  | 1.207   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | 5.136   |
| COAL | 0.158   | 0.235   | 1.309   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | 4.592   |
| EFRE | -0.200  | 0.264   | 0.111   | 1.260   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         | 4.852   |
| BEHA | -0.553**| 0.029   | -0.373  | -0.425  | 1.465   |         |         |         |         |         |         |         |         |         |         |         |         |         |         | 4.145   |
| ASST | -0.050  | 0.130   | 0.018   | 0.080   | 0.086   | 1.416   |         |         |         |         |         |         |         |         |         |         |         |         |         | 4.791   |
| REGL | 0.142   | 0.111   | 0.154   | 0.046   | 0.132   | 0.080   | 1.377   |         |         |         |         |         |         |         |         |         |         |         |         | 3.705   |
| PCOM | 0.094   | -0.394  | -0.254  | 0.023   | 0.052   | 0.021   | 0.325   | 1.357   |         |         |         |         |         |         |         |         |         |         |         | 4.451   |
| TASK | -0.362  | 0.376   | -0.254  | -0.050  | 0.527*  | -0.023  | -0.181  | -0.224  | 1.272   |         |         |         |         |         |         |         |         |         |         | 6.261   |
| REPU | 0.003   | 0.021   | 0.194   | 0.447*  | -0.212  | 0.301   | 0.209   | 0.230   | 0.057   | 0.705   |         |         |         |         |         |         |         |         |         | 2.849   |
| DINV | -0.068  | 0.482*  | 0.108   | 0.664** | -0.185  | 0.199   | 0.141   | 0.090   | -0.035  | 0.266   | 1.442   |         |         |         |         |         |         |         |         |         | 5.212   |
| TECH | 0.000   | -0.976  | -0.253  | 0.153   | 0.189   | 0.509*  | 0.192   | 0.107   | -0.102  | -0.197  | 0.234   | 1.443   |         |         |         |         |         |         |         |         | 4.750   |
| COMP | 0.089   | 0.418   | 0.471*  | 0.536*  | -0.396  | 0.309   | -0.099  | -0.280  | 0.126   | 0.597** | 0.389   | -0.247  | 1.125   |         |         |         |         |         |         | 3.455   |
| DMAN | -0.066  | 0.143   | 0.535*  | 0.540** | -0.328  | 0.129   | 0.241   | 0.029   | 0.032   | 0.411   | 0.268   | -0.089  | 0.587** | 1.015   |         |         |         |         |         |         | 3.182   |
| RUNC | 0.051   | 0.005   | -0.005  | -0.057  | 0.087   | 0.438*  | -0.391  | -0.180  | 0.318   | 0.160   | 0.107   | 0.449*  | 0.170   | -0.242  | 1.017   |         |         |         |         |         |         | 0.912   |
| AGE  | -0.486* | 0.532*  | 0.150   | 0.279   | 0.286   | 0.387   | 0.116   | 0.382   | 0.315   | 0.399   | 0.320   | -0.030  | 0.366   | 0.129   | -0.039  | 0.912   |         |         |         |         |         |         |
| SIZE | -0.085  | -0.024  | 0.001   | 0.077   | 0.095   | -0.041  | 0.159   | 0.399   | 0.016   | 0.089   | 0.123   | 0.083   | -0.320  | 0.000   | -0.090  | 0.126   | 0.907   |         |         |         |         |         |         |

N = 22

** p < .01

* p < .05

s. d. on diagonal

TABLE F.3: PEARSON CORRELATION COEFFICIENTS FOR SERVICE MERCHANDISING INDUSTRY

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Means

1.  CONT (1.806)
2.  INFO (.419** (1.324))
3.  COAL (.126 .157 (1.528))
4.  EFRE (.194 -.080 .005 (1.023))
5.  BEHA (.124 .137 -.298* -.208 (1.349))
6.  ASST (.101 .205 -.313* .060 .480** (1.541))
7.  REGL (.245 -.184 .110 -.144 .003 .057 (1.856))
8.  PCOM (.170 -.150 .145 .033 -.307* -.030 .250 (0.978))
9.  TASK (.162 .438** .303 .154 .514** .467** -.180 -.039 (1.182))
10.  REPU (.180 .081 .106 .233 .017 .296* .014 .090 .152 (0.707))
11.  DIVS (.028 .169 .080 .030 .062 .394** .155 .159 .110 .293* (1.662))
12.  TECH (.074 -.125 -.025 -.027 -.225 .140 .406** .474** -.092 -.192 .077 (1.637))
13.  COMP (.146 -.104 .281 .212 -.167 .176 .310* .076 .397** .313* .085 (1.097))
14.  DMAN (.207 -.172 .415** .115 -.315* -.416** .206 .169 -.206 .310* .129 -.114 .368* (0.917))
15.  RUNC (.194 .230 -.085 -.110 .189 .483** .200 .050 .291* -.106 .370* .224 .043 -.316* (1.246))
16.  AGE (.012 -.354* -.022 .173 .114 .149 .284 .106 .033 .048 .121 .153 .247 -.020 .106 (1.025))
17.  SIZE (.089 -.286 .075 .089 .071 .117 .146 .104 -.056 -.095 .144 .243 .207 -.163 .424** .643** (0.980))

N = 46

** p < .01
*p < .05
s. d. on diagonal
### TABLE F.4: PEARSON CORRELATION COEFFICIENTS FOR MISCELLANEOUS MANUFACTURING INDUSTRIES

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**p < .01
*p < .05
N = 23

a. d. on diagonal
### Table F.5: Pearson Correlation Coefficients for Food and Kindred Products Industry

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Vita

GOPALKRISHNAN RAMAMURTHI IYER

Gopalkrishnan Iyer aka Gopal Iyer was born on March 29, 1963 in Madras, India. He was educated for primary and secondary school years at St. Xavier's High Schools at Ahmedabad and New Delhi. Thereafter, in 1984 he completed his Bachelor of Technology degree from the Maharaja Sayajirao University of Baroda and in 1986 obtained his Master of Business Administration degree from the B.K. School of Business Management of the Gujarat University, Ahmedabad, India. He worked for two years in the areas of Marketing Coordination and Sales for the Reliance Industries Limited (15 months) and the Arvind Mills Company Limited (9 months), before starting his Ph.D. program in Marketing at Virginia Tech in the Fall of 1988. Gopal's research interests are in the areas of Business-to-Business Marketing, Societal Aspects of Consumption, Macromarketing, and Philosophy of Science. He has been an Assistant Professor at the Baruch College of the City University of New York in New York since Fall 1992. He has presented his works at the Educators' Conferences of the American Marketing Association, International Productivity and Quality Research Conference, Annual Macromarketing Conference, and the New England Business Association International Conference. Among his achievements include a Best Paper in Macromarketing Award from the American Marketing Association in 1991. Gopal is a member of the American Marketing Association, American Economic Association, Academy of Marketing Science, and the Academy of International Business.

Gopalkrishnan R. Iyer