

The Role of Distributors in Product Supply Channels:

Theory and Practice

by

Scott D. Freedman

Submitted to

The Department of Civil and Environmental Engineering

in Partial Fulfillment of the Requirements for the degree

of

Masters of Science in Transportation

at the

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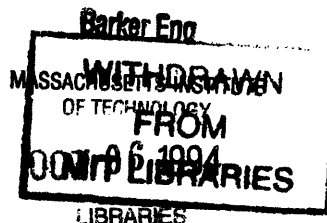
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Abstract:

A collection and synthesis of the theories relating to the role of distributors in product supply channels was completed, and then the product supply channel of a major U. S. retailer was examined through the use of interviews with its suppliers, distributors, and merchandising and logistics personnel.

The literature review of the theories of strategy, transaction cost theory, operations improvement and JIT, marketing channels, interorganizational behavior and political economy frameworks revealed that many compelling reasons why manufacturers and retailers choose to structure their product supply channels in the manner that they do. Further, it revealed the factors that are considered in the creation and alteration of product supply channels. Finally it has shed some light on the decision processes used in product procurement and distribution channels.

The theory was then tested in an exploratory manner by examining distributor usage in a major retailer's supply chain. The exploratory research revealed a number of results that support extant theory. The theories with the best explanatory power were frameworks based upon transaction cost theory, and system modifications and simplifications presented by JIT and operations improvement theories. The nature of the exploratory research did not capture behavioral information well, and thus there is little to say about the explanatory power of those theories.

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1 Introduction

1.1 Motivation

During recent years the retail industry has changed greatly. The introduction of warehouse stores and clubs, the emergence of larger stores, and the growth of retail chains has altered the way retail stores do business, both in selling and in buying their merchandise. These structural changes in the retail industry, including the discount segment, have altered the assumptions upon which product supply channel and distributor decisions were previously based.

Consequently the roles of distributors and middlemen in the product supply channel have been altered. This thesis will investigate both the role of distributors and the theory supporting the use of distributors in product supply channels.

A careful investigation of the literature will reveal that there are many compelling reasons why manufacturers and retailers choose to structure their product supply channels in the manner that they do. Further, it will reveal some of the factors that are considered in the creation and alteration of product supply channels. Finally it will shed light on the decision processes used in product procurement and distribution channels.

1.2 Purpose

I intend to identify and assemble the theories which explain why manufacturers and retailers should use or should not use distributors in their product supply channels. I will then test the theory in an exploratory manner by examining distributor usage in a major retailer's supply chain. Understanding the reasons why different products have different sourcing schemes will provide information about the adequacy of the extant theory.

I expect to find a combination of the following three things in applying the theory to the investigated product supply channel: (1) results that support the theory, (2) results that modify the theory, and (3) results contrary to the theory. Contrary results will identify opportunities for changes in practice, systems improvements and/or cost savings.

I expect that many retailers have not taken full advantage of the supply chain opportunities that have become available in the market today. This may be because they have not fully identified opportunities for change because of internal corporate resistance, or due to other factors. Any lag between the development of economic opportunities for change in the product supply channel and a subsequent corporate reaction offers a potential loss of savings to the retailer. I hope that this work will allow retailers to identify

opportunities for improvement, and to put the savings into the hands of retailers or their customers.

I expect that the best implied economic distribution solution may not be adopted in many cases because of behavioral constraints, i.e., those constraints which arise due to power and interdependence in the product supply channel. A product supply channel is not a simple economic entity; the components of the product supply channel have both joint motives and separate motives. It is these separate motives which make an interorganizational product supply channel (one made up of multiple organizations) different from a wholly integrated product delivery system.

This study will be an important contribution to supply chain management literature for the following reasons: (1) it will assemble and synthesize existing theory, (2) it will test the theory in an exploratory manner. The benefits of this study will be a deeper academic understanding of the theory, and a useful perspective for understanding whether it is appropriate for a retailer to use distributors or to develop direct relationships with manufacturers.

2 Literature Review

2.1 Finding Questions

In asking “should a distributor be used in this product supply channel,” one asks “what operations should an organization have performed for them, and what actions should be self performed?” The question becomes one of the boundary of operations. Embedded in the issue are the following questions:

1. Is the distribution and procurement of products of strategic importance, or are they viewed simply as operations?
2. What other operations are performed? Are there potential synergies?
3. What are the risks involved in this operation?
4. How should compensation for the task be awarded? What is a fair price?
5. Can control of performance be maintained?

2.2 Searching For Answers

An examination of the literature of management, marketing science, economics, supply chain management and marketing channels reveals a number of different answers to the above questions. Channel design literature seeks to explain how product supply channels should be structured. Researchers in this area use tools of economic analysis and a number of practical frameworks based upon economic reasoning. Channel management literature seeks to explain behavior, compensation, reward and punishment within existing channels. It uses the tools of behavioral studies and political economy frameworks.

In the area of management, there are further attempts to answer the forgoing questions specifically in the areas of strategy, industrial analysis, operations improvements and “Just In Time” (JIT), and other related fields. The basis for much of the channel design theory, and research in the area of boundaries of operations is based upon Transaction Cost Theory.

2.3 Transactional Cost Theory

Transaction cost theory (TCT) is an economic approach that seeks to describe how the decisions which define the firm’s boundaries of actions are made. TCT has primarily been applied to operating decisions, not strategic or interdivisional decisions. Some authors, however imply its strategic uses. See for example Rangan et al. 1993. A brief history of the development of transaction cost theory can be found in Appendix 1.

TCT basically seeks to answer and to describe the process of answering the question “should a firm make or buy?” The decision is examined in the same manner whether the question regards making a component, developing software in house, or performing distribution functions. Regardless of the specific decision, the decision to “make or buy?” takes place in a larger framework, that of the technology matrix.

Technology Matrix

Assume that there is a firm that makes computers. In the manufacture of computers there are many activities that must take place to get a computer into the hands of the end-user. The total range of activities is designated by the term the "technology matrix." (Thompson, 1967) The technology matrix for manufacturing computers is vast; some of the tasks involved include the following: research and chip design; the extraction of silicon; the manufacture of chips, of chip making machines, and sub assemblies (disk drives, keyboards etc.); assembly; the design, writing and publishing of software; and product marketing, delivery, installation and maintenance. A complicated technology like computer manufacturing, for example, incorporates the products or results of still other technologies. Each of those tasks has a subsequent technology matrix supporting it. For example, the educating of engineers to do the design work is usually performed by a university, and the certification of delivery truck drivers is managed by the (state) government.

It should be evident that a computer manufacturing firm cannot perform *all* of the activities necessary to get the raw materials from which a computer is made into the hands of an end-user as a computer. The manufacture and delivery of computers relies on series of complex organizations, each of which perform a subset of the tasks required.

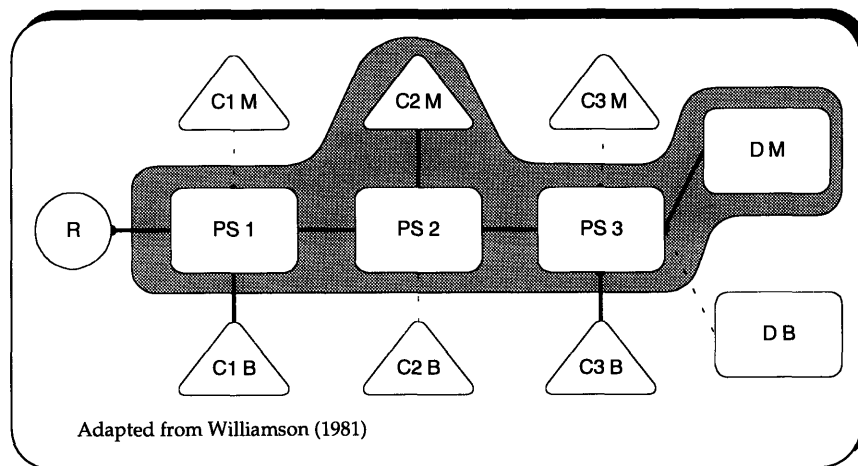
All organizations must establish what is called a “domain.” The domain is the collection of “claims which an organization stakes out for itself in terms of range of products, population served, and services rendered.” (Thompson, 1967) At the center of the firm’s domain is its core technology, that is the functions the firm is guaranteed to perform. The core technology can include proprietary manufacturing processes or services that can not be procured from the market successfully. The firm’s domain identifies the points on which the organization is dependent on its environment for inputs, and markets for its outputs. An organization may find that there is only one possible source for a particular input, or there may be many sources. There may be only one source of demand for a particular input, or many parties bidding for the input. Similarly, on the output side there may also be one customer demanding a firm’s output, or many potential customers.

Because it is unlikely that a firm would perform all of the tasks necessary to bring a product to its end user, the decisions that define a firm’s boundary of actions in distribution, procurement and selling are very important. Each firm must choose the set of tasks that it is best able to perform, or that it can perform with significant rewards. Those tasks which the company feels are unwise to perform itself are then

contracted to other parties. The set of retained tasks is called the boundary of operations. (Thompson 1967)

Efficient Boundaries Of Operation

This is an arbitrary and greatly simplified example but the concepts are pertinent to the examination of boundaries of operation, both efficient and otherwise.



Efficient Boundary Of Operations

Examine the above figure. Suppose that there are three production stages (triangles PS 1, PS 2, PS 3) that comprise a firm's core technology. Further, suppose that the firm is unwilling to license the technology. At each stage in production, a physical transformation occurs and components are joined to the "product."

Suppose also that raw materials are distinct and naturally procured from the "market," circle R. Component supply is represented as triangles C1 M, C2 M and C3 M if the components are "made" in house, and triangles C1 B, C2 B and C3 B if the components

are “bought” on the market. Further let rectangle DM represent the firm making its own deliveries, and rectangle DB represent the firm “buying” delivery services. Also let a dark line indicate transactions that occur, and a dashed line indicate potential transactions that do not. Finally, let the gray shaded region indicate “boundary” of activities that the firm does for itself, the tasks retained by the firm.

The gray shaded region, the firm’s boundary of action, includes the firm’s core technology, production of component C2, and the distribution stage, DM. Raw materials, R, are sourced from the market as are components C1 and C3. The first set of activities the firm will perform are the activities contained in the core technology. There is a second set of activities that are clearly uneconomic for the firm to perform (sourcing raw materials in this case). There is a third set of activities for which the “make or buy” decision can only be made after assessing the production and transaction costs of alternative modes or sources. The efficient boundary is the sum of the core technology and the additional stages for which self supply or “making” can be shown to be the efficient choice.

It should be further noted that the “efficient” boundary of operations is not necessarily static. As markets change and technologies progress, activities which had previously be inefficient or impossible to include inside a firms boundary of operations can now

be retained. For example, less than 10 years ago typesetting equipment and offset printing had been the only way to get professional looking printing results. Today with \$4,000 or less, a desktop computer and laser printer combination, can allow nearly anyone to produce extremely high quality printed material. Just as selection of a firms boundary of action is important, the reselection or re-evaluation of tasks with respect to changing technology and strategic goals needs to be given the attention it deserves.

Transactions And Transaction Costs Examined

In determining the boundary of operations and costs involved with contracting services or production, the cost of the goods or services are not the only costs involved. The costs of the time spent arranging production, or specifying products and services must also be accounted for. These costs fall under the generic term governance costs, and accrue every time a transaction occurs.

The critical descriptive dimensions for transactions are the following: (1) frequency, (2) uncertainty, (3) bounded rationality (4) and asset specificity. (Williamson, 1980) Because we are interested in the distribution decision, we will examine more closely recurrent or relational transactions.

Contracts that are neither recurrent nor relational are called discrete transactions. Outside of theory, they are rare. In examining

the creation of distribution channels, and a firm's boundary of action, we are examining transactions or exchanges that will occur repeatedly, and are continue (in the short run), not one time transactions. Such transactions and exchanges create a relationship between parties, hence they are called relational contracts. In relational contracting, it is the frequency of contract negotiation, not the frequency of exchange that is the relevant descriptor. Describing a transaction as high frequency, implies complete analysis and contract negotiation before each transaction or exchange is made. In relational or recurrent transactions, the transaction occurs less frequently than the exchange. In retail these concepts are separated by denoting the initial negotiation and purchase as buying, and subsequent purchases and exchange of cash for merchandise, (before contract renegotiation) as rebuying. We will assume that all of the relationships developed are long-term (not less than the selling season), making the frequency dimension less important in this investigation.

“Uncertainty” refers to the ability or expected ability for parties to a contract to fulfill the contract. Uncertainty also refers to the stability of internal and external economics and the risk surrounding the transaction. At this point, for simplicity, assume that the economic environment is stable, although later this assumption will be relaxed.

TCT also allows for contracting parties to behave with bounded rationality. The concept of bounded rationality concedes that perfect information is not available to both parties to an exchange, and that the party with better information may exploit these information gaps. (Williamson 1975) Further, the concept of bounded rationality requires that contracts be more specific than otherwise necessary to protect parties from ambiguous situations, since either party might interpret ambiguities to its own advantage. Finally bounded rationality notes that contracts may not be fulfilled simply because the contract exists. Simply, bounded rationality allows cheating, and that it is a possibility against which contracting parties must protect themselves. This protection comes at a cost. Contract performance must be supervised or inspected, giving rise to governance costs. Governance costs complicate the “make or buy” question, and hence the boundary of activity question. Consequently, governance costs also affect the decision to use distributors in product supply channels or integrate the distribution functions outsiders might provide. Unlike production costs, governance costs are very difficult to measure because they represent the potential consequences of alternative decisions.

The last of the critical descriptive dimensions, asset specificity, is considered the most important dimension of an exchange by Williamsonian theorists. In examining transactions it is more

important for the examiner to note whether investment is for an asset suited narrowly for a particular transaction, than it is important for the examiner to note the absolute value of the asset. Investments in “generic” assets pose little hazard for either party of the transaction should the relationship be short lived or disrupted; in such a case the assets can be redeployed with little cost or sold for their value. More specific assets may be difficult to redeploy for a different use, or it may be difficult to find other parties who need the similar assets for the same use.

Asset specificity can arise in the following three different ways: *Site specificity*, where successive functions are located next to one another to minimize inventory holdings and reduce transportation costs; *physical asset specificity*, such as specific injection moldings, or dies used in production; and *human asset specificity* that arises by experience.

Specific assets that arise in distribution contexts include the following: vehicles and material handling equipment that is single purpose like chemical tank cars, trailers or complex package sorting conveyer lines; those assets necessary to perform pick and pack operations for product assortments or small lot sizes (RF scanners, and plastic totes). Similarly, human asset specificity occurs when extensive training of installation or repair technicians makes it impossible for

people other than company trained technicians to perform installation and repair, or when specific managerial experience is required to run a facility.

Asset specificity is a defining characteristic of a transaction because, once the investment has been made, the value of the specific asset is low for other uses. The supplier is “locked into” the relationship to get acceptable utilization rates. The buyer is also tied to the seller because it would be cost prohibitive to obtain supplies from other parties using generic assets or to internalize the function. For these reasons, when the value of the specificity is great and the function is not internalized, each party to the contract seeks to design a relationship that is robust and has continuity. A more generic asset, on the other hand can be used for a wider range of activities.

To simplify examination at this point, consider the case in which site specific assets will be utilized, and functions utilizing site specific assets will be integrated with respect to other co-located functions. Site specific assets will be considered part of what Thompson (1967) calls “core technology,” the set of activities that are not examined, that is the group of functions that an organization is practically guaranteed to perform. From this point on we will concentrate on earlier and later (with respect to the core technology) stage transactions, i.e. those

transactions that the organization will consider contracting or performing itself.

Transaction cost theory makes a few basic predictions with respect to an organization's boundary of activities, by keying on the function or activity, and on the assets required to perform the activity.

If assets are generic or flexible, markets enjoy both production and governance cost advantages over internal sourcing or integration. Delivering commodity parts (with standard tolerances) or simple services requires little management, because the "product is clearly specified." (Williamson, 1980) Clear specifications reduce governance costs because contract expectations are clear. Further static scale economies can be better utilized, and markets are able to pool uncorrelated demand, thus reducing risk and lowering production costs.

As assets become more specific, the aggregation benefits that the market can accrue is reduced, and exchanges take on a bilateral nature (one buyer, one seller). The governance costs of markets escalate and vertical integration of the activity becomes more economically attractive. The forgoing implies that for recurrent transactions where uncertainty is not a factor and remains constant, market procurement will be chosen when assets are non specific; bilateral or obligational market contracting will be evident when assets are semi-specific. When

assets required to complete an activity are highly specific internal organization (vertical integration of activities) will become evident.

See Appendix 2 for a simplified model of transactions cost theory. Some criticism has been leveled at transaction cost theory, for an examination of its weaknesses see Appendix 3.

TCT is the cornerstone of much of the extant theory of channel design. There are three frameworks based upon TCT that lend insight into the decision to utilize distributors in product supply channels or integrate distributor functions. These frameworks are the Market Characteristic, Product Characteristic and Business Function Frameworks.

2.4 The Market Characteristic Framework

The decision to use distributors or to integrate distributor functions is a critical component of a firm's marketing channel strategy. In an important study of the subject, Klein et al. (1990) present a transaction cost theory model for channel integration in international markets. A large portion of their theoretical component holds for product supply channels in general. Their study predominantly deals with how different international market characteristics effect the level of integration that producers seek.

As a transaction cost theory application, Klein et al. examined the areas of asset specificity, and uncertainty, with respect to

international markets. Frequency and bounded rationality were also present in their work, but they contributed most to the understanding of uncertainty by decomposing uncertainty into two components.

Klein et al. propose and find supporting evidence that the following hypotheses hold in international markets.

1. The greater the specificity of assets, the greater the level of integration.
2. The greater the channel volume per period for a product, the greater the degree of channel integration.
3. Within integrated channels, captive distributors or regional sales offices are associated positively with increasing levels of channel volume.
4. The greater the volatility surrounding a transaction, the greater the degree of channel integration.
5. Within integrated channels, the use of captive distributors is associated positively with the level of environmental volatility surrounding a transaction.
6. The greater the diversity of the environment, the lesser the degree of channel integration.

The first hypothesis, that asset specificity and levels of integration move in the same direction, is not surprising given that Klein et al. developed their research in the TCT framework.

The second hypothesis, regarding channel volume and integration level can be explained by the fact that higher channel volumes allow firms to spread relatively fixed governance costs per period across more units. High per-period volumes sustained for multiple periods are then able to support the fixed costs and

investments in assets that vertical integration into distribution commonly require.

The logic inherent in the third hypothesis, regarding captive distributors and channel volumes, is that as the volume in integrated channels increases, the firm will tend to shift from sales forces to regionally-focused company-owned distributors (foreign subsidiaries). Here the effects of higher volume on the type of integration comes into play. High volume will often be able to support regional sales-forces or distributors because it allows these fixed costs to be supported with lower per-unit cost allocations. Strategic focus by geographic region often permits even higher returns and / or lower costs in international markets. Focus allows each regional group to concentrate on serving the needs of the people in a given country.

This third hypothesis was supported by their study but it has less validity in the U. S. for many products. There is less demographic change in each geographic region of the U. S. than in international markets where each geographic region may in fact be a different country with its subsequent language and cultural differences. This hypothesis becomes more useful when distribution arms of the same company or firm specialized by industry or customer group (as opposed to geographic region) are considered. It is very likely that some type of concentration or specialization will result in higher

returns or lower costs. The issue of specialization by customer type or industry is not capital asset specificity per se, but human asset specificity that arises from experience in serving a demographic, geographic, or industry group. (The concept of focus is examined more deeply in section 2.11.)

Before this study, external uncertainty had been treated unidimensionally as an indicator of market failure by economic theorists. High external uncertainty and bounded rationality preclude the writing and enforcement of contracts with an infinite number contingency clauses. Some economic theorists (Williamson, 1975, E. Anderson 1985) feel that the internalization of channel functions controls uncertainty better than market governance structures, through the specialization of decision making skills and communication savings. These properties facilitate the creation of adaptive, sequential decision processes. In a more perfect world, high integration would also economize transactions by harmonizing interests and permitting a wider variety of control processes, as is true with centralized planning. Integration also usually provides dispute settlement mechanisms, precluding the need for legal intervention.

The above theory contrasts with the positions held by organizational theorists (Cyert and March 1963 and Frazier 1983). Organizational theorists such as these have argued that looser, less

vertically integrated organizations are more effective under conditions of high uncertainty, and that flexible organizations are better able to adapt to changing circumstances. Lawrence and Lorsch argue that an organization comprised of highly differentiated sub-organizations coordinated by a strong, unifying group will be the most flexible. These theorists do not imply that the only company that can survive in a volatile industry is the virtual company, the completely decentralized company (Byrne et al. 1993), but that highly centralized organizations are thought by these theorists to be somewhat insulated from changes, which makes them slower to react to changes in the external environment.

To reconcile these mutually exclusive views, Klein et al. propose that uncertainty should be broken down into the components of volatility and diversity. The study attempts to show that each of these components has a different impact on the channel structure decision.

The study defines the first of these components, volatility, as the environment's propensity to change rapidly and unexpectedly. High volatility reduces a firm's ability to predict market outcomes, and thus makes the writing of contracts that handle all possible contingencies difficult. When changes in the environment occur, it is possible that contracting parties will take advantage of the situation, and interpret unspecified clauses opportunistically. These consequences of high

volatility lead to the fourth hypothesis, that increasing volatility leads to increased vertical integration. When market volatility is high, market governance costs are also high relative to internal governance costs, this situation encourages firms to develop more highly integrated marketing channels.

With volatility defined in this way, the logic supporting the fifth Klein hypothesis becomes clearer. The Klein paper assumes that captive distributorships that focus either on a user group or on a geographic region allow the manufacturer to be closer to the customers, and to get marketing information by region and / or customer type. Further, company owned regional distributors deal with product users more closely, and can therefore provide better market information than unowned distributors. By retaining operating control of the distributor in this way, the firm also retains control of the collection, dissemination and use of market intelligence.

The second component of uncertainty presented by Klein et al., diversity, reflects the extent of market and customer heterogeneity, i.e. multiple sources of uncertainty in the market. A diverse market would have many customers, end users, and substitutes for the firm's product. A firm facing such a market will clearly find it difficult to obtain and process information about the market. Further, a highly centralized firm facing such a market may find it difficult to formulate

and manage the multiple strategies necessary to compete effectively. Conversely, Klein et al. posit that a less centralized organization will manage such a marketplace effectively. In other words, environmental diversity supports less integrated product supply channels; this is their sixth point.

The combination of high information needs and difficult strategy formulation that characterizes highly diverse markets suggests that environmental diversity requires the development of complex, fluid channel structures. Structures such as these have the ability to cope more effectively with heterogeneity than hierarchical, vertically integrated structures. Because high diversity is not a sufficient condition for high volatility, the decomposition of uncertainty into two components adds understanding to environmental uncertainty and richness to TCT.

2.5 Business Function Framework

Corey et al. (1989) examine the distribution decision by examining the tasks that must be performed for successful marketing of products. Their examination can be viewed as a framework for the boundary of operation decision. Their work is extensively supported through a large study of the marketing channels for industrial goods.

Corey et al. feel that the distribution system structure decision and the selection and allocation of its ensuing activities and tasks

should be viewed as a strategic decision because of its impact on a company or company's product's success. Further they feel that the distribution system structure decision is best examined as question of what form will allow all necessary functions to be completed satisfactorily. Corey et al. state that all marketing channels are interorganizational institutions that perform the following five basic functions: (1) selling; (2) physical distribution; (3) product modification and after-sale service; (4) channel support; and (5) risk assumption. Each basic function includes a set of tasks that must be performed by members in the channel to ensure channel stability and fulfillment of the channel's following five primary goals: (1) economizing distribution costs; (2) maximizing market share, sales, and revenues; (3) optimizing the returns on distribution specific assets; (4) meeting customers' information needs; and (5) maintaining market information. These assumed goals should hold true for organizations and corporations although they may not hold true for individuals within those corporations who may have other, more personal goals. An examination of the basic business functions will lend insight into how each effects the distribution system decision, the selection of a firm's boundary of action and the use of distributors in product supply channels.

The first of the above functions, selling, includes the tasks of generating demand at the end-user level, and negotiating terms, conditions and prices at intermediate and end-user levels. The task of generating demand usually is accomplished by some combination of sales calls, trade shows, promotions, advertising, and telephone marketing.

The second function, physical distribution, includes the following tasks: receipt of incoming goods; storage; delivery of outgoing goods and the related processing; order entry; billing; credit and collections. Because it can be the most efficient method of fulfilling these functions physical distribution is often shared among producers and intermediaries.

The third function, product modification and after-sale service, includes physical alterations made in the product (sometimes final assembly) as it moves through the channel, and maintenance performed at the end-user's site. It also includes packaging in accordance with purchasers' specifications (breaking bulk for example.)

The fourth function, channels support, includes the tasks of recruiting resellers, replenishing stock, training distributor sales forces, counseling resellers on business practices, encouraging reseller support and monitoring performance.

Risk assumption is separated from the other functions by Corey et al. because it may be performed by multiple channel members in different ways. The major risks that must be underwritten are inventory carrying costs (risks of obsolescence, shrinkage, and the opportunity cost of money, etc.) customer credit, product liability, and costs of distribution-specific investments. Distribution specific investments include the following: investments in warehouses, delivery trucks, office space and equipment, sales force and service personnel training, demonstration facilities, and information systems, both for internal and external communication.

The channels support task includes managing and maintaining the structure and the control system of the channel; it is not the same as controlling the channel. Although channels support can be delegated to other intermediaries, it is usually performed by the manufacturer. Manufacturers usually feel that their products should be presented in a certain manner, and want to retain some control over this presentation.

The four other functions (selling, physical distribution, product modification and after-sale service, and risk assumption) can be delegated to other channel members or retained by the producer. Usually portions of each function (tasks) are delegated, while other portions are retained by the manufacturer.

For example, the responsibility for selling can be retained completely by the producer (as is the case of an exclusive direct sales force), delegated completely to intermediaries and agents, or some combination of the two. Combinations of delegation and direct selling are often utilized where large contracts or important customers are serviced by the producer directly and exclusively, while smaller accounts are delegated to resellers. This allows the manufacturer to service only high margin accounts which produce a higher return on sales force effort.

Similarly, physical distribution can be shared among intermediaries or can be retained by the producer. In many cases producers carry their own inventory and use it to supply both their retained (house) accounts and resellers. Sometimes producers supply resellers' accounts directly from the factory when the reseller makes a large sale. This "drop-shipping" saves the reseller inventory carrying costs and reduces distribution costs by limiting doubled transportation and handling; the distributor usually retains billing and collection functions for these drop-shipped accounts and the risk that those tasks involve.

The set of tasks performed by the manufacturer in the function of product modification and after-sale service usually reflects the concentration of the customer base and the producer's sales decision.

For example, in concentrated markets where the manufacturer has utilized direct selling, the manufacturer's technical personnel usually perform modification and after-sale service (installation, repair and maintenance.) In markets where resellers are used for sales, they often perform maintenance and repair functions. This is not always the case, producers sometimes retain the after-sale service functions to retain control over the quality of service. In markets where the buyers are small and geographically dispersed and distributors are used as the primary selling channel, after-sale service and maintenance are usually also provided by the distributors. These after-sale services are often a significant source of revenue for the distributor or reseller.

The last of the five functions, risk assumption, is usually linked with the performance of selling and distribution; risks are often assumed by the member of the channel that can best manage them, that can afford them, and to whom there is a promise of reasonable rewards. For example, many producers, who are not competent to assess the credit risks at local levels push sales credit risk onto their distributors (Corey et al. 1989).

The allocation of the five basic business functions and their subsequent tasks may vary across channel systems by product type, class of customer, size of customer. In most cases, the allocations are determined by some type of traditional economic analysis. Ideally this

economic analysis would take the costs of managing the contracts and working with contractors into consideration (governance costs), and how asset specificity affects those costs. If governance costs were taken into consideration along with production costs it is likely that the selection of each firm's boundary of activity would include only those activities for which self supply is efficient.

The most basic and least rigorous level of analysis is to list each function and task within each function, and ascertain the ability and willingness for each product supply channel member to perform the task. Following this, the compensation for the tasks is allocated by some type of channel consensus. This "consensus" may be weighted towards some channel members while others have little or no input to decision. Similarly, in new or as yet uncreated channels, an organization can both list the functions it is willing or able to undertake (or willing acquire the talent or capital equipment to undertake), and those functions that is unable or unwilling to undertake. It must then ascertain what price it is willing to pay for the services it is unwilling to perform. Markets for such services (if they exists) will ease this analysis as prices for task performance will be available. When these markets exist for functions or tasks, the function or task may be a prime candidate for outsourcing.

2.6 Product Characteristic Framework

Often the product supply channel structure decision is made on the basis of a product's or product line's characteristics. This is similar to the business function framework (Corey et al. 1989) in that product characteristics determine the relative importance of the business functions. It differs from Corey's work in that by focusing on product characteristics it is customers' desires and needs that come into play, not the manufacturers'.

Product characteristics break down into the following three different classes: (1) selling characteristics, (2) usage characteristics, and (3) after-sale service characteristics. Each of these sets of characteristics, (selling, usage, and after-sale service) when inspected in turn, reveal customer preferences that imply that customers will seek different levels of integration from suppliers. These preferences were noted as early as 1962 (Aspinwall) but until Williamson's work on TCT had been accepted, they were considered to be primarily anecdotal and lacked theoretical support. Now it is recognized that implicit in each indicated level of integration sought is transaction cost theory. By examining each of the characteristics one can discern their implications about customer supply channel preferences, and hence some insight into the whether a distributor is favored by customers or whether a direct manufacturer relationship is preferred by customers.

Selling Characteristics

Selling Characteristics are the factors or properties that add complication to the sale of the product, but do not affect the use of the product. When customers have high information needs, they prefer direct channels. New products, technologically complex products or products with rapidly changing technology are some of the types of products that have high information needs in selling. (Corey et al. 1989, Aspinwal 1962)

When products need customization or adjustment to fit customers' needs, customers generally prefer to deal in direct channels. Customers feel that their needs are handled better when they can specify needs directly to the manufacturer, rather than through distributors (Corey et al. 1989, Aspinwal 1962)

When customers place emphasis on product integrity and reliability because of the effect that the product has on customer operations, customers prefer direct channels. (Aspinwal 1962) Corey et al. note that some customers feel that quality can be best monitored at the manufacturing site, a corollary of W. Edward Demming's maxim, "Quality cannot be inspected into a product."

Usage Characteristics

Usage characteristics differ from selling characteristics in that they are concerned with what the customer will do with the product once the exchange has take place.

When the product has a high dollar value or is used extensively in customer operations, it is likely to represent a significant financial decision for the customer; it therefore represents a intensive purchasing effort. Customers prefer and usually seek direct channels in these cases. This customer preference is relaxed when customers recognize that they or their orders are too small (when viewed in relation to the manufacturer's other customers) to attract the manufacturer's attention. For example, a small machine shop may use bar stock extensively in its operations, but it may never order enough to purchase directly from one of the big steel makers. Instead it will order from a steel service center or distributor. The machine shop recognizes that relative to big steel's other customers (auto manufacturers etc.) it is unimportant.

When customers require a broad range of similar or related products, or products purchased as part of a "shopping list," customer seek indirect channels to fill the broad assortment of needs

When customers wish a high degree of product availability, they seek indirect channels that will hold buffer inventories. Utilizing such

channels can preclude waiting for manufacturers to complete production lots. High availability might be required for such items as spare machine parts or products that have fungible counterparts that can be substituted easily, should a preferred part be unavailable.

After-Sale Characteristics

After-sale characteristics deal with the setting up of purchases, and other actions that prepare goods for usage, or prepare goods for redeployment and return to usage.

When customers are likely to require after-sale services (such as installation, repair, warranty work and maintenance) indirect channels are often sought. Indirect channel usually can support higher levels of customer contact, levels that would be very expensive for a direct channel in all but the most concentrated of industries. (Corey et al. 1989)

When customers' purchases involve transport, storage or supply complexities, indirect channels are preferred. Examples include the transshipping and transporting hazardous chemicals that require specific investments in handling or storage equipment. (Corey et al. 1989)

2.7 How The Frameworks Fit Together

The product characteristics, market characteristics and business function frameworks fit together to form a focused way of looking at

product supply channels. The characteristics of the product and customers' desires will help to define the importance of each business function, and the market volatility and diversity will affect the ability for the channel members to achieve channel goals. Examples of the relationships are as follows:

If customers seek high product availability, the supply channel either will need to produce with short lead times, will need to have a very flexible supply, or will need to invest in buffer inventories. Achieving short lead times might only be possible with very high cost single purpose capital equipment, with high cost extremely flexible capital equipment or with slack capacity. If the customers are likely to continue to require short lead times and product usage remains stable, investments in capital equipment and integration is likely to be the result. If the market is unstable or customers' need are dissimilar, investments in are capital risky, investments in buffer inventories are a more likely solution. Complications result when customer needs are similar, with all customers requiring short lead times, but the market is unstable. Market instability favors buffer inventories, but similar needs favor integration investments. Should customer needs be similar, but demand variable and volatile, centralized inventory is favored.

Further, the product's characteristics complicate decisions. When products are bulky or difficult to ship quickly from a centralized facility, it becomes likely that buffer inventories in customer facing warehouses (CFW's) will be required. The risk of the asset value of CFWs will be borne by the organization that can handle it best. A distributor might own a CFW if there are fungible competitor replacements or products that compliment the product in question to help underwrite the risk. As the number of CFWs increases, distributors are more likely to own the CFW (Corey et al. 1989).

Similarly, if the products that customers are seeking have high after-sales service requirements, the manufacturer must either provide the service or prepare others to provide the service. If the products are sold through distributors due to geographic dispersion or fragmentation of customers, it is likely that the manufacturer will prepare distributors to provide these services. If the manufacturer sells directly to a small number of buyers in large volumes the manufacturer is likely to provide the services directly. This is especially true if the market is stable. In either case, it is likely that the after-sales service will be provided by the vendor that directly faces the customer. When the manufacturer sells both directly and through a distributor the manufacturer has options in the provision of service. They may weigh the option of focusing on manufacturing

against maintaining control over service quality. Manufacturers may let distributors provide service and receive the profits associated with the service in exchange for alleviating the service requirement from the manufacturer. Such a decision should not be made lightly because it has strategic consequences.

2.8 Porter's Buyer And Supplier Power

The last few sections have presented frameworks that deal with customer desired qualities (product characteristics), customer required business functions, and market effects on manufacturers' or resellers' product supply channels. The importance of the desired qualities and factors matter, but which factor will be the most important? In answering this question the power of customers, and suppliers must be examined. If for example there is only one manufacturer for a product that a customer needs, in the short run, there may not be much choice about from whom to buy nor does it matter what the customer prefers to deal directly with the manufacturer or through a distributor. This is because the manufacturer is in a position of power. Conversely, if there is only one customer for a good or service, and the manufacturer cannot switch operations to production of other products (in the short run), the manufacturer may not have many options about, price, level of service or amount of customization. When manufacturers or customers find themselves in positions of weakness they usually try to

minimize their weakness. They usually try to find ways of reduce the power to which they are subject. The actions that they take are part of what are called strategic actions. (Porter 1980)

Michael Porter in *Competitive Strategy*, presents five basic forces that exist in all industries as focal points for industrial analysis and the profitability of an industry. These five forces are potential entrants, industry competitors, product substitutes, suppliers, and customers. Porter feels that each of these factors determine the ability of an industry to retain high margins. In his examination, Porter makes some statements regarding the bargaining power of suppliers and customers.

A company that has the ability to see and choose the customers to whom they sell, or the vendors from which they purchase goods is in an enviable position. Although companies cannot make an informed choice about selling and purchasing options without performing some type of analysis; most cases companies prefer to buy or sell from a position of power (Galbraith, 1956).

Porter talks specifically about generic customers and suppliers in industries, and how they affect industry profitability, but his examination can help aid in the understanding of customer or vendor selection. This section can also serve as a brief primer to power and intercompany relations and sets the stage for more generic discussions

regarding the nature of power in specific relationships between companies.

Powerful customers and groups of customers can cause suppliers to an industry to compete for sales by forcing down prices and requiring higher quality products and services. When possible some companies choose to sell through a distributor to isolate themselves from the powerful customer or customers. The power of customer groups in general depends on an number of characteristics. According to Porter (1980) customer groups are generally powerful if a number of the following things hold true:

1. Customer groups are concentrated or purchases are large with respect to suppliers' total volume.
2. The suppliers' products represent a major portion of the companies' costs or purchases.
3. Suppliers' products are undifferentiated commodities.
4. Switching costs are low; customers are not locked into relationships with specific suppliers.
5. Customers pose a credible threat of backward integration.
6. The suppliers' product is has little or no effect on the customers' product quality.
7. The customers have full information.
8. The customers have influence on end users' decisions in multiple tier distribution systems.

Suppliers to an industry can also affect the profitability of an industry, in a similar manner. Similarly, when possible some companies choose to buy from a distributor to isolate themselves from the powerful supplier or supplier. According to Porter (1980)

suppliers to an industry are powerful if a number of the following conditions hold true:

1. The suppliers are more concentrated than the customers.
2. There are either no substitutes or poor substitutes for the suppliers' outputs.
3. The customers are not the suppliers' core or most important class of customers.
4. The suppliers' outputs are important inputs to the customers business.
5. The suppliers' products are differentiated, or the supplier has built up switching costs.
6. Suppliers pose a credible threat of forward integration.

The above industry attributes influence the initial power distribution in the customer - supplier relationship. What Porter implies is that firms can make strategic decisions as well as operational decisions that alter the power to which they are subject. Firms may make decisions which can alter both the environment in which they operate, and the extent to which they must go to the environment for inputs. Porter predicted that firms in subordinate (weak) positions would seek to reduce the power to which they are subject. Porter does not examine the simple make or buy decision, but asks instead "what can a firm do to reduce its dependence on a particular supplier, or class of suppliers?" and "what can a firm do to reduce its dependence on this customer?" Sometimes isolating themselves from the powerful vendor or customer has little effect on the firm's profitability.

Porter implies that providers of transportation services can be viewed as suppliers, and hence their power must be examined along with other suppliers and buyers in each product supply channel.

Porter's work, while insightful, ignores the possibility that relationships between organizations can be other than "arms length." Porter primarily views the vertical relationship (buyer -seller) between parties as a competition for the chain's profits. For example, the producers of aluminum cans must compete with the aluminum companies and soft drink manufacturers for profits. All are ultimately dependent on the dollars of the soft drink consumer for their revenues; the margin enjoyed by each party depends upon the relative power in the overall product supply channel. It is viewed as zero sum game. (Leavy, 1994)

This omission is important because there has emerged a new, cooperative, way of looking at interorganizational relationships, which seeks to redefine the manner in which organizations interact.

2.9 Behavioral Theories And Channel Management

A number of researchers (Cyert and March 1963, Etgar 1976 and 1978, Frazier 1983, Hunt and Nevin 1974, Lusch 1976, Ross 1985 , Stern and Reve 1980, Thompson 1967, and others) have looked at product supply channels not in terms of profitability, but as social systems.

The examination of product supply channels as social systems is a major division in the supply chain and marketing channel literature. Researchers in this area, seek to describe the behavior of channel members, and improve channel management. This division has been examined primarily by marketing theorists and behavioral scientists. This area of research examines the behavior of, but more importantly the interactions between, channel members.

Behavioral studies of marketing channels generally have started their investigation of interactions with power and conflict between channel members. The inclusion of behavioral theory in product supply channel literature is important because it is channel member behavior that hinders or eases transition of a product supply channel from one structure to another.

Much of the research in channel management is focused on examining channel members ability to resist the influence of other channel members, and possible ways to overcome this resistance. Clearly overcoming resistance will become important when changes or shifts in policy will either increase a channel members' task set without a corresponding increase in compensation, or decrease compensation without changing the tasks and required level of performance.

Alterations to channel structure can either be seen as gradual shifts that may increase channel friction, or as more abrupt changes

that result in overt conflict that can destroy the current channel structure.

In a manner similar to Porter, most of the examinations of product supply channels as social systems have started with power and conflict, because their interactions are not subtle.

Power

Power in a system is closely related to the dependence in that system. Power has been seen as the opposite of dependency upon other channel members. (Frazier 1983) In other words, a firm that is highly dependent upon other channel members has little power over them. Conversely, a firm that is depended upon by others has a degree of power over those who depend upon it.

Although many behavioral scientists have difficulty actually defining power, the concept is consistently understood in the literature. There is clearly agreement about its observable existence. The following are three accepted descriptions of observable power between parties.

“A has power over B to the extent that A can get B to do something that B would not otherwise do .” (Dahl 1957)

“The power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A.” (Emerson 1962)

“When an agent, O, performs an act resulting in some change in another agent, P, we say that O influences P. If O has the capability of influencing P, we say that O has power over P.” (Cartwright 1965)

In supply channels the parties A and B are separate supply channel entities or members. El-Ansary and Stern (1972) propose the following definition of power in terms of product supply channels:

“... the power of a channel member [is] his ability to control the decision variables in the marketing strategy of another member in a given channel at a different level of distribution.”

Although the forgoing definition is not universally accepted, it is the definition I have used. The control that El-Ansary and Stern defined qualifies as power when its application changes the outcome or strategy of the subordinate member from his original or intended actions.

When power exists in the relationship between two channel members, there must be a source of power. Emerson (1962) states that:

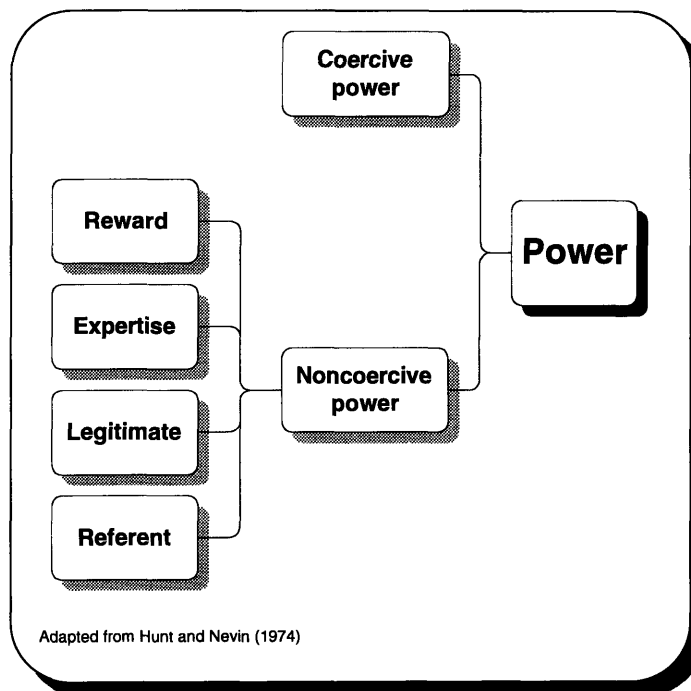
“... the power of A over B is equal to, and based upon, the dependence of B upon A.... The dependence of actor B upon actor A is (1) directly proportional to B's motivational investment in goals mediated by A and (2) inversely proportional to the availability of those goals to B outside of the A-B relationship.” (1962, pp. 32-33)

In other words A's power over B stems from B's dependence on A to meet certain goals, and B's desire to meet these goals. B may need A's help to meet a particular goal, but if meeting that goal is low on B's priorities, A will have little power over B. Conversely if B need does not need A's help to meet any goals, no matter what B's priorities, B will not be dependent upon A.

Sources Of Power

Theorists generally consider there to be 5 sources of power in product supply channels: (1) B's perception that A has the ability to reward B; (2) B's perception that A has the ability to punish B; (3) B's perception that A has a legitimate right to prescribe behavior for B (as in employer - employee relationships); (4) B's identification with A; and (5) B's perception that A has some special knowledge (expertise) that B does not have. (Gaski 1984) The forgoing sources of power are called reward, coercive, legitimate, referent, and expert, respectively. It is important that power comes from B's perceptions of A's ability to administer punishment and reward etc., not A's actual ability to administer punishment and reward etc. Therefor threats, even idle threats are effective uses of power if they are credible. When A actually uses or exercises control or carries out a threat or promise by rewarding or punishing B, the action is referred to as an "application" of a source of power, or exercising a source of power. (Gaski 1984)

Although the group of power sources is comprised of five basic sources, power sources are usually referred to in only two ways, coercive and noncoercive; as threats or punishing actions and helpful actions. In empirical studies researchers have consistently found it difficult to separate the noncoercive forms of power from one another. The following Figure shows how power sources are grouped.



Power Sources And Their Groupings

There is one further source of power, and that is A's ability to alter or manipulate B's environment. This has been termed "manipulative power," "ecological control" and "environmental power." Environmental power is A's ability to control B's environment by actions that A can take. It is based upon A's ability to control information, and restrict alternatives. Environmental control and

manipulation has been studied extensively in Game Theory and its related literatures, but it only has been recognized, not explored fully in the behavioral study literature. (Gaski 1984)

Conflict

Conflict is related to the tension between two or more organizations which arises from incompatibility of desired or actual responses. Conflict is different from competition in that it is entity against entity in a zero sum game. There can only be one winner in a conflict. For example consider two boxers and two golfers: boxer A must try to beat boxer B, thereby causing B to fail. This is a very different dynamic from golfer A trying to *perform* on the course better than golfer B. Although neither golfer attempts to impede the other, they do compete. Each puts forth her best effort.

Within a product supply channel example, an example of competition would be two suppliers trying to win the same contract for a part. Each is acts as an equal and seeks to produce the best bid for the contract that each can afford. Their actions will be limited to competition as long as each seeks to put forth their best efforts. Their behavior changes from competition to conflict when one attempts to impede the other's progress or ability to put forth its bid.

Similarly, when a supplier is informed that the buyer is exploring the possibility of backward integration, the supplier may

have to compete with the customer's production department for the opportunity to execute the contract. On the other hand the supplier may see the customers' interest in self supply as a threat and an overt conflict; the backward integration is considered a direct impedance to their goal of selling to that particular customer. The possibility of forward integration by a manufacturer into selling can have similar implications. The manufacturer's customer will now see competition from its supplier in the marketplace, and may even need to locate a new supplier. Conflict is goal impedance, or interference.

The difference between a threat and overt conflict as mentioned above, has been addressed in the literature. Conflict has been observed to exist on two different and separate levels, manifest and underlying conflict. (Deutsch 1969) Underlying conflict or friction arises from differing opinions and goals. Manifest conflict is the overt actions that result from differing points of view, Manifest conflict is action which actually impede the attainment of goals. Returning to the boxer analogy, underlying conflict is the tension that develops between the two boxers once they know that they are slated to meet one another in the ring. Manifest conflict is the action, the boxing match, which occurs between boxers A and B. Underlying conflict is 'minimized when channel members have compatible goals. When channel members take a joint profit maximizing view of the channel and business functions

the channel performs, corporate goals are harmonized, conflict is reduced and total channel profits usually will increase as a result.

(Bannerjee, 1986)

The definition of conflict generally accepted in the product supply chain literature is that promoted by Stern and El-Ansary (1977).

They write:

“Channel conflict is a situation in which one channel member perceives another channel member to be engaged in behavior that is preventing or impeding him from achieving his goals.”

Similarly, according to Etgar (1979), channel conflict is present when

“a component [channel member] perceives the behavior of another component to be impeding the attainment of its goals or the effective performance of its instrumental behavior patterns.” (p61)

Conflict is virtually inevitable in traditional (noncooperative) product supply channels because conflict is embedded in the very basis of exchange. In traditional economic exchanges one party is attempting to get the highest return for a good or service. At the same time the other party is attempting to receive the good or service while paying as little as possible. Thus each seeks to maximize its own surplus. The price haggling and negotiation are the conflict, not the sale. A sale signifies that the conflict has ended in mutually agreeable terms (although this does not imply that both members are equally satisfied.) This is the zero sum game described by Porter’s views.

“Just In Time” and other cooperative corporate relationship movements are emerging as new paradigms that seek to define product supply channels and vertical inter-company relationships in more cooperative forms. As such, the views of conflict, cooperation, and competition are different from the traditional views outlined above. Some of the implications of JIT on product supply channels will be explored further in sections 2.12 and 2.13.

Interrelationship Between Power, Conflict And Other Constructs

Although researchers have yet to reach complete agreement about the interrelationship between power and conflict, there is fairly widespread agreement that the causal relationship between power and conflict goes in both directions. Some researchers feel that power is antecedent to conflict, while others feel that the converse is true.

Dahl holds the latter view; he focused on power as a response to conflict.

“Let one person frustrate the other in the pursuit of his goals, and you already have the germ of a political system [polity]. For the one may then try to change the behavior of the other. If he does so by creating the expectation of sizable rewards or deprivations then the relations of power come into existence.”
(p72, 1963)

Although the use of power is an appropriate conflict response, applications of coercive power can cause further conflict. The use of threats and coercion, is counterproductive in the mitigation of conflict. Threats elicit further threats, begrudging acceptance or begrudging

performance of roles, thereby increasing underlying conflict (channel friction) or inciting retaliation. (Gaski 1984)

Behavioral theorists have generally accepted that most relationships (including those existing between marketing channel members), are most easily observed as dyads, or pairings. Further, it is agreed that seven constructs or properties exist in each relationship. These constructs (properties) include the aforementioned power and conflict, dependence, satisfaction, performance, and the sources (coercive and noncoercive) from which power is derived.

Some researchers (Galbraith 1956, Etgar 1976) posit an eighth construct called countervailing power. The concept of countervailing power, developed by Galbraith (1956), addresses the fact that one member's ability to influence another is dependent not only upon the magnitude of the power sources, but also upon the target member's ability to resist and counterbalance pressure. Galbraith proposed that concentration of power in one member of an organization (marketing channel in this case) induces other members to seek to reduce that power. Members react to power concentrations in the following four basic ways: (1) by reducing their motivational investments in goals mediated by the controlling members (diversifying, using multiple sources for inputs); (2) by cultivating alternative sources of gratification of those goals mediated by the controlling member; (3) by

increasing motivational investments of the controlling member in goals mediated by the channel member (decreasing relative dependence); (4) and by denying the former alternative sources for achieving those goals (Emerson, 1962). Reducing dependence and motivational investment are similar to Porter's suggestion that reducing the power of suppliers and buyer groups in industries improves the industries profitability. Porter feels that creating switching costs is one way of decreasing the power to which a party is subject, i.e. decreasing the relative dependence by increasing the other's dependence.

Following naturally from power, and attempts to alter the power dynamic the construct called "dependence." Dependence is an indicator of how closely each firm's goals are linked to the continuation of the A-B relationship. Like other constructs, dependence is dynamic rather than static; its state is likely to change with the passage of time. For example, in the retail sector manufacturers are often initially dependent upon retailers to sell their goods. Retailers often specialize and narrow their focus. Then they and rationalize the product mix that they carry and become more dependent on the manufacturers that have survived the weeding process, that is those manufacturers whose products remain part of the product mix.

The construct called “satisfaction” is an indicator of how two parties, A and B, perceive their relationship based upon their expectations resulting from similar relationships in which they have been involved; their expectations resulting from the history of this relationship; and their understanding of the potential relationships that they could form were each not involved in the current relationship. Often suppliers refuse to do business with channel members who do business with their competitors, thus blocking potentially attractive relationships. These stipulations can reduce the satisfaction of the relationship. Satisfaction is not particularly important if the unsatisfied party is completely dependent upon the other party. In all cases where dependence is not complete, however, dissatisfaction erodes the cooperative relationship and causes a gap between intercorporate goals and corporate goals. This erosion hinders future interactions between the parties involved and increases the costs of managing the relationship.

Coercive sources of power and the applications of these sources are actions that the dominating channel member takes to punish the other channel member. Coercive actions include things like slow payment for warrantee work, withholding cooperative advertising funds, and awarding contracts to other distributors. They also include actions such as slow delivery of products, sending incomplete

shipments, or rationing availability of desirable products. Coercive actions rarely improve relationships between channel members, but they can be effective if used as believable threats to force channel members to comply with demands. Some scholars have stated that the use of coercive sources of power is pathological, i.e. the applications increase, rather than decrease resistance of the channel member.

(Gaski, 1984)

Noncoercive sources of power, as stated before, include referent, expert, legitimate, and reward bases of power. The use of these sources of power can potentially reduce conflict and increase satisfaction and performance. Examples of noncoercive actions include hiring consultants, providing business services and advice for the member to be influenced, rewards, factory to dealer incentives, and manufacturer sponsored contests for distributor sales forces. They also include convincing distributors that certain actions are not only in the manufacturer's best interests, but also the distributor's, and getting distributors to identify with manufacturer's needs.

The Consensus Model For Construct Interaction.

With the seven constructs of relationships defined above, is now possible to describe and decompose interorganizational relationships, and the effects that each construct, or property of the relationship, has on other properties of the relationship. The manner

in which the organizational constructs interact with one another is not as completely certain or simple to measure and describe. Because the interactions between behavioral constructs in relationships have been observed by many researchers, some of the findings contradict one another. These contradictions result from using proxies to measure some of the elements of the relationship and the lack of objectivity that is certain to result when examining perceptions. In cases where different or opposing views of the relationships exist, I have chosen to show only the dominant result, the result that has more studies supporting the view of relationship than undermining it. See appendix 4 for list of studies and their impact on the view of construct interaction. The following is a graphical depiction of the interaction of

each construct with the other constructs in a dyadic (between two parties) relationship.

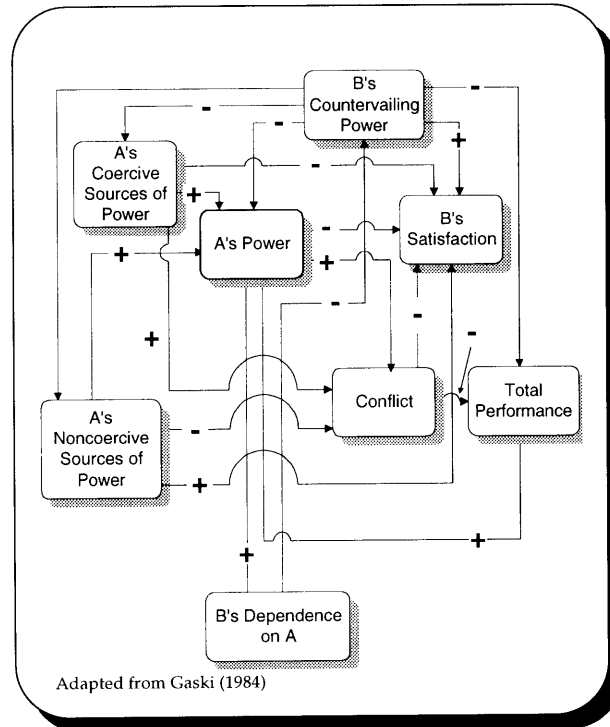


Figure Of Channel Power And Conflict.

Each construct in the A - B relationship is represented as a block connected by a line to a second construct with which it interacts. Arrowheads at the end of connecting lines signify the influence on a construct by the construct at the other end. Each connecting line also has either a '+' or a '-', indicating the direction of the interaction, i.e. + indicates that an increase in the antecedent construct also increases the sequent construct, while a - indicates that an increase in the antecedent construct reduces the sequent construct.

We are examining A's power over B in the A-B relationship. In explaining construct interaction and the depiction above, the most logical starting point is the center, power. We see the constructs B's dependence on A, coercive sources of power, noncoercive sources of power, and countervailing power are antecedent to the power construct. Each is a positive link, except for countervailing power. These relationships are logical; an increase in B's dependence, or increases in any of A's source of power will increase A's power. An increase in B's countervailing power will result in a decrease in A's power. Looking at the constructs that are sequent to power, we find B's satisfaction and total system performance. We see that B's satisfaction decreases as A's power rises, and that total system performance rises as A's power increases. The first result is clear, but the second conclusion is not. Researchers have found that when power is concentrated at one end of the relationship it reduces the possibility that local optimization will take precedence over total optimization. This result aligns with the Williamsonian view that internal governance reduces sub - optimization. The seeming dichotomy that increases in A's power increases total system performance is reinforced by the negative connection from B's countervailing power to total performance. As B exerts its power base against A, total system performance is reduced. It is important to note that total performance

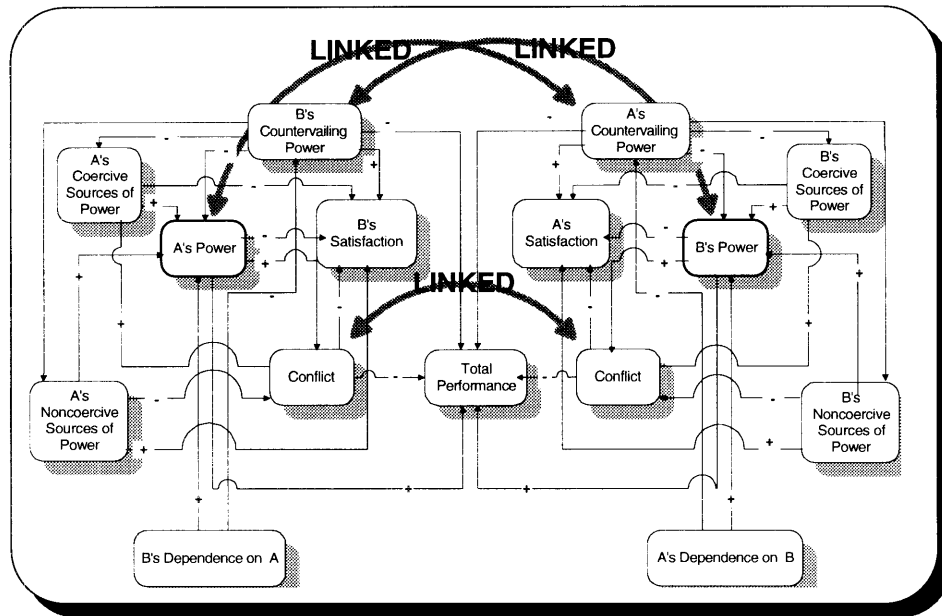
and the distribution of profits in the channel are different. Reduced total performance implies reduced total profit to be distributed, regardless of profit distribution scheme.

Increases in B's countervailing power can have positive effects as well as negative effects. B's increased countervailing power effects include the following: increases in B's satisfaction; increases in A's noncoercive forms of power and their application; and reductions in coercive sources of power and their applications. Increased applications of noncoercive forms of power also increases B's satisfaction. Obviously satisfaction is reduced when coercive sources of power are applied.

The causes and consequences of conflict are not to be ignored in the graphical depiction of this model. Conflict affects both B's satisfaction and system performance negatively. These effects imply that conflict should be minimized for maximum system performance. There will be disagreements in almost all relationships, but they need not develop into manifest conflict or be destructive to the relationship.

The forgoing graphical depiction is not a complete picture of the relationship between A and B. The B-A relationship must also be examined to be thorough. The following diagram shows the connection of the two symmetric models. It also shows the connections of power and countervailing power across the larger model, the

connection of total system performance, and the connection of conflict across the views.



Larger Model Showing Bi-directional Interactions

The studies and resulting models have a number of important managerial implications. First, marketing dyads that have some form central programming of activities usually have higher performance than those that do not. Central programming performed by a person (channel captain) or steering committee with members from multiple organizations will help keep the marketing dyad from pursuing suboptimal courses of action. Central programming also will help to coordinate inputs so that efforts are complimentary and additive. This may be especially true in highly volatile environments because central programming may lend stability to an otherwise unstable environment.

See section 2.4 for more comments on the effects of environmental volatility instability and diversity on integration.

Second, system performance can be improved by such measures as improved communication and coordination, clearly communicating the expectations of the relationship, and reaching agreement on task sets and their accompanying compensation. In general, it can be expected that performance will be highest when both parties are mutually satisfied, because conflict will be minimized.

Some researchers (Assael 1969, Cavinato 1992, Deutsch 1969) feel that conflict is not completely negative, because it points out important areas for discussion and topics that may need further clarification. Assael writes that there are five conditions that must be satisfied for conflict to be redirected in to constructive opportunities. First, organizations within the system must encourage reappraisal of policies. Second, channel members must be willing to communicate objectives and ensure constant feedback. Third, member organizations must be willing to redefine resource allocation and labor division programs with respect given to long-term system gains and not short-term system losses. Fourth, channel members should promote systematic methods of conflict resolution and self regulation. Fifth, the interaction between channel members must be characterized by self restraint in the use of power by dominant channel members. If these

conditions prevail, then conflict can become a useful tool in the relationships between channel members because it highlights areas for improvement. (Assael 1969)

Gaski holds that conflicts arising between members are best mitigated by altering incentive systems or exercising other noncoercive measures, such as attempting to identify with the opposing member's requirements. Coercive measures should be recognized as harmful to the relationship. (Gaski 1984)

Each relationship in a product supply channel can be examined from any perspective in the vertical chain: the manufacturer, the distributor, retailer, and the consumer. Each of these interested parties values different things, and is willing to compromise on different points. It is these points that are important. By attempting to identify with the wants and needs of other channel members, by developing and demonstrating empathy for other organizations, organizations develop a strong tool in negotiation, and are more likely to promote trust in the relationship. Trust in relationships between marketing channel members, makes sustaining the relationship easier, and reduces the needs for complex contracts that increase governance costs. Trust in a relationship helps to reduce governance costs and reduces the potential for bounded rationality (assuming the trust is deserved).

There are other generally perceived and accepted propositions regarding these sociopolitical exchanges in the literature. In marketing channels where power is balanced, the relationship between members will have mostly cooperative interactions as long as the balance of power is maintained. This has intuitive appeal, yet some (for example, Williamson) feel that it is incorrect, or needs testing. Williamson (1975) feels that centralized power will exhibit highly cooperative actions, yet centralized power is extremely unbalanced. To counter his argument Stern and Reve (1980) believe that a distinction must be made between détente type cooperation, and ideological cooperation. Détente cooperation is cooperation intended to reduce potentially unpleasant results (punishment or applications of coercive sources of power). Ideological cooperation is cooperation due to alignment of motives and goals.

2.10 Supply Chain As A Political Economy

It should be evident that it is very difficult to examine or make product supply channel decisions based solely upon economic or behavioral criteria because the two are inextricably linked. Changes in economic policy are very likely to have political repercussions, and a policy or political change will, in most cases, have an impact upon the economics of the action affected. Stern and Reve (1980) propose that distribution channels be examined as “political economies”; they

propose that the economics and the politics of a system must be examined jointly. A major premise of the political economy framework that Stern and Reve propose is that it considers interrelations of system entities as complex multilateral interactions, not as simple cause and effect reactions like those previously mentioned (for example, product characteristics).

Stern and Reve contend that distribution channel is a collection of organizations that simultaneously seek to pursue both self-interest and collective goals. Thus each organization interacts with the others in the channel and the channel interacts with the external environment. This dual nature provides the impetus for separation of the system into two sets of systems for examination; the internal and the external. Within each system or political economy there are two subsystems; the economy and the polity. Both the economy and polity are allocation systems. The economy allocates scarce resources, while the polity can be seen as allocating authority and power within the system. Each subsystem interacts with all of the others. At this point, we will concentrate on the internal political economy and the interactions of the channel members with one another.

The following diagram shows how the political economy is divided into two systems, and subsequently each subsystem is divided again into two more subsystems. The two shaded ovals are the internal

and external political economies. Encompassed by each political economy is an economy and a polity; represented by boxes within the ovals. The links between each box are directions of interaction. As stated above each subsystem interacts with all other, hence each section is linked to all others with bi-directional links.

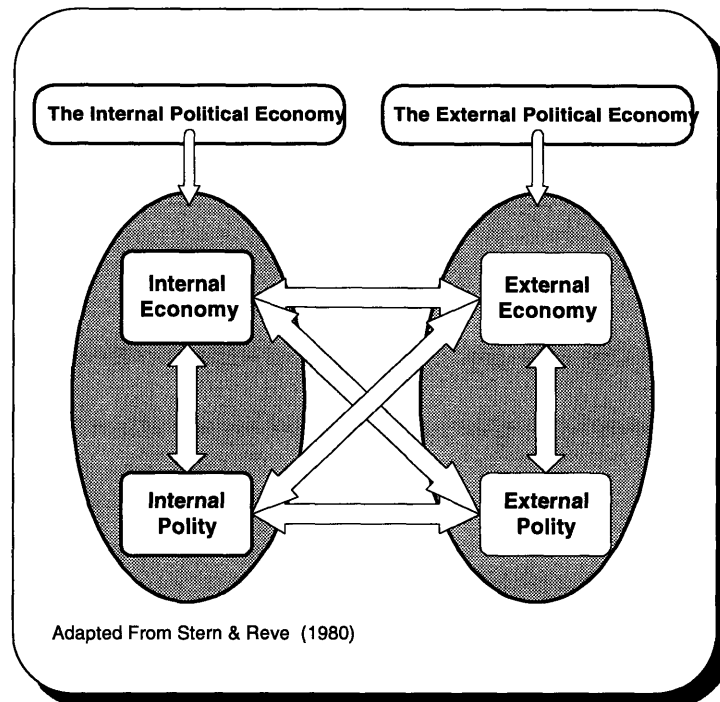


Figure Of Subsystem Interactions Within A Political Economy

Stern and Reve state that “distribution channels are set up to perform a set of essential economic functions in society.” (1980) The internal economy of distribution channels can be further broken down into two components, internal economic structure and internal economic processes.

The internal economic structure refers to the level and type of vertical integration that is inherent in an organization. As stated

before, this can range from completely vertically integrated firms (which perform all production, distribution and selling for the firm's goods), to complete market organization (where each function is performed by separate economic entities). The latter relies on price mechanisms and the former on administrative mechanisms to allocate necessary tasks between internal parties. Between these two extremes there is a wide variety of semi-integrated and formally (or informally) contracted market type mechanisms.

The internal economic processes or decision mechanisms that operate within each internal economic entity (corporation, department, etc.) in the channel are usually determined by the internal structure of the economy. These economic processes may be simple, habitual, and routine or more complex, like decisions reached through bargaining. For example, in a market structured internal economy, competitive, price mediated mechanisms are favored. Likewise highly vertically integrated, or hierarchical structured internal economies are expected to have central planning processes. Integrated economies' usually exchange goods or services at the cost of "production," cost of "production" plus some centrally determined profit, or the going market price (assuming that there is a market for the good or service.)

Some of the more complex central planning processes are simulated market pricing processes. Transfer prices might be set at the

shadow price, the opportunity cost of the good or service, the cost plus the marginal profit, or even the cost of marginal product of the factor. These more complicated pricing mechanisms, types of simulated market pricing mechanisms, reduce the potential for internal supplier departments to utilize their virtual (internal) monopoly to overcharge internal customers, and shift the costs production or execution inefficiencies onto the internal customers. These simulated market pricing mechanisms preempt pricing inequities if both parties to an internal exchange hold profit center status, and the buying party is not permitted to use outside suppliers.

As noted before, distribution channels can be considered both economic entities and political entities. As result, a number of researchers (Cyert and March 1963, Ellram and Cooper 1990, Etgar 1976, Frazier 1983 and others) have studied them as social systems. In the political economy framework, it is the social system that we refer to as the internal polity.

Like the internal economy, the internal polity is broken down into internal sociopolitical structure, and processes. The internal sociopolitical structure comes from the initial pattern of power and dependence relationships in the system. A social system and internal polity will always have power although it may run from minimal power to fully saturated power. Minimal power relationships are

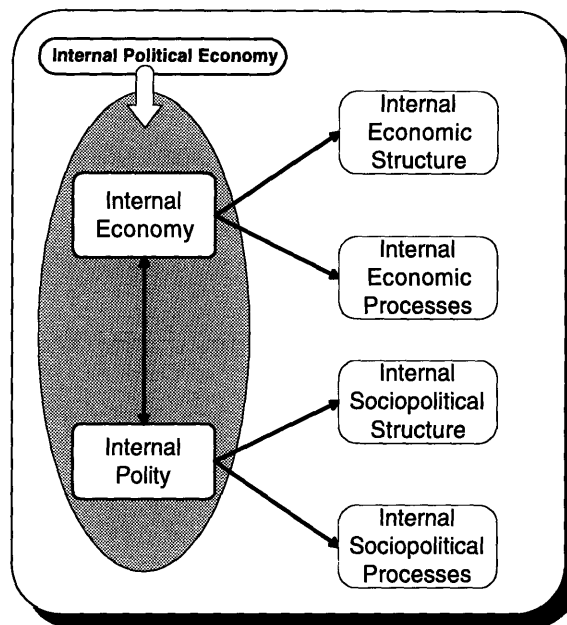
characterized as being relationships that are trivial to either party's continuation as a viable commercial entity. Fully saturated power relationships are characterized as relationships in which neither party would be a viable commercial entity without the other; continuation of the relationship is required.

Every relationship within the channel will have some cooperation and conflict. Without cooperation, the channel simply would cease to exist. While highly related, conflict and cooperation are separate sociopolitical processes, each altering the power structure in the polity. Successful applications of power by members in a channel will reinforce the initial power structure. Successful attempts to countervail (resist) another's power will alter the power dynamic and sociopolitical structure.

Successful cooperation will effectively increase the total power in the system, but may not alter the distribution of power. When two parties cooperate and have successful results perhaps a decrease in delivered unit cost, and an increase in profit per unit delivered. Each will seek to perpetuate the relationship (perhaps with more fervor than before) because it is both less costly, and more profitable to buy from or sell to the other party (compared to other potential suppliers and customers. What may not have changed is how the reduction in cost has been distributed between the parties. A \$1.00 reduction in delivery

costs may put \$0.50 per unit in the hands of the seller, and he may also reduce his cost by the same amount. A powerful buyer might force a \$.75 per unit reduction in cost thereby reducing the potential profits to the seller. The converse is also possible.

The interactions between the polity and economy and the recognition of their interaction are the bases of the political economy framework are depicted below.



Deconstruction Of Internal Political Economy

Stern and Reve (1980) posit that

“In marketing channels in which market transactions are the predominant mode of exchange, and in which power is centralized, centralized planning processes will emerge.”

For example, a relative power position is often used to program the distribution of economic tasks, to allocate tasks within the channel.

An example is Frito Lay’s management of grocery stores’ shelves for

salty snacks and potato chips. Frito Lay utilized their large market share (and the resulting power) to retain shelf management, instead of allocating it to store owners. This allowed Frito Lay to retain control over their products freshness, which they considered a vital strategic point. Similarly, during the 1993 Christmas season K-Mart required toy vendors to sell their toys on consignment, thereby moving sales risk in a difficult to forecast market, back up the channel. Other examples of this type of programming and retention of tasks include boutiques or “shops within shops” at some larger department stores.

Stern and Reve further elaborate their proposition,

“under the conditions specified [previously], marketing channels will exhibit a relatively high level of conflict, but they will also exhibit highly cooperative processes. Such channels will tend to be more competitively effective than others where market transactions are the dominant mode of exchange.”

In other words conflict potential will be high, but centralized decision making will mitigate opportunistic behavior, and help establish channel wide goals.

Similarly, in marketing channels with hierarchical structure and centralized management, conflicts are more likely to be effectively managed. In addition large scale channel goals are more likely to be established and met efficiently, relative to other marketing channel structures. Williamson (1975) supports advantages of centralized power by reasoning that centrally managed economic structures will

obviate suboptimization between internal members of the same organization. Williamson feels that “a more nearly joint profit maximizing attitude and result is to be expected [in such a case].”

As Stern and Reve suggest the political economy framework is suited to examine some propositions that link economic performance with power distribution in channels. Some propositions that need further investigation regard the relationships between cooperation and channel performance (profits) and surpluses, and the relationship between power distribution and the distribution of profits and economic surpluses. Positive relationships between cooperation and performance, and power distribution and profit distribution are expected (Stern and Reve 1980). The relationship between cooperation and performance is expected to be positive, because corporate attitudes will more closely approximate the Williamsonian “joint profit maximizing attitude.” This view is similar to the view held by “JIT” and coordination theorists like Robinson and Cavinato. The relationship between power and economic surpluses is likely to be positive for the simple reason that the channel member with more power will be able to force concessions from weaker channel members .(Stern and Reve 1980) This is would be consistent with behavioral theories, and Porter’s belief that profits accrue to the strongest member of a group of vertical aligned companies.

2.11 Strategic

The body of literature concerning logistics as a part of a competitive strategy is growing. This is not a new development, but an extension of earlier work of academics led by Michael Porter. In his landmark work, *Competitive Strategy*, Porter clearly laid out three generic competitive strategies, overall cost leadership, differentiation and focus.

Porter's generic strategies and their application have led managers to view logistics as a function that can be managed strategically. Further these strategies have allowed companies to change the way they view their businesses, business functions, and the alignment of business functions with strategies.

The most simple of Porter's generic strategies, cost leadership, is extremely difficult to achieve.

"Cost leadership requires aggressive construction of efficient scale facilities, vigorous pursuit of cost reductions, tight cost and overhead control, avoidance of marginal customers, and cost minimization of areas like R&D, service, sales force, advertising... Low cost, relative to other competitors becomes the theme running through the entire strategy." (Porter, 1980)

The low cost producer in an industry yields above average returns, and is in a strong position to defend against competitors' rivalries. The low cost producer will be able to make a return on investment when all other competitors have competed away their profit

margins; none can afford to maintain margins lower than the cost leader for a sustained period of time.

Achieving a low cost position often requires a large market share as well as the ability to develop products that are inexpensive to produce. Often the low cost producer finds it necessary to reinvest those higher gross margins back into R&D and the state-of-the-art machinery needed to retain its cost leadership position. Likewise achieving low cost in distribution and selling requires the same avoidance of marginal customers, building of efficient scale facilities, standardization of procedure, design for logistics, investment in information systems to aid in routing, scheduling and delivery, and investments in automation systems, all in the name of minimize costs.

When channel volumes are low and efficient scales are out of reach, manufacturers often find that their lowest cost will be achieved by contracting for carriage of finished products. Quite simply low channel volumes may make forward integration into distribution cost prohibitive. Similar things happen when the customer base is sufficiently fragmented. For example, L. L. Bean is a large purchaser and seller of outdoors products and clothing. It has simplified order taking and pick and package so that employees can perform these activities for very low costs. It cannot however deliver to customers houses by itself. It instead ships almost exclusively by United Parcel

Service. L. L. Bean's per order volumes rule out forward integration into distribution. Distribution lies outside of L. L. Bean's efficient boundary of activity, therefore it contracts UPS to perform that activity.

When small businesses decide to forward integrate into distribution, they often lease their first vehicles with maintenance agreements. Although they may be able to move their goods cheaply enough, small business can neither justify the expense, nor reach the scale such that it is efficient for them to service their fleet internally, and employ full time mechanics.

The second generic strategy, differentiation, requires that the company find a way to make its product unique, find something that makes its product stand out from others in the industry. The differentiation strategy does not allow companies to ignore costs but does, if successfully achieved, allow some costs (those costs that result from customer valued elements) to be shifted to the customer. Their product will not be viewed as a commodity by intended customers, but as a different class of product. Differentiation can insulate the company from competitive rivalry because it creates and fosters brand loyalty. Further, differentiation yields higher margins, thus allowing some redress from suppliers, and mitigating customer power because "buyers lack comparative alternatives." (Porter 1980)

Ideally, this unique attribute (selected for differentiation) should be one for which customers are willing to pay a premium. Attributes that companies have highlighted include, but are not limited to the following: reliability; technological sophistication; ease of service, speed to market, and dealer network. Using speed to market as a differentiation attribute requires intensive research and development efforts and highly coordinated distribution channels. Using dealer networks as differentiation criteria requires that there be very strong dealer - company relations.

Porter's third generic strategy, focus, requires a company to concentrate upon a segment of the market either geographically, by customer group, or by product segment. Once the focus area has been chosen, the company then attempts to differentiate or become a cost leader in this smaller section of the industry. If successful, the company will have chosen a product or industry segment that it is able to target more effectively than the rest of the industry is able to do. Differentiation then results from a properly chosen segment, because the firm is able to serve the market segment more effectively than the larger industry. Alternatively cost leadership for the market segment might be the result, from the lower cost associated with serving a more narrow market segment. In either case it is likely that more specific assets (either human or capital) will be the result of focus. Human

asset specificity will result for increased experience in serving the focused segment of the market. Asset specificity will result if generic assets are modified to improve their performance for a specific market segments. It is likely that increased asset specificity will increase an organizations desire to place an activity within its boundary of operations.

The logistics system of any company must also align with its strategy (Shapiro and Heskett 1985). A company seeking to be a cost leader will need to set up its product procurement channel and outbound distribution system to acquire and deliver its products with low costs. Similarly, A firm differentiating by customer service cannot afford to have a low cost distribution system if customers demand or require short delivery times.

In retail, some distributors choose a limited geographic region, and then are able to differentiate their goods purchased from them from the manufacturers' goods by providing added services for retail stores, or chains of stores. Some of the added services include vendor managing inventory (VMI), splitting cases (breaking bulk), and shipping bundles of products (product assortments) to multiple store locations. This is the case of the (prerecorded) music departments of some mass merchants. A distributor leverages their knowledge of the music industry and customer tastes, and buys tapes, and compact disks

in bulk for a number of chain stores in different regions. They then manage the inventory levels, the sales, promotions, and replenishment orders. The distributors usually do this as a “boutique” within the store, and then retain a portion of the profits. J. Baker Inc. has a similar selling arrangements for selling shoes that they manufacture at some mass merchants.

Porter feels that each of these strategies will imply differing organizational arrangements and thus require different types of control systems. Williamson would feel that the governance types and costs imply different levels of vertical integration and implied control over functions in marketing channels.

The following table highlights each strategy and skill, resource and organizational requirements.

Generic Strategy	Commonly Required Skills and Resources	Common Organizational Requirements
Overall Cost Leadership	Sustained capital investment and access to capital Process engineering skills Intense supervision of labor Products designed for ease in manufacturing Low - cost distribution system	Tight cost control Frequent, detailed control reports Structured organization and responsibility Incentives based upon meeting strict quantitative targets
Differentiation	Strong marketing abilities Product engineering Creative flair Corporate reputation for quality or technological leadership Long Tradition in the industry or unique combination of skills drawn from other businesses Strong cooperation from channels	Strong coordination among functions in R&D, product development and marketing Subjective measurement and incentives instead of quantitative measures Amenities to attract highly skilled labor, scientists or creative people
Focus	A combination of the above policies directed at the particular strategic segment	A combination of the above policies directed at the particular strategic segment

Adapted from Porter, *Competitive Strategy*

What Porter implies is that not only should organizational structure align with asset specificity like Williamson states, but also that organizational structure must align with corporate strategy. Although similar, these two things are not the same.

Once a strategy is chosen, the organization will need a combination of assets and contracts to properly execute it. What Porter has done is assumed that each strategy implies a level of asset specificity which in turn implies a level of integration (or

organizational structure). Utilizing Porter's view, a cost leadership strategy requires specialized capital, production economies of scale, and tight control of operations. Williamsonian thinking implies vertical integration, and a large boundary of activity over which control is very tight. According to JIT theorists like Robinson, there are other paths to cost leadership which include the following: low overhead; short lead times; reductions in inventory; process improvements that allow for small efficient lot sizes; close partnering with other companies; and only adding value where the firm can do it is best. Using the above strategies, low costs can be achieved with a small boundary of operations; when they are achieved in the forgoing manner the firms involved will have considerably less vertical integration than Porter implies. (Womack et al. 1990)

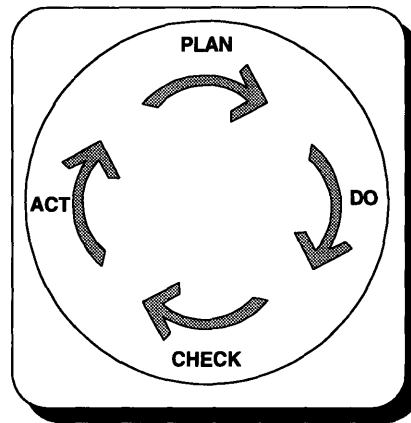
2.12 Coordination Theory

The area of research called coordination theory is another stream of literature that is currently being developed in a number of seemingly unrelated fields. For example, industrial and systems engineering, business, electrical engineering, computer science, biology and physics. (Malone 1988) The aim of coordination theory is to unite all of the research done in systems control and coordination in the many disciplines involved. The coordinating and control plans for

one type of system can then be applied to what on the surface appears to be a totally different type of system.

Portions of coordination theory are used to analyze complex systems, tasks, functions and processes. When coordination theory is applied to business functions, they can be shown to have inputs and outputs both physical and informational. By examining the needs of functions and flows within and between organizations carefully they can be simplified. Once simplified, flows can then be improved by techniques appropriate to the system (EDI for intercompany communications for example).

A simple example of systems thinking is the closed loop control system. A closed loop or feedback loop results from implementing W. Edward Demming's so called PDCA cycle (a tool for total quality management).



Demming's PDCA Cycle

Plan the action, execute the plan (Do), Check the results of the plan, and Act on the results, i.e. Plan again. This results in a cycle of

actions that sends information about performance back to the actor for reevaluation.

Improved coordination resulting from applications systems thinking to business functions and processes (or from anything else) can be interpreted from a Williamsonian point of view. Improved coordination reduces the costs of governance, thereby reducing the cost of contracting for execution of functions or for production of parts . The reduction in control costs allows more work to be subcontracted.

2.13 Just In Time (JIT)

JIT literature has radically altered the notion of intercompany relationship. This literature initially dealt with complex manufacturing systems and their control. Shigeo Shingo believed that it is easier to reduce system complexity and then control the system with a simple control mechanisms (Kanban, for example), than it is to develop a high performance control system (MRPII for example) for a complex manufacturing system. (Robinson 1990) The literature is further characterized by numerous works that suggest reducing work in process and buffer inventories, by promoting the creation and maintenance of lean companies and by works that stress coordination with suppliers and contractors (Womack et al. 1990, Gaither 1990, Fogarty et al. 1991). The Fogarty explicitly states that by decreasing

the amount of inventory coverage in the system, the system will be able to increase cash flow.

Inventory reductions also will uncover problems and areas where improvement are needed within the system. Shingo said that “inventory is like water, it covers up the rocks [problems]. Reducing the water level shows the rocks.” Problems can be removed only when they are visible. (Robinson, 1990)

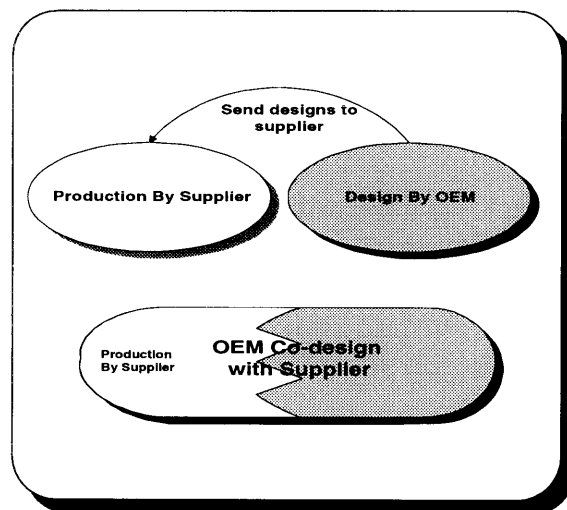
Reduced inventory coverage can only be effectively managed if the items with reduced coverage have steady usage, very short lead-times or are linked to a flexible supply. The supplier and customer must work together to level usage and to decrease lead-times. In return for the ability to decrease inventory investment via improved lead-times and leveled usage rates, the supplier receives firm orders, long-term contracts, and higher prices.

The result of this increased coordination is increased interdependency. In order for these companies to compete effectively with their non “JIT” competitors, both must accept the interdependence, and use it to their advantage. The supplier will often commit large resources to the sole supply of one customer, and will often purchase specific assets to serve specific accounts. The supplier also will often dedicate workers or whole lines to the sole supply of large accounts. As a result of dedicating lines to sole the supply of one

customer, the supplier often must turn down potential contracts. Similarly, the customer often rationalizes its supplier base, limiting purchases to a number of highly cooperative, carefully picked suppliers and increasing its independence on them.

As the relationship develops the supplier and the customer come to depend on the other more intensely. One implication of the lean company is that improved coordination will allow suppliers to take on more tasks as the subcontracting threshold (from transaction cost theory) moves. This development can allow the company to become better focused on the functions that are retained. Eventually, the lines between supplier and customer blur, forcing the companies to change the way they view their businesses.

Often as companies become more adept at working together, they work together in design of products. Changing from traditional scheme of the buyer designing products and sending specifications to the supplier, to a new scheme of co-design.



Design And Send Specifications Vs. Codesign

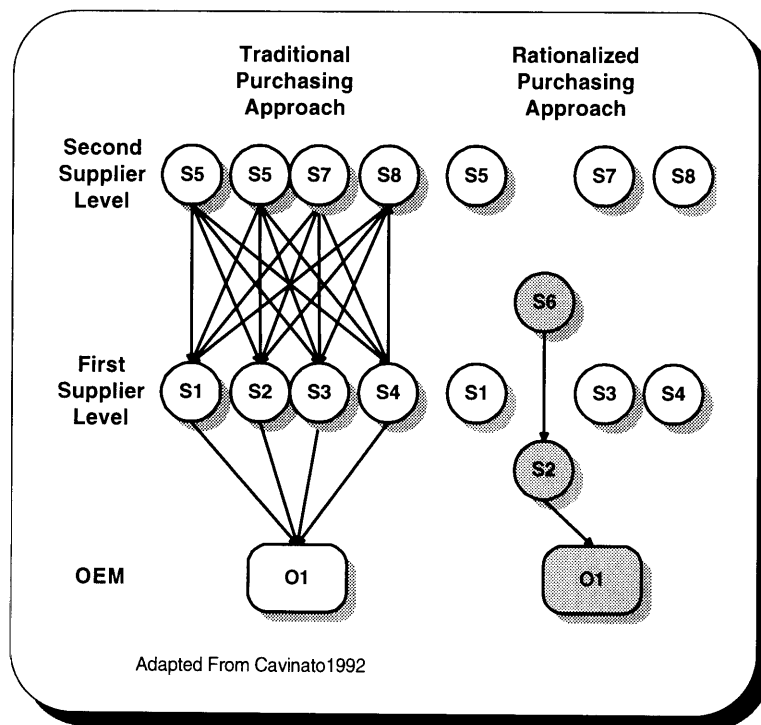
From a strategic point of view, the cooperative relationship insulates the supplier from the full exposure to competition in the supply segment of the product supply channel (particularly in cases where it has committed capacity to the partnership.) The buyer is able to utilize many of the benefits of vertical integration (security of supply, quality and cost control) without the associated investments and risks involved. Further the buyer is able to enjoy the benefits while still being able to conserve capital resources for development of further market opportunities rather than having to commit them to the manufacture of components and raw materials that would only serve to increase overall dependence on a small set of products or a single

industry. In short the suppliers growth and profitability become less dependent on the competitive forces operating in its own segment. Instead the supplier is in effect coopted into the competitive strategy of its buyer. (Leavy 1994)

Each must accept the “codestiny” implied by these long-term relationships and, therefore, must choose partner companies carefully. Often companies must forgo short-term gains and accept short-term losses with the understanding that each company, (both the supplier and buyer), is committed to long-term success. It becomes necessary for the channel members to view the entire supply channel as a strategic entity, either minimizing cost or maximizing end-user value given particular strategic options. If the channel performs adequately, there will be compensation for all; if the channel has poor performance, everybody in the channel loses. (Cavinato 1992) In product supply channels that have power concentrated in one member, there is the possibility that channel profits will accrue only to the powerful member, and that all losses will be shifted to weaker channel members. During economic downturn powerful customers seek concessions from suppliers, but these powerful customers often keep profits when the down turn is over. In equal power relationships concessions would be granted during tough times but some type of

reward would be offered in exchange when profits return to pre-concession levels.

Examine the following figure. On the left side is a traditional purchasing approach supply chain where the OEM purchases components from multiple supplier, who in turn also purchase from multiple suppliers. The OEM has no real control over component quality or cost, and plays one supplier off the others to try to get favorable costs, and threatens switching to guarantee quality. On the right side the rationalized purchasing approach, a group of suppliers working with the OEM. Suppliers S6 and S2 are insulated from competition at their tier, and in exchange work with the OEM to keep costs down and quality up.



Adapted From Cavinato1992

Traditional vs. Rationalized Supplier Bases

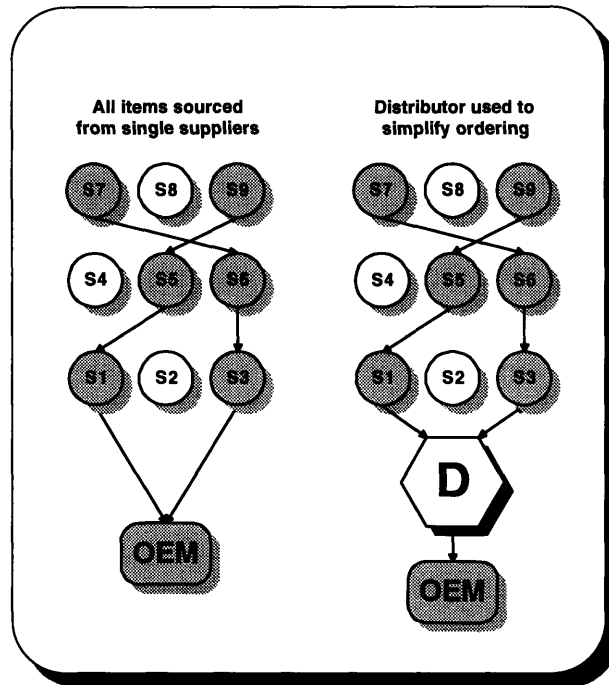
Further, in the rationalized supplier base, suppliers are closer together and better communication results, as there are fewer suppliers with whom to communicate.

The implications of JIT theory on the use of distributors is difficult to ascertain. An OEM attempting to implement JIT will want to choose its “partners” carefully. Two points that OEMs must keep in mind when choosing partners are attitude and ability. The attitude of partnering organizations must be innovative and they must be willing to work with the OEM. The partnering organization must be willing to alter its policies in order to help the OEM grow and adapt. The partnering organization must also be able to fulfill its promises.

In some cases, OEMs or end-users may find that they are unable to partner effectively with unsophisticated manufacturers because of minimum order quantities, or the need to wait for large production runs to finish before the key needed items can be produced. OEMs may, in fact, find it easier to use a distributor as a supplier, especially if they source multiple products from a distributor, or products that have different manufacturers. Using sophisticated distributors can also make it easier to rationalize the supplier base.

On the right in the following figure is a rationalized purchasing base where the OEM purchases small orders from two suppliers. If the suppliers are difficult to work with, the OEM may find it useful to

purchase from a distributor, like the left hand side of the figure. The distributor also may be able to leverage its larger order quantities, size and efficient scales to offer lower prices or higher service to the OEM.



Distributor Used To Rationalize Supplier Base

Further, because the distributor, D, has consolidated the output from suppliers S1 and S3, only one “supplier” is seen by the OEM, not the two from the original supplier base. A reduced supplier base simplifies receiving, purchasing and remittance. While each simplification, may not save much in terms of cost, each simplification contributes incrementally to profitability.

2.14 Summary

Each of the groups of theory intersect with the others and it is possible to tie them together if one theory is chosen as a reference point. The framework that I will use as a reference point is TCT.

Porter's view of vertical relationships and the power of suppliers and customers is that there is vertical competition for the distribution of the total chain's profits. He implies that when suppliers to, or customers for a firm's inputs and outputs are strong, the firm should reduce its dependence upon those supply channel entities. He suggests that vertical integration will reduce the power base of upstream and downstream entities (forward integration to reduce downstream power and backward integration to reduce upstream power.) The Williamsonian view is that transactions and exchanges with powerful suppliers will have high governance costs. Powerful suppliers will take advantage of information gaps and interpret ambiguous market conditions to their own advantage. This is part of the definition of bounded rationality. These exchanges must be managed more carefully and the costs of careful management can offset production cost advantages that accrue when external suppliers are utilized. High governance costs encourage extension of the boundary of action to encompass the performance of the task in question.

Examinations of behavioral theory show many similarities to Porter's views. For example both view the power of external entities as something that should be reduced and dependence upon powerful organizations negatively. Behavioral theorists look more closely the relative dependence in a relationship making predictions about relationships with high dependence and equal power. It also makes predictions regarding behavioral interactions, and examines ways to increase satisfaction between parties. Inherent in the theory is that improved relations are a good thing. Unspoken in much of the literature is the reason that "good" relations are desired, that they reduce the costs of doing business. The behavioral literature prescribes using the sources of power to improve relations with or at least control the actions of other members. It is the exercise of the sources of power (both coercive and noncoercive) that alter or reinforce the existing power dynamic. It is possible to interpret the exercise of sources of power as time or efforts spent managing or governing the relationship, that is, each exercise of a source of power accrues governance costs. The exercise of sources of power can either be attributed or charged against specific transactions or applied strategically and preemptively to alter the power dynamic and reduce future governance cost for a class of transactions. Once the exercise of power is viewed in this way, it is easy to view all efforts of controlling exterior organizations as

governance costs. If in a position of power a company would be wise to utilize exterior organizations for task performance because less governance effort is needed to achieve acceptable results. If not in a position of power, or in a position of low power it is expected that governance costs will be relatively high. This will encourage internalization of functions if possible. If internalization is impossible either the power dynamic must be altered (by exercising power) or the relationship and contract performance must be managed very carefully, i.e. the transaction will have high governance costs. The intention of the political economy framework is to bring the economics of managing these intercompany relationships into clearer focus. It is not itself a new set of theories, but a way of combining traditional economics with behavioral theories.

JIT thinking approaches the management of production, inventory, and intercompany relationships from a different direction. JIT attempts to reduce internal production and internal governance costs, thereby increasing the attractiveness of internalizing tasks. It also seeks to build intercompany relationships with a high degree of dependence with an equal power distribution, allowing the subcontracting of more tasks and functions. Implementation of JIT style relationships implies a quasi-integration of companies, or a quasi-merger. JIT style relationships will be characterized by lower

governance costs relative to non-JIT-style relationship contracting. The creation of chain profits is the attempt in these relationships this contrast with porters view of competition for chain profits. In equal power relationships it is assumed that profit distribution will be equitable.

The following table contains a summary of the predictions or implications that a school of thought or theory imparts upon the use of distributors in product supply channels and vertical integration, given

a state or qualification:

Theory / School of Thought	Qualifications	Prediction or Implication
Transaction Cost Theory: Market Characteristics	High per period channel volume for a product	High level of channel integration
Transaction Cost Theory: Market Characteristics	Highly specific assets required to complete a task	High level of channel integration
Transaction Cost Theory: Market Characteristics	High volatility surrounding a transaction,	High level of channel integration
Transaction Cost Theory: Market Characteristics	High diversity of the environment	Low level of channel integration.
Transaction Cost Theory: Product Characteristics	Customers have high information needs	Customers prefer direct channels.
Transaction Cost Theory: Product Characteristics	Products need customization or adjustment to fit customers' needs	Customers prefer direct channels.
Transaction Cost Theory: Product Characteristics	Customers place emphasis on product integrity and reliability because of the effect that the product has on customer operations,	Customers prefer direct channels.
Transaction Cost Theory: Product Characteristics	The product has a high dollar value, represents a significant financial decision for the customer or a represents a concerted purchasing effort.	Customers prefer direct channels.
Transaction Cost Theory: Product Characteristics	The product is used extensively in customer operations	Customers prefer direct channels.
Transaction Cost Theory: Product Characteristics	Customers feel that they or their order are too small for the manufacturer to really care about	Customers prefer indirect channels.
Transaction Cost Theory: Product Characteristics	Customers require a broad range of similar or related products purchased from a shopping list.	Customers prefer indirect channels
Transaction Cost Theory: Product Characteristics	Customer environments require the channel to support a high degree of product availability,	Customer prefer indirect channels
Transaction Cost Theory: Product Characteristics	Customers are likely to require after-sale services such as installation, repair, warranty work and maintenance	Customers prefer indirect channels
Transaction Cost Theory: Product Characteristics	Customers' purchases involve transport, storage or supply complexities	Customers prefer indirect channels
Porter's forces	Desire to remain free from supplier power	Potential backward integration
Porter's forces	Desire to remain free from buyer power	Potential forward integration
Porter's forces	Market has high barriers to direct entry	Use a distributor for entry
Porter's forces	Manufacturers are very powerful	Buyers might use a distributor for buffer
Porter's forces	Buyers are very powerful	Manufacturers might use a distributor for buffer
Behavioral Theorists	Central programming will help to coordinate inputs so that efforts are complimentary and additive.	Integration
JIT	End-users find that they are unable to partner effectively with the manufacturers	Seek distributor for buffer
JIT	Simplified purchasing system allows simplified control structures	Use a distributor if it will simplify purchasing

3 Exploratory Research

3.1 Purpose Of Exploratory Research

The purpose to the exploratory research is to shed light on the usefulness of the frameworks that are derived from theory, by examining the product sourcing decisions of a major retailer.

3.2 Methodology

Data was gathered for this research by a combination of interviews with merchandising and logistics personnel at a major retailer, interviews with manufacturers' and distributors' representatives, and queries to the retailer's mainframe for information about price, sales, inventories, purchase orders, and budget information for their distribution center.

With the data provided from interviews and the company files, calculations were performed to ascertain the propriety of some decisions, and to explore the feasibility of alternative courses of action.

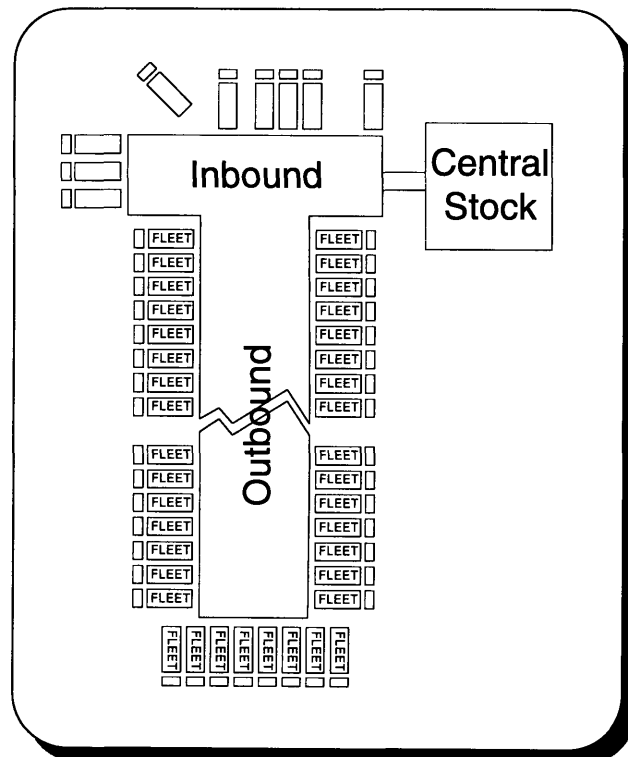
The Retailer

The retailer examined for this research is a major United States chain store merchandising company which records over \$2 billion in annual sales. This chain store company will be referred to hereafter as the Store.

According to an interviewed merchandiser, at each the Store's chain locations, the following things hold true for all items:

- All items in the Store are sold self service (i.e. customers are assumed to have low information needs)
- All items in the Store have a price point less than \$300.
- Products are very unlikely to represent significant financial decisions for the end user.
- Items are sold with no installation, customization or product service warranties. Defective items are replaced with duplicate items, and then returned to the manufacturer, or destroyed by manufacturer request.
- Most products sold do not have high information needs. They are easy to set up, display and sell.

The Store had also recently constructed a new distribution facility in the Midwest. The facility is basically a large crossdocking facility. Connected to the DC is a small central warehousing facility used primarily for holding items before a promotion or holding seasonal items. The Store was interested in examining its products' supply channels to optimally utilize the facility depicted below.



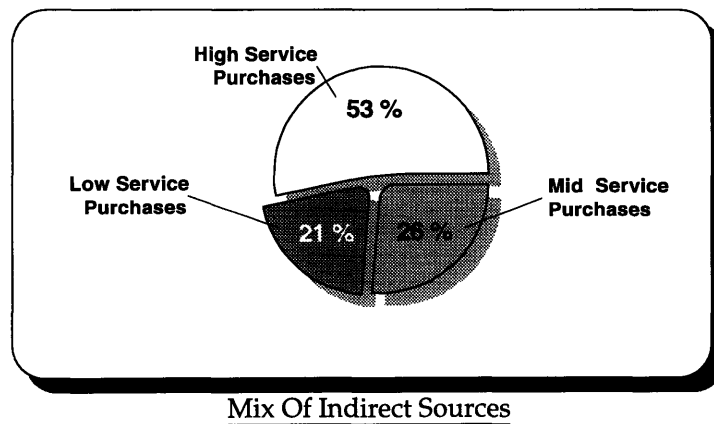
Midwestern Distribution Center And Central Stock

Currently the store does not perform pick and pack at this facility and most of the storage is not in racks but palletized.

The Store's Use Of Distributors

Approximately 50% of the Store's annual purchases, about 140 million units, are from distributors or non-factory sources of goods.

Most non-factory vendors provide three levels of service, low, middle, and high, with the goods that they sell. Nearly 53% of the indirect purchases are categorized as high-service purchases, 26% mid-service purchases, and 21% as low-service purchases.



The lowest of the three levels of service allows the Store to purchase products in quantities smaller than manufacturers' minimum orders. These are shipped on pallets, and usually cost the store between 5 and 8% over the (list) cost of the goods or an "upcharge of 5 to 8%." Items purchased with the middle level of service are shipped to the Store in full cases, palletized by store location. For example, one pallet may go to each store per day, and each pallet will have multiple products in full cases on it. These store palletized shipments are referred to as pre-received and simply crossdocked at the DC. Pre-received items do not have the paperwork for receiving processed at the DC, instead it is processed at each store location. These goods are upcharged 7 to 10% with 9% being the norm. The highest level of

service includes sending product assortments and single units, boxed by store departments on the store pallets, pre-received. These goods may be mixed on the pallets with the mid level service goods. The goods are upcharged between 10 and 15% with 14% being the norm. Distributors report that their margins are highest on low service level good and lowest on those good with highest level of service.

To simplify the investigation, it was limited to one department that presented a good representation of the Store's product mix in terms of product cost, demand, and procurement strategies. In light of the reduced sample the following are also true:

- All of the products investigated come from one department.
- This department is supplied by 126 different product sources, both distributors and manufacturers.
- There are 2550 product-source combinations in this department. (each product -source combination has a unique identifying number)
- The average cost of the products in this department is \$4.38.
- The average retail price of the products in this department is \$6.07.

As this number of suppliers and products became unwieldy, the investigation was further limited to a representative sample of the department, comprised of 35 products with similar consumer usage characteristics, but different levels of demand and procurement strategies.

- The average cost of the products investigated is \$4.27.
- The average retail price of the products investigated is \$5.38

The following table shows the product number, Supplier (a letter / number combination where “D” indicates a distributor, an “S” indicates a factory source), Units Per Case (“NA” recorded when it can be orders one unit at a time), Cost, Price (to the consumer), and the Sales for the 1993 selling season (the tenth week of 1993 to the fortieth week of 1993).

SKU	Supplier	Units / Case	Cost	Price	Sales
1	D2	na	2.45	3.48	3478
2	S12	12	1.47	1.97	3355
3	S9	12	2.37	4.97	1520
3	D2	na	2.80	3.25	
4	S1	24	1.01	1.48	8146
4	D2	na	0.96	1.00	
5	S1	6	5.69	7.48	4352
5	D2	na	6.28	4.50	
6	S7	12	3.00	3.97	2105
7	S5	12	4.47	5.97	2941
8	S15	12	2.10	2.97	17494
9	S15	24	0.85	0.97	10391
10	S5	12	2.67	2.97	4309
11	S17	6	7.65	9.97	1711
11	D1	na	7.65	9.97	
12	S7	12	2.61	2.75	3118
12	D2	na	2.97	2.75	
13	D2	na	3.40	4.97	2517
13	S16	4	2.78	3.25	2517
14	S16	12	1.89	2.00	180
15	S7	12	1.90	2.97	5531
16	D1	na	3.00	5.00	1256
17	D2	na	4.45	5.97	963
18	D2	na	2.34	3.48	8140
19	S3	12	0.67	0.70	187

SKU	Supplier	Units / Case	Cost	Price	Sales
20	S1	12	4.52	2.00	2021
20	S5	12	3.99	2.00	
21	S7	12	1.90	2.97	2589
22	D2	na	1.58	2.97	3343
23	S3	12	0.67	0.70	206
24	S5	12	3.04	3.97	1998
25	D1	na	0.50	1.18	749
25	D2	na	0.50	1.18	
26	D2	na	1.76	1.97	12166
27	S3	12	2.69	3.48	7038
28	S3	6	7.20	9.97	1195
28	S3	36	6.11	9.97	
29	S17	6	16.65	17.97	6860
30	S1	6	4.52	5.97	4381
31	S10	12	3.84	4.97	16866
32	S2	12	1.73	2.78	4159
33	S2	12	3.50	4.97	8073
34	S2	12	2.58	3.48	5944
35	S4	6	24.42	27.97	1223
35	D2	na	25.25	29.97	455

The Store was able to negotiate lower rebuy prices (replenishment costs) for the following four products: 2, 8, 12 and 31 when sourced from suppliers 10,12,15 and distributor two.

Product	Initial Purchase Cost	Replenishment Cost
2	1.47	1.17
8	2.10	1.94
12	2.97	2.75
31	3.84	3.59

3.3 Observations Of The Product Supply Channel

19 of 35 the products being investigated were purchased directly from their manufacturer. (products 2, 6, 7, 8, 9, 10, 15, 19, 21, 23, 24, 27, 28, 29, 30, 31, 32, 33 and 34) Of the remaining 16 products, six are sourced exclusively from one of two distributors. (products 1, 16, 17, 18, 22 and 25) The remaining ten products have all had two or more sources during the last selling season. (3, 4, 5, 11, 12, 13, 14, 20, 28 and 35) They have been sourced from both the manufacturer and a distributor; these products are the most interesting.

Further investigation revealed that the sourcing for one of the products, product 35, is not dual, but that its source has changed permanently from direct purchase to distributor purchase during the selling season. The Store was purchasing only this product from a supplier (S4). The Store then shifted purchasing to D2. The following

table shows the product number, its initial supplier, and the current supplier.

Product	Initial Supplier	Current Supplier
35	S4	D2

The Store used distributor D2 to rationalize its supplier base. Before the shift nearly 1300 products were purchased from D2. N. G., the merchandiser, said "The cost of adding [this product] to the list of products already sourced from [D2] was inconsequential." Rationalizing its supplier base helps to minimize transaction and supplier management costs for low volume products. The elimination of one supplier also simplified ordering and remittance.

Product 35 was a relatively slow moving product. Its sales level, 1678 units, is small when compared to the average sales of 4506 for the examined products and average sales of 7000 units per selling season for the entire department. (A small number of products in the department sell in very high volumes) The low sales levels, coupled with the relatively high per unit value \$24.42, vs. 4.27 and 4.38 for the sample and the department, respectively) led the Buyer to believe that single unit orders would be a better way to procure the product.

A \$0.83 increase (3.3%) in the unit cost was the result of changing the source, in response to the increased cost the Store increased the retail price by \$2.00. The previous sourcing scheme required purchasing twice each season in lots of about 850 units, once before the

selling season, and once in the middle of the selling season (replenishment). Each lot moved to the DC by LTL at an approximate cost of \$2.50 per case, an extended freight cost of \$708.33 (with six units per case, the freight cost per unit was \$0.42.) When ordered from the distributor D2, the price included the freight charge, so the increase in net landed product cost (cost of the product, delivery to the DC and preparation for outbound transportation) was actually \$0.42 or about 1.7%.

The following table shows how the change in net landed product cost and consumer price affect the margin on this product.

Supplier	S4	D2	D2 (no price change)	
Per Unit Cost	24.42	25.25	25.25	Increase in unit cost.
Per Unit Freight	0.42	Included	Included	Decrease in freight cost
Net Landed Unit Cost	24.84	25.25	25.25	
Sales	1223	455	455	
Total Cost	\$30,379.32	\$11,488.75	\$11,488.75	Combined with price increase results in an increased net margin, and order simplification.
Price	\$27.97	\$29.97	\$27.97	
Gross Receipts	\$34,207.31	\$13,636.35	\$12,726.35	
Gross Receipts - Cost Of Goods Sold	3,827.99	2,147.60	\$1,237.60	
Gross Margin	11.19%	15.75%	9.72%	

Had the Store not increased its price they would have had a decrease in the product's margin of 1.47 points, that would be partially offset by the simplification of ordering the product, and the reduction of inventories for the product. Coupled with the \$2.00 increase in price, there was a margin increase of 4.56 points, not including the forgoing gains mentioned. This price increase was a function of

customer acceptance, and the price could have been increased regardless of the source.

The Store also changed the sourcing scheme for 3 products. Each was sourced from a distributor originally, then changed to a combination sourcing scheme (both distributor and manufacturer). The following table shows the product, its initial supplier, and its current supplier.

Product	Initial Supplier	Current Supplier
4	D2	S1 / D2
5	D2	S1 / D2
20	D2	S1 / D2

The Store uses the following combination sourcing scheme for a number of products in the sample. The Store places its initial order directly with the manufacturer to load the inventory at the beginning of the selling season. These orders are then cross-docked at the Store's Midwestern DC from the inbound trailer to the Store's fleet trucks bound for stores. The Store then uses a distributor (D2 or D1) for replenishment of the product during the selling season. After the selling season there is no replenishment; the Store lets the inventory recede, and reduces the floor space for the department, while increasing floor space for other departments and promotions. Eventually the products are placed in clearance. The following table shows the products sourced with this combination scheme, the initial order supplier and the replenishment supplier.

Product	Initial Order Supplier	Replenishment Supplier
3	S9	D2
4	S1	D2
5	S1	D2
11	S17	D1
12	S7	D2
13	S16	D2
14	S16	D2
20	S1	D2

Because initial order volume is large enough to meet manufacturers' minimum orders, initial season purchases are sourced directly from manufacturer at costs lower than the costs of procuring from distributors. The Store's buyers feel that this scheme allows the Store to realize reduction is the net landed cost of goods to be sold, due primarily to lower per unit costs.

Replenishment or mid-selling season orders are placed with a distributor. This simplifies rebuying and replenishment because one distributor may carry the products of 10 to 50 (or more) manufacturers. Products ordered from distributors move on full trucks from the distributor, and some distributors (both D1 and D2 in this case) take discrete (less than one case) product orders and bundle the products by store, allowing the product assortments (bundles) to be crossdocked at the DC. This is the highest level of service discussed previously. The provision of delivery in product assortments relieves the Store from the need to perform pick and pack operations, and the costs, both fixed

and variable, associated with those operations. The fact that one tractor-trailer combination carries products from 10 or more manufacturers also simplifies traffic at the DC because the number of arriving combinations is reduced.

It is the Store's policy to order initial and replenishment orders in this scheme. If this ordering scheme does in fact reduce net landed product costs, these actions are consistent with the mission of the Store, offering value priced products. N. G., the buyer responsible for this department, said "I assume that analysis was performed at the product two digit class level, but probably not at the 4 digit class or sku level." He believed that gross analysis was performed before he took the position (9 months prior to the interview) to get a "feeling" and then a policy was determined and implemented. This policy was not examined on a unit by unit basis, nor has it been reevaluated to N.G.'s knowledge.

In examining the suitability of placing inventory loading orders directly with manufacturers, and placing inventory replenishment orders with distributors, I performed a conventional cost analysis (Gaither, 1990) at the sku level for four of the products that are covered by this policy in the sample (incomplete information prevented me from testing all products in the sample that are subject to this policy.)

I used the cost information that the store uses in its decision making in the analysis

The cost of placing replenishment orders with the manufacturer and then breaking bulk at the DC, was compared to the cost of placing replenishment orders with the distributor. I was unable to measure the governance costs of the transaction, but due to the large number of products sourced from these distributors, I assumed that the marginal governance costs for the four products investigated was small.

All products leave the DC on fleet trucks, so outbound freight charges were also ignored. The Store uses the holding cost of \$0.28 for each case held for a portion of the selling season. (This is the average carrying cost multiplied by the average value of the products held in inventory multiplied by the average amount of time the goods are held either before the selling season or before shipment to the stores for replenishment.) A handling charge of \$0.54 represents the amount of labor required to place a carton or case into existing central stock and later pick it for placement on awaiting fleet trailers. Further, the analysis included the cost of breaking bulk at the existing facility with a cost of \$0.10 per unit. (This figure is consistent with industry norms.) The existing central stock facility has enough extra storage and labor capacity to switch this department to a pure direct manufacturer sourcing and to perform the subsequent breaking of bulk that direct

sourcing would require. (P. F., a logistics analyst for the Store, supplied the above parameters.) Below the parameters are shown in tabular form.

Logistics Costs	
Average LTL Cost Per Case	\$2.50
Average TL Cost Per Case	\$0.70
Handling Cost Per Case	\$0.54
Handling Cost Per Unit (Breaking Bulk)	\$0.10
Holding Coast Per Case*	\$0.28
Jobber Upcharge Broken Case	14%

* for the selling season

The next table is a summary of the results for the four examined products. Manufacturer sourced orders incur the cost of goods and the following: costs for shipping; the cost of handling each case; the cost of holding each case for a portion of the selling season; and the cost of breaking bulk for each unit. For orders of 100 cases or less inbound freight was assumed to be LTL, \$2.50 per case; for orders of 100 or more cases the Store's traffic department could coordinate the shipment with other shipments or utilize a backhaul from one of its stores. Because of the low marginal cost for carrying goods coordinated with other shipments or on backhaul shipments, freight cost were assumed to be TL or \$.70 per case. Distributor orders only incur the cost of goods, and the distributor upcharge (freight is included in the upcharge), 14%. Check marks indicate the better of the two options indicated by my calculations and the current supplier for

reordered units, the distributor. A pair of check marks in the last two columns in any row indicates that the lowest cost sourcing for that product is also the scheme currently used.

P R O D U C T	S U P P L I E R	Number Replenished	Units Per Case	Cost Per Unit	Cases Ordered	Cost Of Goods	Cost Of Inbound Freight	Cost Of Handling Cases	Cost Of Breaking Bulk	Cost Of Holding	Up Charge 14%	T O T A L S	B E S T	U S E D
3	S9	1129	12.00	2.37	95	2701.80*	237.50	51.30	112.90	26.60		3129.10	✓	
	D2			2.80	na	3,161.20					442.57	3,603.77		✓
4	S1	3344	24	1.01	140	3,393.60*	98.00	75.60	334.40	39.20		3,940.80		
	D2			0.96	na	3,210.24					448.43	3,659.67	✓	✓
5	S1	589	6	5.69	99	3,379.86*	247.50	53.46	58.90	27.72		3,767.44	✓	
	D2			6.28	na	3,698.92					371.07	4,214.49		✓
11	S17	447	6	7.65	75	3,442.50*	187.50	40.50	44.70	21.00		3,713.25	✓	
	D1			7.65	na	3,419.55					478.74	3,898.29		✓

In this (small) sample the policy indicated that a distributor be used for reorders on all (four) products; of these four the Store's policy chose the best sourcing solution on one of them. If the reorder decision had been questioned on product by product basis a savings of \$1,107.69 would have been realized.

While not a tremendous savings it is significant; blind adherence to the policy will potentially waste large sums of money. The savings that might accrue from the small sample suggest that this policy might be evaluated for the entire set of distributor sourced products carried by the Store. On the other hand, it must be remembered that this policy reduces traffic at the DC, simplifies reordering and simplifies

remittance. The policy should be examined for a class of products on a yearly basis, so that the policy is not necessarily altered, but that the set of products that the policy applies to is reevaluated.

This type of replenishment is not uncommon in the retail sector. (Representatives from suppliers S1, and S2 reported that they have similar arrangements with some of the Store's competitors).

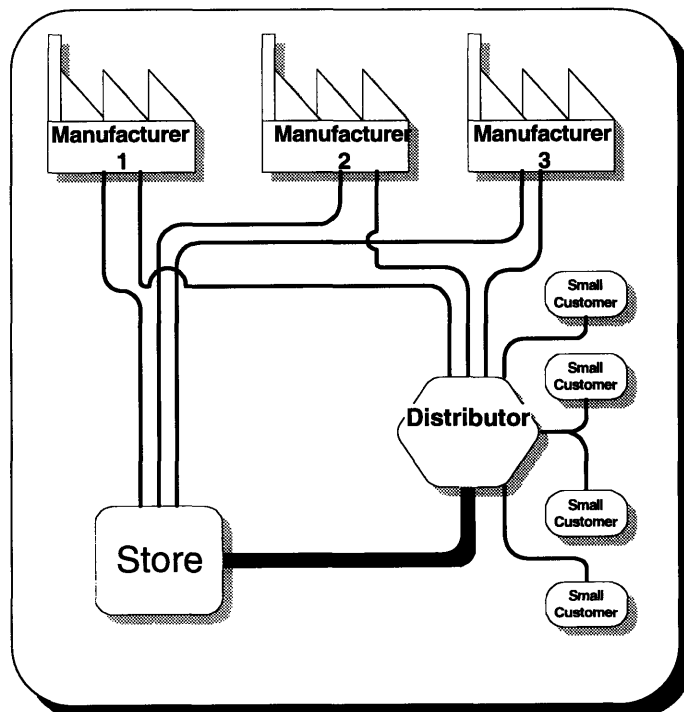
The key criterion for using distributors for supply of replenishment appears to be the service that the distributors provide. The assets required for self performance of the services, a break bulk facility and management, are not highly specific (excepting land and building which would be site specific). It is the low asset specificity coupled with the Store's desire to remain liquid and maximize open-to-buy time (the time that the store can commit funds to the purchase of products) that implies that the store should leave the breaking of bulk outside its boundary of operations. The construction of a break bulk facility would also increase the fixed portion of the store's cost base.

Another reason that these goods are replenished through distributors is a non-economic. The addition of a break bulk facility as would be required to direct source all high and mid service level purchases would increase the importance of Store Operations function, as the percentage of revenue spent on merchandise would decrease

relative to the percentage of revenue spent on operations. This would upset the balance of internal power and alter the nature of this company which has traditionally emphasized merchandising not operations. (This is true of many retailers.) Therefore the use of distributors to perform logistics functions allows the Store to retain its focus on merchandise.

Interviews with suppliers' representatives revealed that most of the factory suppliers relied upon the use of dual channels in bringing their products to market. Each reported selling both directly to retailers and to distributors who in turn resell them to others.

Most of the examined suppliers manufacture or process and package this product, capital intensive functions. (Suppliers S1, S2, S3, S5, S7, S8 , S10, S12, S14, S15, S17) Therefore, each is likely to perform capital intensive processes and have relatively high fixed costs. In cases where the use of distributors is less profitable than selling directly to retailers (most cases), sales to distributors still contribute towards profits, improve asset utilization and help to maintain efficient scales of production by concentrating and capturing marginal demand that might be lost otherwise. The following figure depicts manufacturers utilizing dual channels, and the Store's procurement from dual channels.



Dual Product Supply And Procurement Channels

In using dual or parallel channels most manufacturers have formal minimum order policies and direct smaller orders to their distributors. S16 had an informal minimum order policy; its employees evaluate each order on a case by case basis, but it still utilizes distributors. A representative from supplier S1 stated that the company prefers to deal directly with retailers, but that it also recognizes that it becomes very costly for it to service small orders and therefore directs them toward distributors.

These minimum order policies demonstrate that manufacturers recognize that small orders, regardless of the ordering company's size, are less profitable than large orders. This observation also demonstrates that manufacturers recognize that the selling to distributors, who then service small orders, allows them to capture some marginal demand. On the other hand, most manufacturers' representatives stated that manufacturers prefer to deal directly with the retailers when profitable because it allows them to retain "presentation control." (the manner in which a product is displayed and sold)

The minimum order policies in place at almost all of the manufacturers block smaller, distributor served, customers from purchasing directly. The manufacturer may sell to the distributor at a discount but it appears that the distributor discount is the same as the

discount available to any customer who orders in large quantities. L. K. of D1 assumes that the discount his company receives when it orders is also less than the reduction in profitability the manufacturer would experience from self servicing smaller orders. It is only through economies of scale that the distributor can profit. (L. K.)

The minimum order policy is related to the issue of dual channels but it has implications on the profitability of distributors. The channel through which the product flows is selected not by industry or customer type, nor is selected by product type but by order size. It may change for a customer on an order by order basis. This “cherry picking” of orders by manufacturers makes distributors dissatisfied with the manufacturers, according to those interviewed. There is little to no after sale services with which to reward to distributors, and the manufacturers are retaining all but the least profitable customer orders. L. K. of D1 remarked upon his dissatisfaction and difficulty in selling full cases coupled with low levels of service, (higher margin goods). Most of the business his company does is in goods couple with higher service, (lower margin goods). This corresponds to the Store’s order percentages of indirect purchases. The majority of the goods purchased from distributors are coupled with higher levels of service.

The manufacturers' retention of all but the least profitable orders has created intense competition between distributors, with only the most efficient distributors surviving. L. K. further explained that although this (investigated) class of products has many manufacturers, it has a very concentrated distributor base. The Store utilizes only two distributors for this class of product. There are three others nationally who deal in this class of product.

The L. K. reported that his company did see itself as part of the product supply channel, in part because he communicated sales levels back to manufacturers so that their customers received appropriate fixtures, display aids and cooperative advertising funds.

When the manufacturers' representatives stated that manufacturers prefer to deal directly with retailers I asked them if they considered the distributor as part of the product supply channel. Some of the representatives stated that they do not view vendors as a crucial part of the product supply channel. The manufacturers' representatives (from S1, and S5) replied that products are sold to them as if they were similar to other customers (same discount-quantity schedules). I expect that this is partly a result of interviewing account representatives and other mid level company employees, and not top level executives.

Standing alone, the representative from S17 made it clear that it initially brought its product to market through the use of distributors, and therefore did view distributors with a deal of respect, (even at the middle level of the interviewed representative). Initially S17 had little luck convincing the larger retailers to carry its product. It offered the product to distributors with a relatively high margin. This encouraged distributors to push the product for profit, and it gave S17 a virtual sales force many times the size of actual sales force. Retailers did purchase and carry the product when pushed by distributors. Eventually the major retailers went directly to S17 for their purchases.

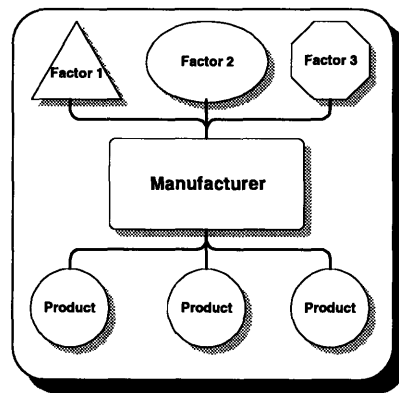
4 Theoretic Consistency

In examining the consistency between the observed practices in the product supply channel investigated and the theories presented earlier, it seems most reasonable to start where the examination of distributor usage itself began.

Boundaries Of Activity And Efficient Boundaries

The question of distributor usage was first examined by looking at the activities that organizations perform, and the domain that each company uses to define itself. What do the manufacturer, distributor and retailer do?

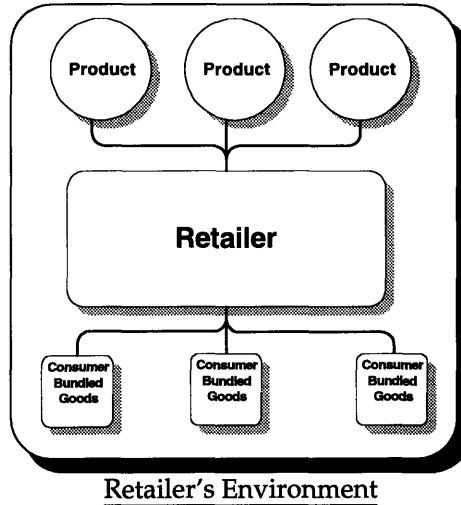
A manufacturer generally goes to the environment for its inputs or factors, then it internally combines the factors to form products. Finally it places products back in the environment for sale.



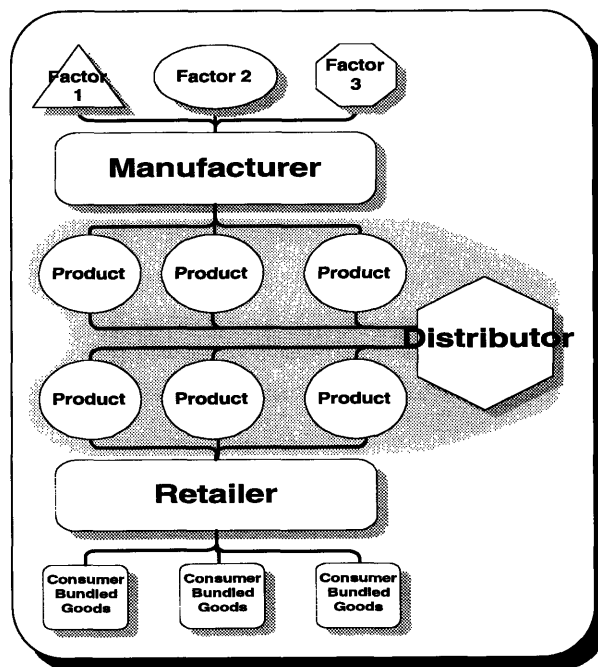
Manufacturer's Basic Domain

A retailer goes to the environment for inputs or products, then internally it collects, displays and then places them in the environment

to satisfy consumer demand. The products are purchased in bundles by consumers.



What is the function of the distributor? Where does it touch the environment? What are its inputs and outputs? A distributor goes to the environment for inputs, products, and places in the environment these same products.



Distributor's Domain (With Manufacturer's and Retailer's Domains)

The internal transformation that the distributor effects on products may include final assembly, consolidation, or repackaging in accordance to the next user's needs. Distributors internally perform some type of service for the manufacturer, who placed the products in the environment and / or for the party, in this case the retailer, who will take goods as inputs from the environment.

It is common that manufacturer's outputs are not perfectly suited for the next user. This is because there are functions that neither the manufacturer nor the next channel member (the retailer) wish to perform. It is these functions, the functions that do not lie within the boundaries of activity of manufacturers and retailers, that distributors perform.

In the investigated product supply channel most of the manufacturers basically confine their boundary of activity to manufacturing their goods and shipping full cases in quantities not less than some predetermined minimum. Their boundary also includes channel support functions, such as distributing cooperative advertising funds and the supply of displays and endcaps.

The Store has similarly confined its boundary of activity to actions that it feels it performs best, stocking, displaying and selling goods. In both cases, the servicing of small orders, breaking bulk and

holding buffer inventories, has been placed outside the boundaries of activity.

Transaction Cost Theory

Transaction cost theory would ask why has this happened, how do the cost structures of these activities affect the allocation of their fulfillment. Transaction cost theory would first seek to examine the specificity of the assets required for the performance of the task of breaking bulk and shipping smaller orders efficiently.

Although the assets required for breaking bulk are reasonably specific (RF scanners, plastic totes, etc.) the activity of breaking bulk is not itself a highly transaction specific task. It is not a very different activity to break bulk for electronic components or health and beauty aids. The assets (RF scanners, plastic totes, etc.) used for one are easily redeployed for other similar activities. The facility need not be co-located with either manufacturers or retailers reducing the need for site specific assets, but is usually centrally located so that transportation to and from a variety of locations is easy. Given the lack of transaction or customer specific assets employed for the activity, the relationships between most manufactures in the channel and the distributors are not relationships that will end the future viability of either party should they deteriorate.

A second important area of transaction cost theory is the concept of bounded rationality. This is an extremely important consideration when there is ambiguity surrounding the transaction and a possibility of cheating or being cheated. In the investigated product supply channel the product, (product assortments and small order quantities) is very clearly specified. Ten units delivered to an agreed upon location (midwestern distribution center for example) by a certain date, is 10 units delivered to an agreed upon location by a certain date. It is difficult to misinterpret a near commodity. There is little room of creative interpretation; there is little ambiguity. This being true, governance costs will be relatively low, or at least bounded rationality will not be a major factor in driving governance costs up. Quite simply low asset specificity and clearly specified contract performance criteria will imply that the Store will place the activity outside their boundary of activity.

The explanation of how examined manufacturers view the channel is interesting because it is not clear how the dual channels came about, only that they currently exist. It could have been as simple as manufacturers first deciding not to service small orders because they were relatively unprofitable (when compared to larger orders). Then, seeing the opportunity, distributors went to the manufacturers with order quantities large enough to satisfy minimum

orders requirements. Following that distributors re-bundled the items in smaller quantities, even selling single units to buyers who desired small orders, but were blocked by minimum order policies.

Eventually even larger customers who could order in larger quantities, recognized opportunities and advantages to ordering in smaller quantities. It freed cash, and reduced the value of inventory that needed to be held. The advantage of more liquid assets was not lost on retailers. It allowed them to be “open to buy” longer and allowed them to respond to better deals and promotion on other merchandise.

Ordering in small quantities also relieved management from the need to staff and manage large central inventory facilities. This allows management to concentrate on what it views as important, merchandising (in this case.)

Earlier, three frameworks based upon transaction cost theory were presented. Next, each will be applied to the observations to see if there is good fit between the frameworks and observations.

Market Characteristics

The characteristics of the “market” can be examined in light of the propositions put forth by Klein et al.

- The greater the specificity of assets the greater the level of integration.

This has been examined, the required assets for breaking bulk are not transaction specific. Vertical integration of the function by manufacturers or retailers is not expected. (An explanation of this is in the preceding subsection on transaction cost theory.)

- The greater the channel volume per period for a product the greater the degree of channel integration.

Not all products purchased by the store are purchased from a distributor, and when the volume for the channel is high, for example before a promotion or at the beginning of the selling season, a distributor is not used. The Store purchases directly from factory sources when the volume is high and it sorts cases bound for stores at the DC. This task is vertically integrated when channel volume is high. It is when channel volume drops to low levels, during replenishment, that distributors are used.

- The greater the diversity of the environment the lesser the degree of channel integration.

Although the producing base for these goods is relatively fragmented, the demand for goods is concentrated into perhaps a dozen chain merchandising stores and about five distributors. As such, is not expected that manufacturers will choose to use distributors for a large percentage of goods. This is in fact what was observed. A relatively small portion of the products travel through the distributor. The manufacturers prefer to deal directly with retailers when possible.

- The greater the volatility surrounding a transaction the greater the degree of channel integration.

It did not appear that there was high volatility surrounding the transactions between manufacturers and distributors, neither did there appear to be volatility surrounding either the manufacturer - store transactions or the distributor - store transactions. The level of market volatility that the store faces was difficult to ascertain from the interviews. I was led to believe that the market for this class of goods was relatively stable, implying that integration of activities by manufacturers would be not be preferred, yet the manufacturers retain all functions for all but the most profitable orders. The market in which the retailer operates has seen great changes in recent years. Should the Klein et al. volatility hypothesis hold true, the volatility of the retailers market would imply integration of channel functions, but the Store prefers to be relatively liquid, to remain flexibility. This is because although the market that the Store operates in is volatile, this transaction is not surrounded by high volatility. The market's volatility has an indeterminate effect on the level of integration as examined.

Basically, three of the six propositions made by Klein et al. are relevant, it was unclear whether the a fourth, (regarding volatility) was supported. The two dealing exclusively with the extent of integration within integrated channels were not reexamined.

Business Functions

The next framework presented was the business function framework. There are five basic functions selling, physical distribution, product modification, channel support and risk assumption.

The function of selling is primarily retained by manufacturers in the examined channel, as such manufacturers also retain the negotiation of prices at the intermediate level, and suggest prices for the end user level. Selling is not retained for the smallest and least profitable orders, and neither are the associated logistics functions. These functions are completely assumed by distributors for small orders.

Physical distribution is likewise retained for larger orders, and performed by distributors for smaller orders. For customer who deal directly with manufacturers, the customer (retailer) has the option of arranging its own transportation.

Corey et al. expect that channel support is allocated with the sales function. This is in fact what was observed. The distributors collect information about sales levels for smaller customers, and send the information back to the manufacturers. Following this product displays and similar items are sent to the distributor, and then forwarded to customers who purchase exclusively from distributors.

The manufacturer directly serves customers who place any large orders and have an official relationship with the manufacturer. In these cases the distributor is called upon to verify sales levels so that corresponding cooperative advertising funds and fixtures (displays and end-caps) can be distributed by the manufacture.

There is little product modification in this class of products. As such manufacturers sell in the size and quantities that they feel most profitable. Repackaging in accordance is customers orders is the distributor's core activity, therefore it must be retained by the distributor. After sales services are also basically non-existent for this class of product (a simple consumer good). The most basic after-sales service is replacement of defective products. This is handled by the manufacturer when it becomes necessary.

The last of the business functions examined by Corey et al. is risk assumption. As Corey et al. expected risk assumption is performed by multiple channel members. The risks of credit assumption is assumed by the vendor (manufacturer or distributor) of goods. The risk of underwriting capital equipment is borne by distributors, because the capital equipment required for breaking bulk can be utilized by distributors for servicing many different products, spreading the risk across the distributor's product base, diversifying the risk.

Manufacturers do not feel that the risk of running a break bulk facility

(or selling in small lots) is worth the low return that they could earn on these smaller orders. Distributors are able to leverage economies of scale and scope and large volumes by diversification so that the lower margins still provide ample rewards.

Product Characteristics

The next framework examined was the product characteristic framework. As stated before there are three classes of product characteristics, selling, usage, and after sale service characteristics, and each has a different impact on the level of integration that customers seek from vendors.

In buying this class of product there is not a complicated technology involved, neither do customers (retailers) have high information needs. (It is easy to set up and sell this class of product.) This class of products requires very little modification or customization for its effective use by the store. When the above factors are present each implies that direct sources are preferred. Because not one is required for selling this class of product, it is expected that direct sources will not be favored over distributors. (This does not imply that distributors are preferred)

The products bought from distributors are identical to the products bought from the manufacturer. Accepting this premise shows that product integrity and reliability are not better when sourced from

the manufacturer than when sourced from the distributor. This class of product's selling characteristics favor neither the distributor nor the manufacturer.

It is the usage characteristics that force the selection of the vendor. What is seen is that during prepromotion orders are placed with the manufacturer, low per unit costs are important. During the replenishment period, the products are ordered to fill a broad assortment of needs, and they are purchased from a shopping list. It is simplification of rebuying and replenishment that are valued. Further product availability is important to the Store at this time. This also tips the balance towards the use of a distributor for replenishment.

As stated before these products require very little after sales service, therefore after sale service characteristics have little impact on the sourcing decision.

Basically, it is the product usage characteristics that encourage the use of distributors for replenishment. Where the services provided by the distributor make handling the products much simpler, and routine.

Buyer And Supplier Power

The examined product supply channel did not form a cohesive social system, and the exploratory research did not capture a supply channel in flux, therefore there was little evidence collected on the

efforts to alter compensation systems or otherwise influence supply channel members. Most action in the social realm of the examined product supply channel were efforts to alter dependence of channel members upon one another.

The power of distributors was interesting to examine because the manufacturers are relatively fragmented, yet retain the ability to sell directly to some of the same customers that distributors serve. In this way the manufacturers retain a good deal of power. If manufacturers lowered or altered the minimum orders requirement, the distributors could potentially lose many customers. Unfortunately, the distributor cannot stop its customers from attempting to create direct relationships with manufactures. To preempt this possibility the distributors added services to the products that they sell (differentiation strategy).

By giving retailers what they desire, small order quantities and fractional cases and other services, distributors have built in very high switching costs for retailers. Few retailers can pose a credible threat of backward integration because the efficient scale is larger than most retailers require.

The same high efficient scale requirements for performing pick and pack operations has concentrated the distributor base for this class of product, and has limited the risk of new distributors being created. (High efficient scale requirements are a barrier to industry entry.) The

most credible threat to current distributor's profits comes from distributors for other classes of goods who could increase their scope to include this class of products quite easily.

The Store's examination of increased direct sourcing and construction of its distribution center might be viewed as attempts to reduce the power of distributors as noted and predicted by Porter and Galbraith. It appears that the investigated product supply channel does in fact have the form of vertical competition for profit shares that Porter described, not the more cooperative relationships that are characterized by JIT thinking. At least this characterizes the relationship between the distributors and the manufacturers.

Strategy

In the investigated product supply channel we see that a are not able to see the effects of the Store's strategy in day to day operation, but.

It would seem that the distributor is selling the same products as the manufacturers from whom they source their goods, but this is not the case. Distributors differentiate themselves from manufacturers by offering services. The services offered are services for which retailers are willing to pay a up to a 14% premium. It is not clear what the cap on the premium is, but distributors need to minimize their costs subject to the services that they offer. To do this, they build large scale

facilities, reaping the available economies of scale. Their assets specificity and facilities do align with their strategy, as Porter implied would be necessary.

Behavioral Theories

Given the existing power dynamic, high switching costs for retailers, and low relative power of between distributors and manufacturers, the most evident behavioral phenomena was the distributor's addition of services, an attempt to drive up switching costs and increase the Store's dependence upon them.

Also important to note was the distributor's lament that manufacture's low minimum orders, make it difficult for distributors to sell higher margin, low service goods. D1's representative feels that manufacturers' practice of accepting low order quantities is in direct conflict with the distributor's goal of selling low service high margin goods. (Goods sold with more complex services have lower margins.)

Their dissatisfaction with manufacturers' minimum order policy, did not appear to have a great effect on the profitability of the relationship, perhaps because distributors were viewed as a competitor with the manufacturer for chain profits, and not a partner.

An explanation for the lack of evidence regarding behavioral interactions might be the level of representative interviewed. Most representatives were low to mid level employees, as such their view of

the “big picture” was likely limited. In most cases representatives were not responsible for high level interactions with other companies but were responsible for more operational decisions and interactions between organizations, and therefore had little to report about attempts to countervail power, or the influence actual and perceived of other channel members.

Further most of the behavioral theories, and the political economy framework are best suited to investigating product supply channels in flux. They are best suited for examining attempts to ease the transition from one product supply channel structure to another. The exploratory research did not examine a channel in (structural) transition. Further the investigated product supply channel did not form a cohesive social system. Thus it was difficult to capture information on the behavioral interactions between channel members.

JIT

Within the literature of JIT are two basic reasons to use distributors in inbound product supply channels, instead of sourcing directly from manufacturers when both are viable options. The first reason is that simplifying the supplier base will allow simpler control structures. This use was observed in two different manners. In the first, the Store completely eliminated one manufacturer from the supplier base. The sourced product is now sourced from the distributor

S2. The second manner is the policy to use distributors for selling season replenishment. This has the temporary effect of reducing the number of suppliers when managerial attention might need to be directed elsewhere. Before the beginning of the next selling season the merchandiser will again include all of the factory sources in an effort to minimize unit costs.

The second reason for utilizing distributors is the services that they can add to the basic goods. Distributors trying to increase switching costs for retailers are likely to add services and comply with retailer requests when possible. By partnering effectively with retailers distributors guarantee repeat business, and retailers can reduce total costs although unit costs might increase. (for example pre-received items cost more than items bought from the manufacturer, but they allow a reduction in full-time-equivalents (FTEs) at the DC.) Further it moves the system towards product flow through.

It is not unreasonable to expect that it might be easier to partner effectively with distributors eager to build in switching costs, than it is to partner effectively with manufacturers.

It might be less useful to partner with a distributor than with a manufacturer, because there are only a limited number of services that a distributor can offer. A distributor is unlikely to be competent at designing specialty products, or performing codesign etc. Most

distributors are likely to be limited to services like vendor managed inventory. They are also likely to be limited to products that they currently carry or can acquire the rights to carry.

Despite the Store's adoption of distributors to simplify the replenishment and ordering systems, the relationship between the Store and their distributors was not obviously characterized by cooperation. The relationship was not characterized by highly cooperative or coordinating efforts. In fact the opposite was true, the Store purchased from the manufacturer when it had large orders. Had the Store been highly concerned with the profitability of their distributors, it is likely that they would have tried to negotiate lower prices for full cases, low service orders. The the Store could have then ordered their full case volumes from the distributor (at prices closer to manufacturers prices), guaranteeing the distributor better profitability, due to higher volume on their lower service goods. Even with margins reduced from current levels this might improve distributor profitability.

5 Summary

In examining the role of distributors in product supply channels many disciplines have been examined, each adding a little insight to the questions, each adding a little complexity to the answer. In researching the role of distributors in product supply channels the following areas have been investigated: transaction cost theory and three related frameworks; strategy; interorganizational behavior and the political economy framework; the concepts and implications of JIT; and coordination theory. Exploratory research of the product supply and procurement channel of a major U. S. retailer revealed support for some of the investigated theories.

The first area investigated was that of transaction costs and transaction cost theory as developed by Williamson (1975). Transaction cost theory has been researched extensively, and goes a long way towards the explanation of organizational structure and the inclusion or exclusion of tasks from an organization's activity set. Its strength is that it requires that the costs entailed with monitoring contract performance be included in examinations. More explicitly, it requires that the costs of monitoring outside actors be accounted for as carefully as the costs of monitoring inside actors. The theory also concedes that outside actors may try to cheat, and brings into focus the importance of managing relationships.

Transaction cost theory makes the case that the difference between the costs of monitoring outside and inside actors increases as the narrowness of assets (asset specificity) required for task performance increases. As asset specificity increases, the total of the differences between production and management costs for utilizing internal and external actors will bias decisions toward utilization of inside actors for contract performance.

Transaction cost theory brings to light the notion that management costs do matter, and that the costs of managing external parties needs to be considered when contracts with external parties are considered. By itself it seems to ignore the fact that management costs are not static, but dynamic, and that management costs vary not merely on the specificity of assets employed for a particular task but on other parameters as well. The three frameworks, product characteristics, market characteristics, and business function based upon transaction cost theory hold up to the when examined with practice both in the exploratory research and in studies by Corey et al (1989) and Klein et al. (1990).

Klein et al present a series of six statements regarding market characteristics and the level of integration a product supply channel will exhibit. They are the following: (1) The greater the specificity of assets, the greater the level of integration. (2) The greater the channel

volume per period for a product, the greater the degree of channel integration. (3) The greater the volatility surrounding a transaction, the greater the degree of channel integration. (4) The greater the diversity of the environment, the lesser the degree of channel integration. (5) Within integrated channels, captive distributors or regional sales offices are associated positively with increasing levels of channel volume. (6) Within integrated channels, the use of captive distributors is associated positively with the level of environmental volatility surrounding a transaction. An important notion in their work is the environmental uncertainty has been decomposed into the components of environmental diversity and environmental volatility.

In applying their statements to the investigated channel the first, second and fourth are supported. Their third statement regarding environmental volatility went untested because the nature of the exploratory research did not capture environmental volatility effectively. Their last two statements, regarding integrated channels, were not applied because the investigated channel did not exhibit much vertical integration of distribution functions.

The next framework presented, the business function framework, was developed from work done by Corey et al (1989). They broke the product supply channel down into five discrete functions, physical distribution, product modification, channel support and risk

assumption. Within each function are a set of tasks Corey et al. predict that each task and function will be performed by the channel member who can manage it best or perform it with the expectation of reasonable rewards.

The exploratory research unearthed tasks that manufacturers were unwilling to perform because the rewards were too small. (the shipping of small orders and breaking bulk) Distributors did perform these functions. By collecting the unperformed tasks of many manufacturers and performing the task in large scales it became profitable. Their work also implied that certain tasks would be bundled with other tasks. Their groupings of tasks were accurate, for example the extension of credit, and the arrangement of physical distribution, would be retained by organization that made the sale. This is in fact what was observed.

Corey et al. and others (Aspinwall 1962, Williamson 1981) also predicted that when products with certain characteristics were purchased, buyers would seek certain levels of integration from suppliers when possible. There are three classes of product characteristics, selling, usage, and after sale service characteristics, and each has a different impact on the level of integration that customers seek from vendors. In the exploratory research, the product's usage characteristics were clearly more important than selling and after-sale

service characteristics. Further the importance of specific characteristics varied with time. The nature of the product's sourcing tracked directly with the change in importance of the characteristics. Initially, product cost was the most important, and one class of products were purchased from the lowest cost source. After the initial buy, convenience and management ease overshadowed the cost of the product. At this point the product was sourced from a distributor that eased the purchase, and added services to smooth the interface between the distributor and the Store. Before the beginning of the next selling season the price is expected to become more important again.

The area of strategy was examined with reference to Porter's three generic strategies low cost, differentiation and focus. Each generic strategy was inspected as it related to logistics functions. Porter's primary view of the vertical relationship (buyer -seller) between parties, competition for the chain's profits, was exhibited in the product supply channel examined. Also examined was Porter, Shapiro and Williamson's, view that strategy must align with organizational structure, distribution methods, and asset choices, respectively

In the exploratory research the alignment of asset specificity and strategy was evident, and the distributor examined was seen to have a differentiation strategy. The distributor was seen to highlight

available services to make its products stand apart from the manufacturer's identical products, and charge a premium for the services.

The implications of JIT and the emerging cooperative intercorporate relationship on distribution and the use of distributors was examined. Within the literature of JIT two basic grounds to utilize distributors for inbound product supply are developed. The first reason is that rationalizing and simplifying the supplier base will allow the use of simple control structures. This use was observed in two different manners. In the first, the Store completely eliminated one manufacturer, who only sold one product to the Store, from the supplier base. The product is now sourced from a distributor. The second manner is a policy to use manufacturers for initial orders and to use distributors for selling season replenishment. This has the temporary effect of reducing the number of suppliers allowing managerial attention to be directed elsewhere. Before the beginning of the next selling season the Store will again include all of the factory sources in an effort to minimize unit costs.

The second reason for utilizing distributors is that they can add services to the basic goods. Distributors trying to increase switching costs for retailers are likely to add services and comply with retailer requests when possible. By partnering effectively with retailers

distributors guarantee repeat business, and retailers can reduce total costs by allowing distributors to perform what had previously been internal functions.

The section on coordination theory was included to illustrate how advances in one area of research can bring about advances in other areas of research. Further it presented an opportunity to show how advances in coordination and communication affect the assumptions upon which transaction cost theory is based, and how those changes might be reflected in the real world (increased subcontracting).

A careful investigation of the literature dealing with product supply channels as social systems revealed a different perspective on the previously presented theories, strategy as described by Porter and transaction cost theory and governance structures as presented by Williamson. This body of theory develops a clear definition of power, and its sources, conflict, different ways to reduce conflict, mediate rewards and influence other channel members. Internally the theory is consistent with itself, and shades of the theory are evident in all of the other areas examined. For example, Porter writes about power of suppliers and customers to an industry as affecting its profitability. Similarly, Williamson writes about governance costs, and how it increases with bounded rationality and how they can be minimized by

internalization of functions. Unfortunately the theories try to relate very complicated phenomena to one another, in doing so creates a very dense and difficult to understand set of rules. The political economy framework complicates matters even further by including economic measures for effectiveness and efficiency. It is within the political economy framework that power and policy changes are tied to economic performance and attempts to measure action in the social realm of the supply channel quantitatively take place. Their inclusion in this body of work was meant to present different perspective on the other theories presented, and to help identify ways to ease the transition of product supply channels from one structure to another.

The examined product supply channel did not appear to form a cohesive social system, and the exploratory research did not capture a supply channel in flux, therefore there was little evidence collected on the efforts to alter compensation systems or otherwise influence supply channel members. Most action in the social realm of the examined product supply channel were efforts to alter channel member's dependence of upon one another. For example, the distributors attempted to increase the Store's dependence by building up switching costs by trying to "hook" the store on its services. Another example is the Store began an investigation of its sourcing options in an attempt to reduce its dependence on distributor services.

In the examination of the role of distributors in product supply channels the areas of strategy, JIT and transaction cost theories have helped to clarify the decision processes organizations used in choosing boundaries of activity, task sets and product sources. Each of these theories has a good measure of explanatory power. The nature of the exploratory research did not capture behavioral information well, and thus there is little to say about the explanatory power of those theories.

Appendices

1. History of Transaction Cost Theory

Transaction cost theory was developed by uniting the following three relatively independent literatures: economics, organization theory and contract law (Williamson 1981). It was first articulated cohesively by Williamson in 1975.

Economics

The proposition that the transaction is a basic unit of analysis was advanced by John R. Commons in 1934. Ronald Coase specified the proposition more clearly in 1937 in "The Nature of the Firm." He observed, as did others at that time, that the production of final goods involved a succession of processing and assembling activities. Coase proposed that when assessing the ease with which markets mediated the exchange of intermediate and final goods, a firm's boundary of actions was a decision variable that needed assessment. Previously others used the boundary as a parameter. In *The Use of Knowledge in Society*, Friederich Hayek observed that the economic problem is relatively uninteresting, except when economic events are changing and adaptations to these economic changes are needed. He also implied that a high performance economy is one that is able adapt efficiently to uncertainty. His arguments imply transaction cost minimization, though he did not state them in those terms. Postwar

economic literature helped to define some of the market failures, but it was not until 1969 that transaction costs were closely linked to market failures. As Kenneth Arrow put it: "Market failure is not absolute; It is better to consider a broad category, that of transaction costs, which in general impedes and in particular cases completely block the formation of markets" (1969 p. 48).

Organizational Theory

The appearance of Chester Barnard's *The Functions of the Executive* in 1938 and Herbert Simon's examination of the Barnard's book in 1947 are widely recognized as significant events in organizational theory. The ideas of the organization as a problem facing and meeting entity, the importance of informal organization and bounded rationality were prominent in their work. This stream of research was further developed by March and Simon (1958) and Cyert and March (1963). Hierarchical organization and its controls were traced to humans' limited capacity to cope with complexity and uncertainty by these theorists. In 1962 Alfred Chandler's *Strategy and Structure* ended the notion that economic efficiency was substantially independent of organizational structure. Five years later Thompson built upon all of the forgoing in his classic statement of the organizational problem, *Organizations In Action*. He proposed that the organization was the "problem facing and problem solving" entity, not

the individual managers and members of the organization. (Thompson, 1967) Both uncertainty and bounded rationality were featured, and he explicitly fixed attention on efforts to minimize transaction costs. He also recognized core technologies, the boundaries of organized action, and the powers and limits of hierarchical modes.

Contract Law

The legal literature that has contributed to the transaction cost approach is the literature of contracting, specifically the literature contrasting “hard contracting” and “soft contracting.” Hard contracting is the letter of the law; it is binding. Alternatively soft contracting refers to transactions where the contract serves primarily as a framework for the transaction. In 1931, Karl Llewellyn observed that a highly legalistic approach can often impede transactions between parties, instead of facilitating them. This issue was especially important when continuity of the relationship was highly valued. As Ian Macneil implies in “The Many Futures of Contract” (1974), the “discrete transaction” is very rare in both law and economics. The study of what he refers to as “relational” contracting has become more important

A deepening awareness of transaction cost issues marks the maturation of each of the forgoing literatures. By the early 1970s it was becoming clear that the study of organizations was a

multi-disciplinary undertaking, and it was in 1975 that Williamson first introduced transaction cost theory.

2. A Simplified Model Of Transaction Cost Theory

The following is a simplified model of Transaction cost theory. As stated earlier, the purpose of TCT is to examine how an organization determines its boundary of actions. If an activity lies within an organization's boundary of actions, then the activity's governance or management is internal to the organization. Conversely, if an activity lies outside the firm's boundary of activity, its governance and management lie primarily outside the organization or in "the market." These structures are called internal and market governance structures, respectively. TCT also recognizes the trade off between production cost economies and governance cost economies.

Transaction cost theory assumes that "markets" will have less costly production, because members in the market will be able to pool demand and reduce uncertainty, process (manufacture, distribute, service, etc.) in larger volumes, and utilize machinery better.

Transaction cost theory assumes that internal organizations *cannot* produce less expensively than a product can be procured from the "market." Actually, the market may not be able to pool all the demand as would be expected where natural monopolies exist. If no natural monopoly exists, internal production may be able to meet the external

price. On the other hand, TCT assumes that internal organization simplifies the coordination of complex tasks, and that it becomes more difficult to harmonize tasks performed in the market because it is a loosely organized group of price setters and price takers. Similarly, it is assumed to be easier to ensure contract performance and to monitor product quality internally than it is to monitor an outside party.

TCT requires the following rules:

- Physical asset specificity is not valued for itself, but only because it results in higher demand through increased performance.
- The increased demand is often realized by greater production expense.

For example, the demand for products with good fit and finish is higher than the demand for similar products finished poorly, but the production costs to achieve good fit and finish are also higher due to the use of more expensive finishing machinery or more highly skilled labor.

- In choosing asset specificity (or processes and which will determine asset specificity) management must trade off between production cost and demand.
- Governance costs vary with asset specificity and therefore must be taken into consideration simultaneously with cost and demand.

Firms are assumed to be better at harmonizing internal exchanges because common ownership of parties reduces suboptimization through central programming; internal organization schemes are able to utilize “legitimate power” to resolve differences.

This contrasts with differences between independent parties that can be costly to resolve. Internal organization schemes can also have more complete information about the parties involved (costs, profit margins etc.) when dispute settlement does become necessary. As uncertainty becomes greater, internal organization schemes become more favorable because the cost of maintaining the interface (scheduling meetings, changing terms and conditions of contracts etc.) varies directly with the need to adjust to changes. (Williamson 1975) It is important to notice that bureaucracy is not mentioned in this model of the firm. Bureaucracy can reduce some the advantages of internal organization. (Robins 1987)

It is asset specificity and its relationship with governance costs which makes the boundary of operation decision interesting. If assets are nonspecific, markets enjoy both production and governance cost advantages over internal sourcing. Delivering commodity parts or simple services requires little management, because the “product is clearly specified.” (Williamson 1981) Clear specifications, like those in commodities, reduce governance costs because contract expectations are clear. Further static scale economies can be better utilized, and markets are able to pool uncorrelated demand, which reduces risk and lowers production costs. As assets become more specific, the aggregation benefits that the market can accrue are reduced, and

exchanges take on a bilateral nature. The governance costs of markets then escalate and vertical integration of the activity becomes more economically attractive. The relationship between asset specificity and vertical integration implies that for recurrent transactions (where uncertainty is not a factor and remains constant) market procurement will be chosen when assets are non specific, bilateral market contracting will be evident when assets are semi-specific, and internal organizations (vertical integration of activities) will become dominant when assets are highly specific.

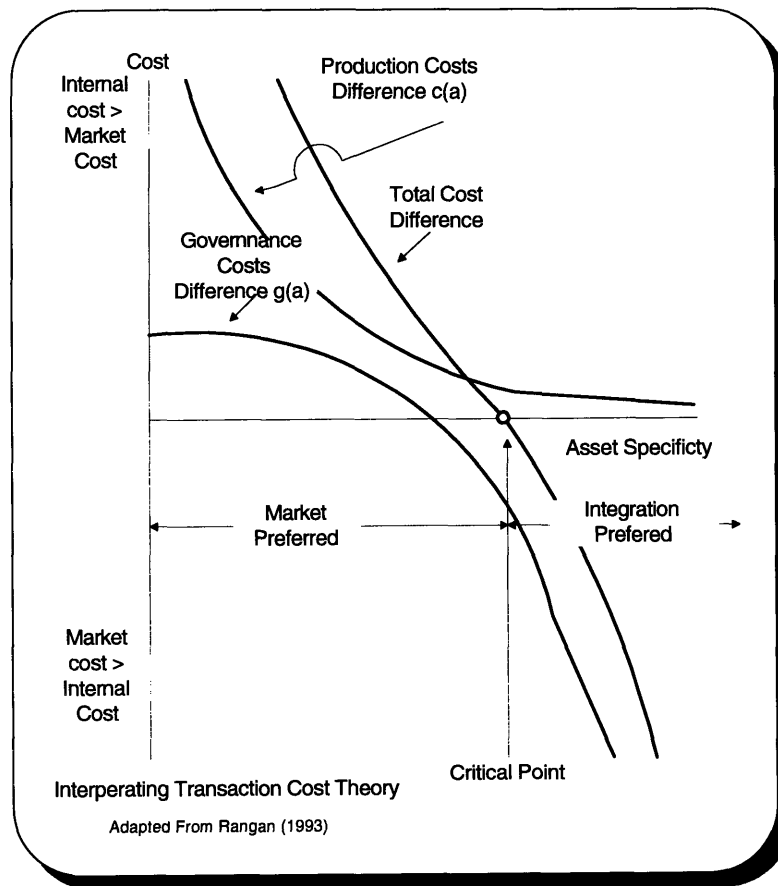


Figure Of Governance And Production Cost Differences.

The relationships between asset specificity, production and governance costs have been depicted above in a simplified model of TCT. The argument is as follows. The innermost curve, differences between governance costs, is $g(a) = g_i(a) - g_m(a)$, where g_i and g_m are governance cost functions of asset specificity for internal and market options respectively. This curve has a downward slope to imply that as asset specificity increases, market costs will be preferred until the point where it costs exactly as much to organize and monitor performance internally as it does to monitor the performance of market entities. The governance curve starts above the X axis to imply that when nonspecific assets are employed and contracts are easy to fulfill, the market is preferred. I concede that it is unlikely that asset specificity is the *only* variable that affects the cost of managing an activity.

The second curve, differences in productions costs, is $c(a) = c_i(a) - c_m(a)$ where c_i and c_m are production costs as a function of asset specificity for internal and market options, respectively. This curve shows that, as asset specificity increases, it becomes more and more costly to for the market to produce. This curve does not cross the X axis because it is assumed that it will never be cheaper to manufacture the item, or to fulfill the service in house.

The third curve $g(a) + c(a)$ crosses the X axis at the level of asset specificity where neither market nor internal governance structures are preferred, that is the “subcontracting threshold.” This curve shows the combined effects of production and governance costs. At low levels of asset specificity, market production and governance are preferred; at high levels of asset specificity, the opposite is true.

If improved coordination results from any of the following: applications of systems thinking to business functions and processes; improvements in information technology; efforts to improve relations with suppliers; or improved EDI (electronic data interchange) standards and their implementation, the coordination will effect a reduction in the costs of governance. This can be seen as an inward shift of the governance curve, which in turn shifts the total cost differences curve and its critical point. The threshold at which processes are subcontracted is lowered, allowing for more work to be subcontracted.

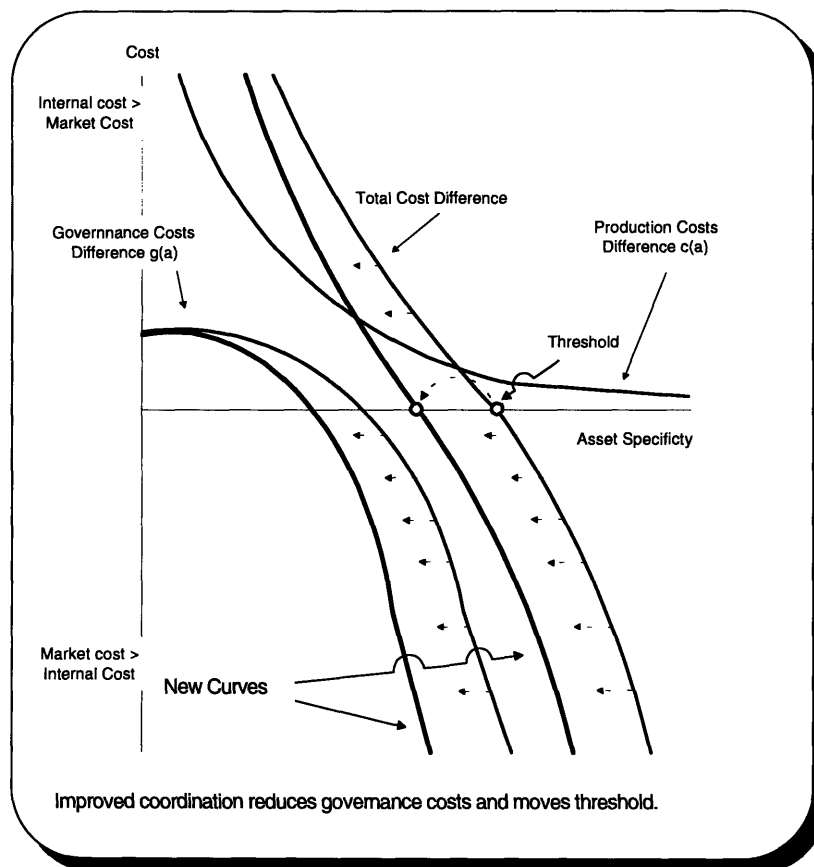


Figure Of Shifting Curves

3. Weaknesses Of Transaction Cost Theory

There have been some serious criticisms leveled against the work Williamson and others' on transaction cost theory. Although Robins (1987) concedes that TCT has helped to revitalize the study of organizational economics, he points out that there are several flaws in its underlying assumptions and its power as an explanatory theory. Robins feels that although the basic theory is not flawed, it has tried unsuccessfully to meet the ambitious goal of explaining organizational structure.

To meet this goal, TCT has borrowed the doctrine of economic efficiency from neoclassical economics to explain organization. Williamson implies that more efficient forms of organization will come to supplant less efficient ones, and that the observable organization is more appropriate than others. This concept of efficiency is not further elaborated in most of transaction cost literature. TCT relies on the analogy of organizational efficiency to economic efficiency, but the analogy is weak at best. TCT gives efficiency the same causal role that it is given in economics as a motivating force.

In making this analogy transaction cost models of the firm assume a common cost minimizing organizational structure, just as the microeconomic model of an industry involves a series of firms with common factor prices and productivity. This assumption is the basic

building block of TCT. Williamson has noted that *any* economic situation can be rationalized with liberal doses of TCT.

TCT's analogous use of economic efficiency imposes strict demands on TCT. While it elevates TCT to causal analysis, it requires stringent adherence to important assumptions for the analogy to be useful. The idea of economic equilibrium is a crucial component of economic efficiency. Efficiency is defined in terms of operations in a society composed of competitive industries. The individual firm is practically unexamined in that model. Only under conditions of equilibrium is it possible to say anything about the firm; at that point a firm is merely a collection of factors (inputs) combined in necessary proportions to ensure that each factor (input) will be paid exactly the value of its marginal product. This type of equilibrium can only be achieved in perfectly competitive markets, the requirements for which are very stringent.

In markets approaching competitive equilibrium there are the following three types of firms: firms pricing correctly and earning "proper" returns on capital; firms earning above average returns on capital encouraging others to enter the market; and firms earning substandard returns on capital eventually leaving the market or adapting and evolving to earn "proper" returns on capital. The entrance, exit and evolution of firms in the market moves the economy

towards equilibrium. Because this movement toward equilibrium can be the result of either adaptation or attrition, we are again unable to make any inferences about individual firms.

In reality, the level to which any organization will seek to adopt internal governance structures will reflect both competitive pressures and strategic alternatives. Unless the market is perfect, both factors are uncertain, and both may vary greatly across organizations. In imperfect markets therefore the organizational structure that will minimize transaction costs is indeterminate.

Transaction cost analysis adopts a model that has meaning only in perfectly competitive markets and then seeks to apply it to highly imperfect markets and situations. Its use of efficiency is difficult to allow when we see how little the neoclassical notion says about the behavior of individual organizations.

Transaction cost theory can play an important role in strategy formulation because it allows firms to view organizational structure as a potential strategic weapon. Organizational structure cannot, however, be the sole source of differences between firms' production functions. Organizational structure would be the sole form of interfirm differences in production under conditions of competitive equilibrium in factor and product markets. The concept of competitive strategy, however, becomes meaningless under equilibrium conditions.

Another weakness of TCT stems from a failure in not theory, but in application. It has been noted previously that TCT should not be applied in strategic decisions, but is best if its use is reserved for tactical or operational decisions. TCT relies upon static governance cost and production cost curves, and the differences between internal and market organization, respectively. In truth, these curves may be static only for short-run decisions. In the long run, these curves are more likely to shift than remain fixed.

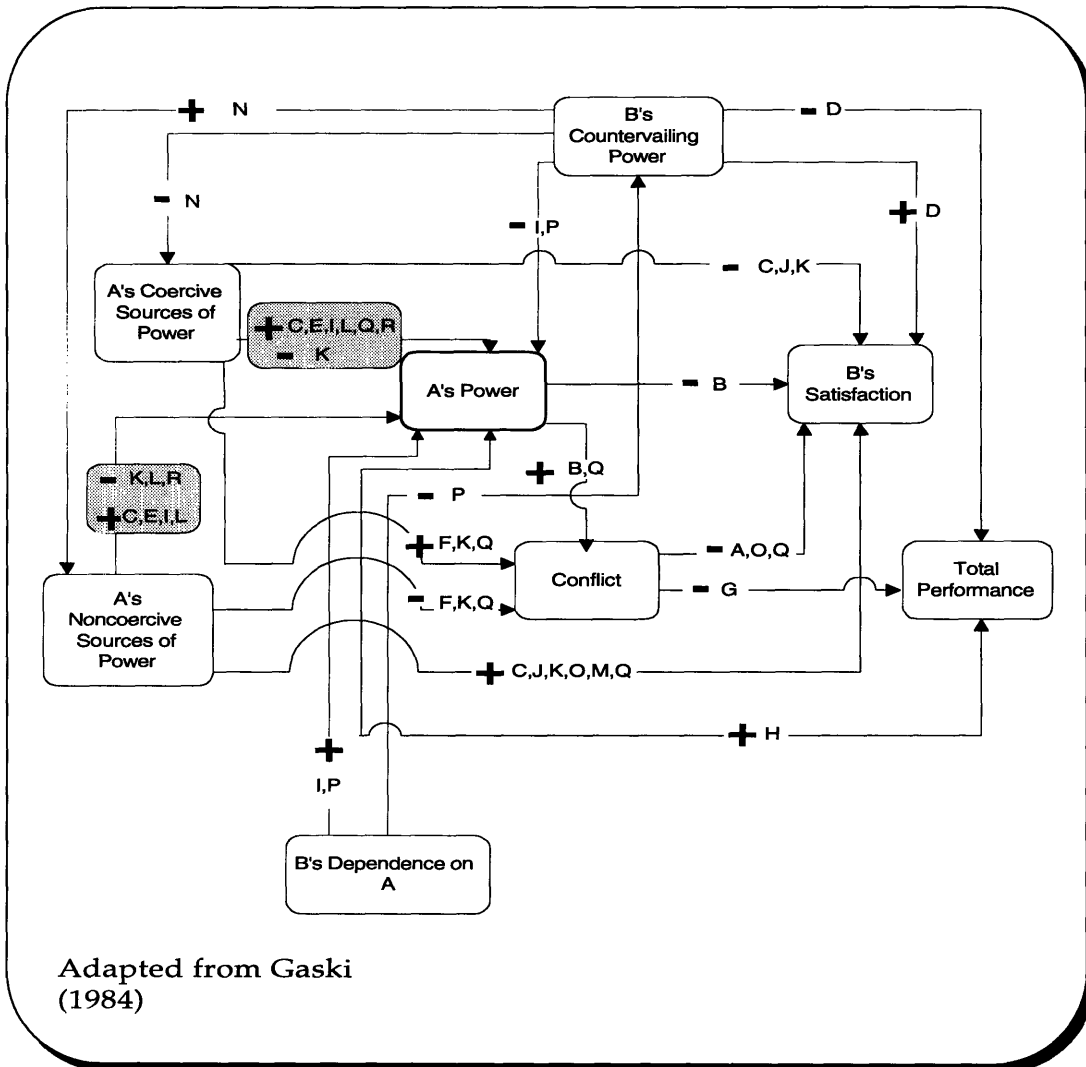
Rapid advances in information technology and communications have drastically altered governance costs, and the differences between internal and market costs, respectively. Similarly, rapid changes in production technologies can shift production cost curves. If internal production (with current production technologies) is chosen, the organization may not apply enough capital to research in production technology, because small advances may not have enough impact given small production volumes. Market organizations (subcontracted production specialists) may have more incentive to improve production technologies, because expenditures can be allocated across larger unit volumes and small improvements will have a larger effect because of the larger volumes.

A third weakness of TCT is that it can be *very* difficult to measure costs and opportunity costs for strategic decisions.

Unexpected entrants into an industry may necessitate sudden and drastic changes in strategy. The unexpected nature of highly volatile industries nature makes it nearly impossible to account for differences between market organization and internal organization.

4. Interactions Between Behavioral Constructs

A model for the interaction between behavioral constructs was presented in section 2.9, and at that point studies supporting the interactions was not presented, and conflicting evidence was simply omitted. At this point a list of studies supporting each link will be presented and contradicting results will be noted by a grey shading at the link between sources of coercive and power and sources of noncoercive power and power.



The Theory Of Channel Power And Conflict

The following is a list of studies that contributed to the forgoing model, in chronological order. each letter corresponds to the letters on the connections between constructs:

- A: Rosenberg, Larry J. and Louis W. Stern (1971), "Conflict Measurement in The distribution channel," *Journal of Marketing Research*, 8 (November),
- B: Walker, O. C., Jr. (1972) "The effects of Learning bargaining Behavior," in *1971 Combined Proceedings*, F. C. Allvine, ed., Chicago: American Marketing
- C: Hunt, S. D. and J. R. Nevin. 1974. "Power in a Channel of Distribution: Sources and Consequences." *Journal of Marketing Research*, vol. 11 (May).
- D: Porter, Michael E. (1974), "Consumer Behavior, retailer Power, and Market Performance in Consumer Goods Industries," *The Review of Economics and Statistics*, 56, (November)
- E: Wilkinson, I. F. (1974) "Researching the Distribution Channels for consumer and industrial Goods: The power Dimension" *Journal of the Market Research Society*, 16 (no. 1)
- F: Lusch, R. F. (1976a). "Sources of Power: Their Impact on Interchannel Conflict." *Journal of Marketing Research*, vol. 13, pp. 382 - 390.
- G: _____ (1976b). "Channel Conflict: Its Impact on Retailer Operating Performance," *Journal of Retailing*, 52 (Summer)
- H: Etgar, M. (1976a), "Effects of Administrative control on efficiency of vertical Marketing Systems" *Journal of Marketing Research*, vol. 13, (February).
- I: _____. (1976b). "Channel Domination and Countervailing Power in Distributive Channels." *Journal of Marketing Research*, vol. 13, pp. 254 - 262.
- J: Lusch, R. F. (1977), "Franchisee Satisfaction: Causes and Consequences," *International Journal of Physical Distribution*, 7 (February)
- K: Brown, James R. and Gary Frazier (1978), "The Application or Channel Power: Its Effects and Connotations" in *Research Frontiers in Marketing*:

Dialogues and Directions, Subhash C. Jain, ed., Chicago: American Marketing.

- L: Etgar, M. (1978), "Selection of an Effective Channel Control Mix," *Journal Of marketing*, 42 (July).
- M: Michie, Donald A. (1978) "Managerial Tactics: An Alternative Explanation of Warranty Satisfaction in a Channel of Distribution," in *Research Frontiers in Marketing: Dialogues and Directions*, Subhash C. Jain, ed., Chicago: American Marketing.
- N: Wilkinson, I. F. and David Kipins (1978), "Interfirm Use of Power," *Journal of Applied Psychology*, 63 (no. 3)
- O: Dwyer, F. Robert (1980) "Channel-Member Satisfaction: Laboratory Insights," *Journal of Retailing*, 56 (Summer)
- P: Philips, Lynn W. (1981), "Assessing Measurement Error In key Informant Reports: A Methodological Note on Organizational Analysis in Marketing," *Journal of Marketing research*, 18 (November).
- Q: Wilkinson, I. F. (1981), "Power, Conflict and Satisfaction in Distribution Channels — an Empirical Study," *The International Journal of Physical Distribution and Materials Management*, 11, (no. 7)
- R: Lusch, Robert F, and Brown (1982), "A Modified Model Of Power in The Marketing Channel," *Journal of Marketing research*, 15 (May)

5. Interview Summary— N. G. -Buyer, The Store

N. G. is the buyer for The Store that is responsible the department examined. During our interview, we discussed his role as a buyer for the Store, and his responsibilities. They include but are not limited to choosing the mix of products that the department will carry, deciding on the timing of product promotions and choosing sourcing options for products.

Further, he and I discussed the company's mission and strategy and how they affected the company in its day to day operations. He explained how they affected his daily decisions and the daily operation of the store including customer service and product selling needs. We discussed price point issues, the information needs of customers and how these needs were met, i.e. what type of services that the Store provided for products that they sell.

We also discussed after-sale service issues, advertising funds, coop-advertising allowances and other services provided to the Store as a customer. Other things that we discussed include the following: buying and rebuying (replenishment); the kinds of service that vendors provide for the Store; shipping allowances; endcaps and displays; vendor sophistication and EDI; and special handling that may be required for some products.

N. G. and I spoke about the dual sourcing nature of product procurement in his department and said “I assume that analysis was performed at the product two digit class level, but not at the 4 digit class or sku level.” He believed that gross analysis was performed before he took the position (9 months prior to the interview) to get a “feeling” and then a policy was determined and implemented. This policy was not examined on a unit by unit basis, and has not been reevaluated to N.G.’s knowledge. He did not know when the policy was instituted.

I spoke very briefly with the man who occupied the position prior to N. G.’s appointment, and he could not recall when the policy was implemented exactly, but said it was between 18 -24 months ago.

6. Interview Summary— P. F. -Logistics Analyst, The Store

On numerous occasions I interviewed P. F. and we spoke on all of the following subjects: Supplier theory, Corey’s work; applications to theory; warehouse utilization; safety stock levels; the Store’s policy of safety stock levels; central stocking locations; applications of expert systems to the rebuying and replenishment of goods; planogram levels (floor stock; shipping; receiving; vendor services; pre-receiving.

He is well versed in the theories of inventory management, management science, at the time was trying to develop and introduce expert systems to the rebuying staff at the store.

He related to me that the Store was trying to examine their policies on inventory, and supplier management, and alter the policies so that they had feed back and performance measures for policies.

7. Interview Summary— M. H. -S1

During my interview, M. H. and I discussed the nature of the products market / industry in terms of volatility, uncertainty, fragmentation, competition, new products research and development.

We then discussed the nature of S1's outbound product supply channel, generally at first and then more specifically. Later, he stated that S1 preferred to deal directly with the customer facing entity, i.e. the party who sells to the consumer. He said "We prefer to deal direct to retail, unfortunately not all of the retailers that sell our product are able to handle such a relationship." In other words some retailers are either not sophisticated enough or have chosen not to have the ability to break bulk orders or order in large quantities.

He stated that S1 does have a minimum order quantity of 300 cases, because "order quantities smaller than that begin to be less economical to ship and service. That's why we have dual product channels. We let the distributors handle the small stuff."

Following this, we spoke about the Store specifically. He said that he was responsible for the Store's account, and described to me the nature of its account and its ordering practices. He said that it

procured from both channels, directly and through a distributor. Since S1's products are seasonal, the Store loads their initial inventory with products ordered directly and "crossdocked" (moved freight from inbound to outbound trailers without moving goods into inventory) from S1's trucks to its own fleet at the Midwestern distribution center. The direct purchase is used to load inventory at the beginning of the selling season. Then, to his understanding, the Store replenishes each individual store with orders placed with a distributor. This is because it did not have a central stocking location for S1's products, and could not meet the minimum order threshold at each replenishment point during the selling season. After the selling season, he understood that it did not reorder product until the beginning of the next selling period (the next year). He said the Store "simply sold through [all of their stock]."

He said the practice of initial ordering direct, replenishment through "feeders" is a common practice for large merchants. The practice is primarily used for "loser" products, products that the company must carry to be in "the business" but that move very slowly. He then gave me some example of "losers." Chain store companies do not want to tie up central inventory space with these products, so they order them from somebody else, in quantities that are usually too small the manufacturer.

8. Interview Summary— J. S. Manufacturer's Representative S2

I spoke with J. S. about his role as a Manufacturer's Representative / Broker for S2. He began by explaining that the company that he works for has the exclusive right to represent S2's products in the Region. He said that S2 has a very small sales force and "at best can meet with national accounts only once or twice a year." He continued by stating that S2, has no preference for selling to distributors or directly to retail, though they did have a minimum initial yearly order or not less than one truck load, about 1600 cases, following this they could order replenishments of not less than 100 cases. To his knowledge the Store made yearly initial fill order for delivery in the early spring (March) through him, and then ordered replenishment quantities through a distributor or through him when order sizes were large enough. (P. F. said that they rebuy from J. S. when the Store orders one case per store, 151 cases)

As a rep / broker, he performs a number of service or fills a number of needs for the Store and S2. He does not extend credit, but helps the Store arrange for credit with manufacturers (all of those he represents). He also helps the Store in timing its orders with respect to S2's and other manufacturers' promotions, in order to help it achieve the lowest product costs. Most of the services he performs for the Store are on an ad hoc basis, i.e. they are not programmed by S2 or the Store.

For example, he provides industry updates and information about S2's products and S2's competitors products, as well as information about other retailers' activities, helping the Store keep abreast of its competitors and suppliers. He also acts as a liaison with the S2 factory, he feels that he has more credibility, as an independent agent than a S2 employee might. He acts as a broker multiple product lines, and therefore he feels that his relationship with the Store is equally important as his relationship with S2. He told me that he "feels that he must take a long-term view of the [store's] relationship."

9. Interview Summary — K. F. - S5

K. F. reported that S5 preferred to deal with the retailer over using a distributor, and that S5 made efforts to make ordering from them easy. They had the lowest minimum order quantities of all suppliers to the store (not including distributors or S16), and that they supplied end caps and frames (for peg boards) and other display aids for each store. K. F. also stated that they supply products to other departments within the company, and that he was the contact for the store. Part of the reason that S5 tried to be easy to work with is the fact that "we are *in* there, walk down any aisle in any store and our products are on display." In other words the store does a lot of business with them.

10. Interview Summary— M. C. - S16

I spoke briefly with M. C. and we discussed her company's products, and the kind of companies to whom they sell. They sell direct to most companies in this sector of retail and also to distributors. There is a minimum order policy, but it is not a firm minimum in either number of cases or dollar value like other suppliers. She concurred with J. S. and M. H. that the Store places initial orders directly with the company, and then uses distributors for product replenishment. She reported that this replenishment scheme is not unusual in this industry, and said that a competitor of similar size to the Store does the same thing. Following this she stated that sales to distributors were "just like sales to any other customer."

11. Interview Summary — S. O. -S17

In my interview with S. O. we talked about the nature of the business, and the market. His company is relative newcomer to the industry (15 years old), and told me about the difficulty his company had bringing their products to market. His company started with one of the few "new to the world" products in this industry in a long time, but had difficulty selling the product to the major retailers. He related to me a bit of company history and explained that they got their first products to store shelves by selling to distributors, when it was a small company. By enlisting distributors as a sales force they were able to

get their product on the shelves. Their product did sell, and eventually “the big names came to us asking for direct sales.” The company did not turn them away, but instead set minimum orders on the high side (1 truck load). This allowed the distributors to retain business, and the profits in return for helping to crack the market, and taking a chance on S17’s “new to the world product.” S17 has a full line of products (all extensions of the original product, or relying on the original product’s brand image) and sells its products like others interviewed, both direct and through distributors. Their minimum order quantity is now also in line with industry norms at 500 cases.

12. Interview Summary — L. K. - D1

I spoke with L. K. about his company, D1, and its role as a distributor. Specifically we spoke about his contract with the Store, their buying needs, and the services that D1 provides.

He stated that his company sells products for a couple of departments, (including the one I investigated). He told me that as a distributor they have three levels of service that the Store utilizes. The lowest of the three services is allowing the Store to purchase products in quantities smaller than manufacturers’ minimum orders. These are shipped on pallets, and usually cost the store between 5 and 8% over the (list) cost of the goods. The middle of service that it supplies to the store are products shipped in full cases, palletized by store location.

For example one pallet may go to each store per day, and each pallet with have multiple products on it. Each product will in turn be in full cases. These store palletized shipments are referred to as pre-received, and are simply cross docked at the facility.

Pre-receiving means that they are not received at the Distribution center, but at the store location. The costs involved here are on the order of 7 to 9% of the list cost of goods. The highest level of service includes sending boxes of product assortments, single units, boxed by store departments on the store palettes. These goods may be mixed on the pallets with the mid level service goods. The costs involved are 10 - 15% of the cost of the products.

When the Store purchases directly from manufacturers they usually buy products for 1 to 5% below list cost depending on past and current order sizes. I asked him what his cost to perform pick and pack on the goods for product assortment, and he said that it was proprietary. He also indicated that he would prefer if the manufacturers would not sell full cases to his customers, because it makes it harder for him to sell low service level goods. He said that he would prefer to sell more lower service level goods because his margin is "a little bit better."

As for other services that his company provides, he said "I ship fixtures, endcaps and the like, for products that [the Store] sourced

exclusively through us. I also let the manufacturer know about purchases of multisourced products, so they [the Store] receives appropriate cooperative advertising funds and fixtures and manufacturer support.”

13. Other Interview Notes.

The representative from S4 would not return my phone calls, but left me a message on my answering machine “[The Store] dropped me with no warning, I have no time to speak with you.”

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