

## **Pricing structure and structuring price**

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## PRICING STRUCTURE AND STRUCTURING PRICE

### Abstract

We study the managerial practice of economics in the task of adjusting price as a means to address a deep theme in organizational research, the gap between social science theory and management practice. Although theories of price adjustment derive from neoclassical economic theory, economic theories and methods are inadequate to address that theory in practice. We argue that the practice of price adjustment is a problem that organizational scholars are uniquely qualified to address. To arrive at a theory of how managers use economic theory in practice, we conducted a two-year ethnographic study of the processes of price adjustment in a Midwest manufacturer. At the heart of our study is a significant price change that forced the firm to think carefully about how they adjust prices. While the outcome of that price adjustment is consistent with our stylized understandings of market forces, the process is inconsistent with what we would expect, given our understandings of economic theory. That gap returns us to a problem that was central to both the behavioral and the evolutionary theories of the firm, but in a way that engages the practice of economics. Our approach to the problem allows us to make contributions to problems of the practice of economics, the microfoundations of economic behavior, and the evolution of routines.

“The economic organization problem, as seen through the neoclassical lens, is to provide people throughout the economy with the information they need to make decisions that are *coherent* ... Under certain circumstances, prices provide people with all the additional information about the economy that they need in order to make efficient use of the available resources.” -- Milgrom and Roberts, 1992: 58

“The modern firm ... sees the market through an organizational filter.” —Cyert and March, 1963: 2

One of the thorny problems for management scholars is the relationship between social science theory and managerial practice. The gap between theory and practice and practice is a deep theme in organizational research on fads and fashions (Abrahamson and Rosenkopf, 1993; Abrahamson, 1996; Abrahamson and Fairchild, 1999), the rhetoric and reality of managerial behavior (Zbaracki, 1998; Pfeffer and Sutton, 1999), surges of design and devotion (Barley and Kunda, 199x), and institutional theory (DiMaggio and Powell, 1983). In response, some have argued that managerial theory has only minimal influence on practice or that we should think of management theory and practice as semi-autonomous realms with separate internal dynamics (Astley and Zammuto, 1992). Yet, as Ferraro, Pfeffer, and Sutton (2005) show our social science theories do matter, often in ways that we do not understand or anticipate. Perhaps nowhere is this more evident lately than in the influence of economic theory on managerial behavior. According to Ferraro, et al. (2005) economic theory not only describes individual behavior, it also shapes behavior through institutional designs, management practices, social norms, and by perpetuating languages and assumptions. In response, they suggest that we need a way to study how managers use social science theory.

In this paper, we address that task. We study the managerial practice of economics in the substantive problem of price adjustment. We choose the managerial practice of economics because, as Ferraro, et al. (2005) argue, the effect of economic theory on managerial practice is

particularly troubling lately. Within economics, we choose price theory and the problem of how prices adjust, because few theories have more influence than does price theory. Most of our understanding of economic behavior begins from the ground of formal price theory and proceeds towards behavior. Both price theory and the problem of price adjustment present thorny economic and social problems, but we frequently assume that our stylized and idealized models of price behavior offer a sufficient for understanding market behavior. As influential as neoclassical price theory is, however, we argue that price adjustment is a problem that organizational scholars are uniquely qualified to address.

Addressing the influence of our theory on management practice is not an easy task, however, because it asks us to hold price theory and practice in tension. The temptation is to either focus on theory or on practice. For example, most economic theory begins from the ground of the market ideal in formal theory to develop models of firm behavior, whereas theories of firm behavior may begin with a substantive problem, but put aside the formal theory. In contrast, we want an approach to price adjustment that takes into account the way that our theories, problems, and categories of scholarly judgment shape the very behavior we seek to study (Bourdieu and Wacquant, 1992). To accomplish this, we must first take seriously theories of price behavior. We therefore begin with a (very brief) overview of the scholarly literature on price theory. We focus in particular on pricing theory in economics and on its (sometimes uneasy) relationship to pricing practice, showing both how price theory defines the ideal of practice, but also how the two have long diverged. We need this grounding in economic theory to have a grasp of how price theory shapes our understandings of understanding of firm behavior. We then seek to apply the literature on practice (Hutchins, Lave and Wenger, Bourdieu, Giddens) and negotiated order (Barley, 1986, 1990; Orlikowski, 199x; Bechky, 200x) to the problem of adjusting prices.

We ground our research in a two-year ethnographic study of the processes of price adjustment. Following Feldman and Pentland (2003) we distinguish between the ostensive aspects of routines—which we argue are shaped in part by economic theory—and the performative aspects of routines. To identify the economic influence on pricing practice, we begin with the marketing literature that seeks to define an economics-based approach to pricing practice (e.g., Nagle, 1987; Dolan and Simon, 1996). To identify the performative aspects of routines, we identify the ongoing price routines before the price change. At the heart of our study is a significant price change that forced the firm we studied to think carefully about how they adjust prices. We follow the effects of that price change, showing how the routines embody theory in managerial practice both before and after the price change.

Our research returns us to a longstanding question of pricing practice that was central to the behavioral theory of the firm (Cyert and March, 1963) and to the evolutionary theory of economic change (Nelson and Winter, 1982), but with two important differences. First, whereas the behavioral theory of the firm describes how firms seek to avoid goal conflict—for example, through sequential attention to goals—we show the effects when those mechanisms break down as the firm must address those conflicting goals. In so doing, we show how routines adjust in response to price changes. Our approach implicates interests and power that the firm members prefer to suppress but, when faced with the need to make significant price changes, cannot. Second, whereas both the both the behavioral and evolutionary theories of the firm bracketed the application of economics to managerial practice, we intentionally focus on the practice of economics. In so doing, we are able to show how interests and power are both shaped by and shape the economic theory of pricing. We show that economic theory is used not just to describe

behavior, but to establish order, power, and control. For pragmatic purposes, this may be necessary, but as Ferraro et al. (2005) show, it has important social implications.

### **Price in theory**

At the heart of price theory is a market ideal that we generally take for granted—an ideal image of economic behavior in which markets determine prices. From the standpoint of neoclassical economics, the beauty of the price system is the way that it channels information about economic fluctuations to managers who must allocate resources in firms. In response, those managers can adjust prices upward or downward to arrive at a competitive equilibrium between supply and demand, thereby efficiently directing resources to produce the appropriate goods and services. A wide variety of changes may take place—for example, changes in costs, supply, or demand, competitive entry, and changes in technology. Firms incorporate those changes and adjust prices upward or downward. Neoclassical economics assumes that because organizations possess this ability to adjust prices, industries, markets and economies can function efficiently. Much of the existing literature in both organizations and economics takes this ability for granted, assuming price adjustment is a kind of innate organizational capability.

In practice, of course, price theory provides a highly stylized theory of market exchange. We know well that market behavior deviates, often significantly, from that ideal. Indeed, a great deal of the theoretical work in economics, much of it at the firm level, seeks to understand why practice deviates from the ostensive ideal of the market. Yet most of this theory still begins from the ground of formal theory. What the formal theory lacks, however, is a good understanding of how managers set prices and how, in doing so, they use economic theory. The implications of this shortcoming are not trivial. In the ideal neoclassical model, markets adjust instantly without

cost. In practice, however, a great deal of empirical evidence demonstrates that prices (and wages) adjust only slowly to macroeconomic shocks. As Caplin (1988) argues, for economists “the fact that institutions do change only slowly is one of the most crucial features of the economy.” This problem is at the heart of one of the central problems of current macroeconomic theory, because what economists refer to as “nominal rigidities” are essential to new Keynesian economics.<sup>1</sup> Unfortunately, because price theory is a theory of markets, not of firm behavior, conventional economic methods have only yielded “meager results” in understanding the nature of such rigidities (Blinder, et al., 1988:4).

The meager results are not for lack of effort, however. Macroeconomists have offered a variety of theories as to why prices adjust so slowly. Because price rigidity must have its origins in individual and firm behavior, economists have been forced to grapple with the microeconomic foundations of macroeconomic behavior. For example, one important theory is that price adjustment is a complex and costly organizational problem (Caplin and Leahy, 1991; Ball and Mankiw, 1994; Levy, et al., 1997; Zbaracki, et al., 2004). In macroeconomic theory, one approach to these difficulties in responding to price shocks is to treat them as “costs of adjustment”. According to Blinder, et al. (1998, p. 21) these costs have become “...one of the main strands of New Keynesian theorizing.” One model treats the cost of the price change as continuous with the size of the price change (Mankiw) while a second proposes the cost of changing prices varies with the size of the price change (Rotemberg).

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<sup>1</sup> Blinder and colleagues (1998: 3-4) offer the simplest of illustrations from what is known as “the quantity theory of money with fixed velocity.” Consider the classic relationship from macroeconomic theory,  $MV = Py$ . In this theory, if the Federal Reserve seeks to manage the money supply,  $M$ , and the velocity of money,  $V$ , is fixed, then the question is what happens with regards to the price level ( $P$ ) and output ( $y$ ). If there are no nominal rigidities in price, then changes in  $M$  show up as inflation and there is no effect on real output. If, on the other hand, there are nominal rigidities in the price level ( $P$ ), then changes in  $M$  must have an effect on output,  $y$ .

From the standpoint of organizational theory, however, the more troubling implication is that economic theory also offers prescriptive implications. This is the implication that motivates the work of Ferraro, et al. (2005). Consider, for example, the practice of price adjustment. Theories of price adjustment define the problem from the ground of neoclassical price theory, wherein firms adjust prices in response to market forces, which allows us to understand firm choices as a response to exogenous market events. This is a fine starting point for purposes of studying markets, and it forms the ground for a great deal of analytic work in economics and marketing that compares market results with the predictions of economic theory. When it comes to firm-level behavior, however, the theories present more significant problems. Marketers have begun to take the wisdom derived from an economic analysis of markets to develop an extensive literature on how firms should practice pricing. (See, for example, Nagle, 1987 and Dolan and Simon, 1996.) As the next section will demonstrate, however, firms rarely follow such practices, at least in their ideal form.

The implications of price theory extend also to tradeoffs between the price system and alternative forms of economic organization. Economists recognize that the price system is not always the right solution to problems of organization. For example, in his influential work, Coase (1937), asked why, if the price system is ideal, we would choose alternative forms of economic organization. Coase proposes that economic organization involves “transactions costs” that vary depending on the system of economic coordination. The problem of economic organization requires choosing the form of exchange—either conducting transactions in a market setting or using the centralized authority of a firm—that performs most efficiently. This approach has led to theoretical work analyzing the costs of contracting business relationships (Williamson, 1985) and to work that seeks to model the costs as either bargaining costs or influence costs

**Comment [iz1]:** Do you mean why the reality doesn't match the predicted ideal?

(Milgrom and Roberts, 199x). (For a comprehensive treatise following this approach, see Milgrom and Roberts, 1992.) The implications of this approach, however, are precisely the approach that trouble Ferraro, et al. (2005) and others. For example, as Moran and Ghoshal (199x) argue, transactions theory has more than descriptive implications; it has come to define an approach that managers take in designing organizations.

### **Price in practice**

In principle, neoclassical market theory and its variants are about how markets set prices and, as the previous section demonstrates, price theory shapes what we have come to expect in price behavior. Whatever our expectations, however, the practice of economic theory is more complex. This is most evident in what is known in economics as the “marginalist debates” (Machlup, 1946; 196x), a dispute that emerged as economists confronted the mounting evidence that managers did not perform economics as their theories predicted they should. Whereas the standard economic literature (following price theory) assumed that managers should set prices where marginal cost equals marginal revenue, a variety of studies, beginning with Hall and Hitch (1939) have demonstrated that managers in firms do not follow this ostensive ideal.

The behavioral theory of the firm (Cyert and March, 1963) emerged out of this debate and marks an interesting point of departure for price theory. The behavioral theory took seriously the body of literature that demonstrated a gap between economic theory and firm behavior. In response, the theory sought to open up the black box of the firm, break down standard assumptions—of the firm as a unitary actor seeking to maximize profits, of the firm as possessing perfect knowledge, and the firm as setting price where marginal cost equals marginal revenue—and develop a more descriptively accurate model of how firms practiced economics.

The theory has substantially shaped our understanding of organizational action, but given its original setting, the behavioral theory of the firm has had a somewhat peculiar history.

Organizational scholars have embraced its central themes: organizations as coalitions of actors, firm goals as derived from functions, and tradeoffs between those goals as resolved through such mechanisms as sequential attention to goals, and firm behavior as following standard operating procedure. In particular, this last theme has substantially influenced the literature on routines (Nelson and Winter, 1982; Feldman and Pentland, 2003), an issue we will return to later. But the subsequent discussion has largely dropped most of the focus on economic theories in the behavioral theory of the firm.

In contrast, economists rejected the more descriptively accurate models of firm behavior, resorting to two main defenses (both discussed by Cyert and March, 1963: 13-14 and by Nelson and Winter, 1982). One defense followed Friedman (1953), who maintained that economic theory was valuable for its predictive accuracy, not its descriptive accuracy. Whether firm members in practice followed economic theory, the theory could provide useful predictions of outcomes. A second argument followed Machlup who argued against an objective use of data by managers (1946). For firm members engaged in economic analysis, he said, “the relevant magnitudes involved—cost, revenue, profit—are subjective ... rather than ‘objective’ ... Marginal analysis of the firm should not be understood to imply anything but subjective estimates, guesses and hunches.” Managers do not perform calculative decisions as price theory might imply, but through their skills arrive at the outcomes economic theory would predict (Machlup, 196x).

The marginalist debates point to an ongoing puzzle on the gap between the ostensive ideals of economics—for example, that firms should set prices where marginal cost equals marginal

revenue—and the complex realities of firm behavior. The effective outcome of the marginalist debates was that economic theory in practice as a problem was abandoned. Economics dropped both the behavioral theory of the firm and the problem of the practice of economics.

Organizational theorists embraced the behavioral theory of the firm, but dropped the problems of the practice of economics which motivated the theory originally. These divergent responses are at the heart of the gap that trouble Ferraro, et al. (2005).

We suggest that the response to the problem requires careful balancing. Out of price theory emerges a set of prescriptive implications that we often take for granted. If we take price theory for granted, however, we cannot address the implications of the tension between the theory and practice of price adjustment. To the extent that we do not take economic theory seriously we leave the problems to economists. But ultimately the practice of economics—as in the practice of price adjustment—is a profoundly organizational problem and requires the tools and methods of organizational scholars.

### **On the practice of economics**

In this paper, we seek to achieve that balance by returning to the problems of how firms practice economics in the context of how firms set prices. As this history of price theory suggests, the practice of pricing sits across a difficult divide between economic theory and managerial practice. One important reason for this difficulty is that approaches to the problem generally begin from the ground of formal theory – in this case, neo-classical price theory – and proceeds to substantive problems. In contrast, we seek to develop an approach that begins with what Glaser and Strauss (1967) describe as a substantive problem and proceeds towards theory. We suggest that if we begin from the ground of the substantive problem of price adjustment and of organizational practice, we can say a great deal about the problems of economists but

also about our theories of practice. For example, the competing models of price change—costs of adjustment as continuous with the size of the price change (Mankiw, 1985) or price changes as variable with the size of the price change (Rotemberg, 1982)—have parallels in the literature on stability and change in routines (Feldman and Pentland, 2003). These two models of price adjustment are simply specific instances of problems of continuous and episodic change, wherein continuous costs of adjustment imply continuous change while costs of adjustment that vary with the size of the price change imply episodic price changes.

Although our approach does not ignore formal price theory, we do not begin with the *a priori* assumptions of macroeconomic or microeconomic theories. Instead, we begin with a simple research question: How do firms adjust prices? From that substantive problem we seek to develop a dynamic model of pricing practice which has implications for existing formal theory. If, as Cyert and March (1963: 2) argued, the firm “sees the market through an organizational filter,” then the need to change prices presents an interpretive problem that firm members must address. We treat that interpretive problem much like Fligstein’s (1996) “markets as politics” metaphor. He argues that market competition creates both power struggle across firms and power struggle within firms. The power struggle across firms asks managers to understand firm positions in the marketplace. In Fligstein’s terms, market actors use “conceptions of control ... to erect social understandings” that deal with both the price competition between firms and with the internal firm politics. For Fligstein (1996: 658) a conception of control is “a worldview that allows actors to interpret the actions of others and a reflection of how the market is structured.” Organizational members use those conceptions of control—which might include economic theory—to propose actions that will aid in the power struggle across firms, but also as a means to position themselves in the power struggle within the firm.

The analytic challenge in our approach is how to capture the power struggle and the conceptions of control. We suggest that economic theory—among other things—shapes those conceptions of control, and the task is to understand how. To accomplish this task, we draw on a growing literature on negotiated order and practice. We argue that a price change offers what Barley (1986) describes as “an occasion for structuring.” We want to understand the rules and resources that actors engage when adjusting price. We also want to understand how they engage economic theory as a conception of control. Because there are no physical properties to constrain the use of pricing technology, we are particularly interested in how individuals use the socioeconomic context to either constrain or shape the use of economic theories. Rather than focus on economics as prescribed, we follow Orlikowski (2000) in studying a technology-in-practice. We treat economics as a “behavioral template” (Barley, 1988: 49) that actors repeatedly construct and draw on as they engage in pricing activities.

We ground that behavioral template using the contrast between ostensive and performative aspects of routines developed in Feldman and Pentland (2003). Ostensive aspects of routines, they argue, define potentially relevant elements of a routine, while performative aspects of routines bring to life the routines in the various actors, actions, and situations. We suggest that marketing and economics professions play a big role in defining the ostensive aspects of routines. For example, pricing texts propose models and methods such as price elasticity of demand or price sensitivity, price experiments, conjoint analysis, economic value analysis, market segmentation, price perception, bundling, and Bayesian analysis (see Dolan and Simon, 1996; Nagle, 1987). Moreover, marketing theories of price suggest that firms must also attend to competitor actions, and suggest that managers must anticipate and influence competitor behavior, introducing game-theoretic models of price. In these models and theories, marketing

and economics define a normative model for setting price. The ostensive aspects of a routine may then be defined differently by various members of the organization as they draw on those economic images, each in their own way.

In our approach, however, the problem goes beyond simply the routines that firm members follow. In our approach, the process of setting prices becomes a ground for disputes over jurisdiction over the work performed in setting prices. As Hutchins (1995: 176) argues, the social organization has a substantial effect on both “the cognition that is the task and the cognition that governs the coordination of the elements of the task.” Both the routines and the abstract knowledge in the economics that lies behind the routines are subject to dispute. The routines and the economic theories behind them are used for instrumental purposes, but also for control, for power, and for legitimacy in disputes over jurisdiction, much as machines and drawings are used in Bechky’s (2003) study of equipment manufacturing.

In this sense, our approach offers a sociological approach to the practice of economics that seeks to understand how the basic elements of economics—here, price, the meaning of price, the customer, and competition—are constructed. But as with recent work by Bourdieu (2005) and Fligstein (2001) our approach seeks to take seriously the problems of economics. Our approach offers a way to contribute to our understanding of the evolution of routines, but also to the micro-foundations of economic behavior. Understanding such dynamics are essential to delineating what macroeconomists understand as costs of adjustments (e.g., Mankiw, 1985), to understanding what transactions costs theories define as bargaining and influence costs (Milgrom and Roberts, 199x), and to understanding how routines adjust (Feldman and Pentland, 2003). All this depends on developing a model of how prices adjust. We turn to that next.

**Comment [iz2]:** Now these two sentences, the one before and the one after this comment are the real heart of your paper, aren't they? The real trick of this paper is that you're focusing on one economic moment - pricing - to draw attention to a broader dynamic, and perhaps why the system isn't as easy to study (and to reconcile theory vis-à-vis behaviors as one might expect?

## METHOD AND DATA

As part of a larger project addressing the costs and processes of adjusting prices, we studied the price adjustment processes of a large, Mid-Western industrial firm that manufactured parts used to maintain machinery. We chose the firm for the work that it had already been doing to improve its pricing processes. One of the members of the larger research project had been teaching pricing methods to firm members, and in response a pricing analyst invited us to study their pricing processes. The firm was already considered a national leader in its major product lines.

### Data sources

Along with other members of the research team, we studied the firm's pricing processes over two annual pricing seasons, and between seasons at both the firm and at several of the firm's customers. We gathered data from multiple sources within the company, seeking themes across different activities in the price setting process. Our three main sources of data were interviews, non-participant observation and records data. Data collection for the first season was retrospective; we interviewed participants and gathered their stories about the pricing process. Data for the second season tracked the price-setting process as it occurred.

*Interviews.* We began by conducting ethnographic interviews (Spradley, 1979) with the employees directly responsible for defining and implementing the pricing strategy. In these initial interviews, we sought a detailed description of the price-setting process, including the tasks and participants, the data-processing requirements, the routines used, and the participants' concerns. We then interviewed a broader range of participants, including the vice-president in charge of marketing, the director of sales, the marketing director, and various area managers for

the sales force as well as members of the sales force, various support staff responsible for maintaining pricing information, systems analysts responsible for maintaining the pricing systems, and former employees who had been central to pricing. (See Figure 1 for an organization chart showing the formal relationship between the different actors in the organization.) We also interviewed various customers, from whom we obtained detailed descriptions of how they dealt with price changes made at the focal firm. We sought to understand the relationship between the customers and the focal firm, as well as the relationship between the customers and other firms selling comparable products. In total, we interviewed twenty-seven informants. The interviews varied in length from 45 minutes to over seven hours. In many instances, we conducted multiple interviews, returning to interview informants until we had as complete a picture as possible of their perspectives on price-setting at the organization. We interviewed five informants twice, and two informants three times. We interviewed the main pricing coordinator nearly every time we visited the research site.

*Non-participant observation.* Along with some members of the research team we attended pricing meetings over the course of the second pricing season. We also observed various interactions among pricing team members while we were on site. In addition, various members of the organization demonstrated the computer resources and various other pricing tools that they used. While on site, we also observed the social interaction between the pricing team at headquarters. At the various customer facilities we visited the operations and also observed the interactions. Also, each customer provided a tour of its operations, so we were able to note the relationship between part sales and other activities at the distributors.

*Records data.* We collected different kinds of record data to provide information about price-setting actions at the organization: price lists for both pricing seasons, relevant email messages

among team members for both pricing seasons, and meeting minutes and supplemental documents from the second pricing season. When available, we collected detailed records of pricing activities and accounting information on the costs of pricing activities. We also collected copies of special pricing requests (e.g., discounts and rebates off of list price) for several pricing seasons. Over the course of the study and data analysis, we continued to contact the pricing coordinator to clarify issues and to gather additional documents and information.

### **Data Analysis**

Following the logic of grounded theory (Strauss and Corbin, 1990) our data analysis proceeded in an iterative manner. We began with the question of how organizations use economic methods. Given that firm members had been recently learning economic and marketing tools for price adjustment and that the CEO had been hiring MBA graduates for their expertise, we were particularly interested in how their economic tools worked in the pricing practice. Two barriers to implementation of that expertise stood out. One barrier was the complexity of the pricing process. For example, the sheer number of parts sold and of customers purchasing parts made it very hard for pricing analysts to obtain the data that they needed. While firm members could do the kinds of analysis a pricing expert might recommend, it was prohibitively expensive to do such analysis for every part and every customer. A second barrier was the variation in pricing models. One of the most striking findings was that each individual we interviewed would present what seemed like a coherent and compelling, but different, approach to pricing. For instance, the pricing director outlined a program that clearly followed the prescriptions of marketing and economics. The sales force presented a different model of pricing, equally compelling, but substantially different and often inconsistent with the director's

plans. This second barrier was vividly illustrated when the firm greatly reduced the cost of one of its product lines. From the standpoint of economics and marketing, the “market realities” suggested that the firm should reduce its prices. In practice, the firm members showed a great deal more diversity in how they understood and approached the “market realities.” They agreed that price needed to decrease, but disagreed on how the firm should reduce price. Moreover, they disagreed on even the most basic economic elements: who is the customer, how the market should be segmented, and how the firm should take the price decrease to their customers.

The analytic challenge was finding a way to identify the source and nature of the conflict. The disagreement was reminiscent of the behavioral theory of the firm (Cyert and March, 1963) in that the conflict seemed to follow functional lines. Yet whereas the behavioral theory of the firm attributes such a split to goal conflict, in this case the firm members agreed on goals. They were fighting over how to achieve those goals. In addition, the behavioral theory of the firm brackets economics, focusing instead on ongoing organizational routines and coalitions as the means by which organizational members interpret the market. Yet the firm members were using economic principles throughout the process, sometimes explicitly and sometimes implicitly. The challenge was to find a systematic way of identifying how economic theory played a role in their arguments. Because firm members were oriented toward the problems they were trying to solve, the economic theory seemed to come in and out of focus. Moreover, because the firm had divided pricing responsibilities among various actors, different organizational members addressed different aspects of the economic models.

To ground a systematic analysis of how firm members used economic methods we chose a structured pricing model drawn from a classic marketing text (Nagle, 1987: 125—133). This model is representative of how most marketing textbooks and MBA courses teach the process of

pricing (see also Dolan and Simon, 1996; Monroe 2002). Each of the seven steps requires specific economic language and tools derived from economics. (See Figure 2 for a flow chart of the model, with the relevant economic analysis in each of the steps.) In our further analysis, we collapsed some of these dimensions to arrive at a set of four dimensions that would represent the economic language. We then compared the language and practice of pricing in the firm to this economic framework.

Analytically, this framework offers two benefits. First, it offers a basis for defining ostensive aspects of routines (Feldman and Pentland, 2003). From the standpoint of economics and marketing, a firm should use these tools as comprehensively as possible. In practice, however, firm members must construct these tools for themselves. As a result, we can anticipate that the rhetoric and reality of practice will diverge (Zbaracki, 1998). By attending to the use of these tools, we can see what—if anything—firm members construct as they put the tools in practice. By using these economic and marketing techniques to provide a sort of “tool view,” we can ground Fligstein’s conceptions of control to see how they relate to both external market dynamics and internal political dynamics.

Second, from the standpoint of economic sociology, we know the firms must simultaneously construct both an external understanding of the market and an internal conception of control that supports that understanding of the market (Fligstein, 1996). In addition, we therefore developed a framework to analyze the use of more organizational and sociological elements that might arise in the construction of the pricing process. This allowed us to also arrive at elements not necessarily reflected in the economic models—status, power, trust, and identity—that were also relevant to the construction of pricing practice.

## FINDINGS

At the firm we studied pricing decisions were situated in a pricing structure defined by the market but also by the firm, its products, its prices, its distribution channel, the market signals, and the pricing processes. The structures and processes formed a behavioral template that influenced many of the firm members' market perceptions. For modest price changes, they worked well. But major price changes introduced what Bijker (1995) calls "interpretive flexibility," and those structures and process were up for negotiation.

In this section, we present the implications of these structures and processes for the task of adjusting prices. We begin by describing the organization and the market. We then make multiple passes through the process of adjusting prices to show how the layers of structures and processes shift the focus of price adjustment, depending on the kind of price changes. In our first pass, we present the ongoing pricing structure, focusing in turn on the structure for the marketing group and for the sales force. We show how that structure shapes how representatives from marketing and sales perceive both the external market and the internal organizational features that they consider relevant to pricing. This ongoing structure, we argue, forms the ground for what Feldman and Pentland (2003) label the ostensive and performative aspects of routines. In our second pass, we return to show the effects of a major price change as the firm members must restructure price. We again focus on the marketing group and sales force, this time to show how the price structure introduces a major battle over both the economics and the organization. We then show how the vice-president resolves that dispute. Although the outcome of the process is consistent with our stylized understanding of market forces, the process is not at all.

## **Pricing structure**

### **The organizational and market context**

The aftermarket group that we studied was run by a vice-president for the aftermarket business. Working for him was a pricing director and a sales director. The director of pricing managed various pricing analysts. The director of sales managed the sales force, which included several area managers who in turn managed territory managers in different regions of the country. (See Figure 1 for an organization chart.)

The firm sold nearly 8000 parts across three product lines. On the core product line the firm was the acknowledged market leader. That product line derived from the products the firm sold when it had been founded, and the line sold in the greatest volume and for the highest margins. On a second line, the firm was less competitive, but still produced reasonable margins. For the newest product line, however, the firm purchased products from a competitor and resold them under its own label. As a result, a distributor said, “I could go in and quote a customer on [the core product line] and knock the doors off them but when it came to the [newest line] I couldn’t come close.”

As in many industrial settings the firm used both of what Eichner (1987) defines as “list” and “transaction” prices. Pricing activities began with a price list which was set annually and then distributed to all distributors and dealers. The firm then negotiated volume discounts and rebates to address market conditions. Discounts and rebates varied from customer to customer, but generally the higher the volume a distributor sold, the greater the discount. This structure was typical of the market in which the firm sold.

The aftermarket group sold products to about 1400 different customers. Most of those customers were warehouse distributors, firms that resold the products to end users who needed

replacement parts. The firm also sold parts to the original equipment manufacturers, who installed the parts in the machinery they shipped. The study addressed primarily the market for the components sold through the various value-added resellers. These distributors faced considerable competition from consolidating distributors and from end users buying directly from the firm.

The company was considered the market leader in its industry, with a reputation as a high quality producer and innovator in its markets. Firm members worried about a weakening market position. They thought that the differences between their products and the products of their five major competitors had diminished, thereby reducing the price premium that the firm could charge and threatening to reduce margins. In response, firm members began to question the value provided by the products, by the service groups, by the distributors, and even by the sales force. They also began to explore new product and service offerings that might increase their margins.

The pricing process worked sequentially from marketing to sales. The marketing group set list prices, standard discount structures, and procedures for handling exceptions. The sales group then negotiated discounts for individual bids. The effective outcome is consistent with predictions of the behavioral theory of the firm, which suggests that firms pursue multiple goals by dividing organizational processes between different groups in standard operating procedures (Cyert and March, 1963) or routines (Nelson and Winter, 1982). Figure 3 presents an abridged flow chart of the process, showing the standard routines followed by both the marketing group and the sales force. We consider these routines in the following two sections.

### **Marketing: Setting list price.**

The marketing group was made up of a variety of individuals—some drawn from related functions, and including a representative from finance, the director of pricing, a pricing manager, and a pricing analyst—who worked on pricing issues. As discussed in the data analysis section, these employees increasingly had MBA training and sought to bring that training to the firm’s pricing practices. Those ideas were not necessarily used as precisely as the marketing literature (e.g., Nagle, 1987; Dolan and Simon, 1996) would advocate. For example, they frequently lacked the data or tools to be able to do complete economic analyses. As one manager said, “To say there was a defined process would be a lie. I would try to get the cost, sales analysis information and try to gather with the little experience I had on competitor information to come up with what I knew people had budgeted for as a price increase.” Instead, the concepts emerged in much more abstract terms from the discussions at the firm. Consider, for example, the following extract from a meeting on Latin American pricing:

**Latin American representative:** If we wanted to break it down by product classification I think [our traditional line] would justify a couple points more in the spread, whereas [our newer lines] might need to be a little closer to the [Competitor 1] target price, if not right even with them. [On our third line, our product] justifies a little bit higher premium than any [Competitor 1] equivalent. 5 percent is the average goal that we would like to have.

**Pricing analyst:** Are you saying that on an average basis you are within 5 points up to [Competitor 1’s] price, the net price, you can take the business away from [them] or that you are able to take it away from another competitor?

**Latin American representative:** I am on equal ground to compete against [Competitor 1].

**Pricing analyst:** So you are saying customers will value [our product] more than [Competitor 1] or is that just because they like your pretty face?

**Latin American representative:** That is what I would like to think. For example, in regards to the national brands the premium is justified because of the quality issues. [Competitor 1] is the main part that we are competing against and based on the quality presentations that we provide—and I am taking into account changes—we can fight with the 5 percent.

**Pricing analyst:** This is interesting. In the states typically for [our traditional] product we dominate in the leadership. We are able to command a higher price. On these other products in the states [Competitor 1] typically demands that premium perception and they are able to command a higher price than us.

The example demonstrates several features of how the marketing group analyzed price as it related to the firm's competitive position (c.f. White, 1981). First, the analysis addressed list price, which members of the marketing group considered the most effective signaling tool. List prices were distributed to all distributors, so they believed that the list price was the most visible and the easiest for competitors to interpret. Second, when the analysts discussed market prices, they considered aggregate prices. Although the data bases included prices for all products the marketing group tended to address aggregate price information. Third, rather than address all competitors, the analysts tended to select particular competitors for comparisons. They targeted these competitors to read and send signals about competitor's intentions and likely future actions in the marketplace. Fourth, in considering market position, the analysts sought to understand how their product could be differentiated from competitors. In this discussion, they considered product value in terms of quality and cost. While these discussions lacked the detailed data one might expect from econometric analysis, they did incorporate the concepts one might expect in economics.

To address the relationship between the pricing routines at the firm we studied and the more economic concepts, we have developed a more detailed analysis. As discussed above, we began our analysis with the ostensive aspects of routines that one might expect from literature in economics, marketing, and organizational theory. The second major aspect of our analysis

addresses the major activities in the pricing routines. The director of pricing had worked hard to bring structure to the pricing process in a routine that followed a sequence of five steps. In this section, we analyze the relationship between those five steps and the ostensive aspects of routines defined by the use of economics and marketing theory and by the organizational elements that firm members incorporated. (See Table 1 for a summary of the details.)

**Step 1: Establish pricing strategy.** The list price adjustment process began with what the director of pricing described as “high level price discussions” as senior managers created targets for different internal goals, including revenue, profitability, and market share. In their discussions, the headquarters staff addressed several of the economic elements of the ostensive aspects of the pricing routine, including the profit implications of a price change, revenue, and market share goals. For example, a manager said that “the business units would meet with the CEO and in negotiations they would come up with which business unit has what expectations for the coming year in terms of profitability dollars.” Similarly, the director of pricing said that the management team “wanted us to have more aftermarket business as a company. They were heavily invested in OE [original equipment products] and wanted xx amount of revenue and 30 percent of the share.” While these discussions addressed various internal goals, they also served to enact the roles of the headquarters staff, establishing them as the high-status and dominant actors in setting pricing strategy in practice.

**Step 2 –Gather data on competitive position.** At the same time, the formal pricing process began each fall when a pricing manager assembled a pricing team to consider list prices for the coming year. In anticipation of the formal price adjustment process, an analyst from the marketing group began to gather various data about the prior year. That data included the firm’s past year list prices, quantity sold, and major price changes, as well as current product costs. For

competitors, where possible the data included price lists, discount structures, and quantity sold. The marketing group depended greatly on members of the sales force for competitor price information, which they gathered from the distributors with whom they had good relationships. The pricing director said, “We kept all the competitors price lists when we could get our hands on their market price sheet, as they published it just like we did ... and we could find out the discount structure of our competitors that way.” The pricing analysts for the firm assembled that data into a data base which the pricing team could then use to analyze the firm’s market position. Members of the pricing team also relied on other formal or informal data to define the firm’s competitive position. For example, the director of pricing described his perspective on the firm’s product differentiation and value relative to their competitors. He said, “I also spent an awful lot of time managing the testing of competitive products and slowly and very surely there is no obvious differential between the products.” As a result of his studies, he said he concluded that it was a commodity market, a perspective shared by the pricing team that informed many of their pricing decisions.

**Step 3 – Discuss current position.** Given a perspective on the market position of the firm’s products, a central concern of the pricing team was how customers would react to a price change. They needed to understand how price changes would affect, for example, sales volume. In this conversation they included a language of price sensitivity, an important element of economic analysis of price. Indeed, the director of pricing said this quite directly: “It is a highly price sensitive market. No question in my mind about that.” He didn’t have any clear market data to demonstrate his belief, however. When we asked whether he had data to support that conclusion, he said, “About a million price quotes that it is all about price.” Given that most of the annual list price changes were relatively small price increases, there was little need for detailed data on

customer response to price changes, especially given how the discussions incorporated only broad market terms.

The organizational structure played a prominent role in these conversations. For example, as the price sensitivity language demonstrates, these conversations favored market knowledge derived from an MBA curriculum. The marketing members of the committee tried to bring their MBA expertise to the task, as promotions depended on the expertise they contributed. They also controlled access to the pricing meetings in which market position was discussed because the meetings were held at headquarters. The sales force worked in various locations around the country and needed to fly in to attend the meetings. The marketing group also controlled the data bases that contained the market knowledge and defined the meeting agendas and minutes.

**Step 4 – Simulate possible prices.** In the end, price adjustments had to be profitable for the firm. Insuring profitability required that the pricing analysts assess the cost, margin and profitability implications of a list price change. Over time the firm had developed a variety of what Callon (1998: 23) describes as calculating tools to aid in this analysis. For example, the director of pricing might impose an aggregate percentage increase on an entire product line and then compare the firm's list prices against the various competitors, possibly adjusting individual part numbers to reflect perceived deviations from the market. The pricing analysts would then compare the prices against product cost to make sure that the margins on the sales would be sufficient. Given the broad market prices and the specific prices on the market basket, the analyst would calculate aggregate effects, iterating so that the prices met the firm's goals.

The central artifacts for these analyses were a set of simulation tools and the resultant data on the effects of a price change. The tools had been developed at the request of the director of

pricing, but in practice the analyses afforded status and power for the financial analyst, who did most of the pricing runs and guided the pricing team on the financial effects of price changes.

**Step 5 – Sell new list prices to upper management.** Once the iterations were completed, the marketing group then presented the proposed prices list in meetings with the director of pricing and the vice-president for aftermarket for approval. Discussions, questions and suggestions from this meeting were then incorporated and the pricing team went back and re-adjusted prices. In these conversations, the pricing team focused on the firm’s cost, margin, and profit goals. They justified the pricing plans in terms of actions by key competitors and the market perceptions of the pricing team. The process of selling the new prices established a variety of positions within the firm. It clearly gave status and power to the corporate hierarchy, who approved the revised prices. But the process also defined the role of the marketing group, because they controlled the agenda for the meeting. The sales force tended to have a more subservient role.

**Sales: Negotiated price.**

Once the list prices were set, however, much of the work was transferred to the sales force. The sales force began their price adjustment work each fall after the annual sales meeting where they received the new price lists. Price negotiations could occur at any time during the year, but the new list prices were an important signal and most negotiations were done during this period. The sales force used the list price as the basis for negotiating discounts, rebates, and special terms. These discounts and other pricing terms allowed the sales force to take into account market variation that aggregate analysis could not address. The following example in which a sales representative described how he would evaluate a customer’s deal illustrates how they thought about pricing decisions.

There is a distributor in New Jersey with [replacement] parts. ... We need distribution in that area and they have a good reputation ... They have a high percentage of their sales through [low-profit parts], but they also sell other [high profit parts] and that is where we were most interested in growing that business. Well we need to give something in the case of [their low-profit parts]. We gave them the competitive price, but we benefited with the other business. So overall it became a good distributor. They are now a half a million dollar distributor.

In this quote, the sales representative evaluated three dimensions of the distributor, all of which related to firm goals. One dimension was the reputation of the distributor, which was an indicator of the value that the distributor could add. A second dimension was the profitability of the parts that the distributor sold, which is a direct measure of what the deal with the distributor would add to the firm's profitability goal. A third dimension was the overall revenue the distributor produced, which is an indicator for the market share goal. These were the same goals the marketing group used across the entire market to set list prices, but cast to the individual distributor circumstances.

For the sales force, the task was to take the list prices and firm goals and relate them to those circumstances. As with the list price process, the negotiation process involved a series of steps, proceeding from receiving a new price list to arriving at a proposed negotiated price. In this section, we again analyze the relationship, this time for the sales force, between those steps in the pricing routine and the ostensive aspects of the process as defined by economics, marketing and organizational theory. (See Table 2 for a summary of the details.)

**Step 1 – Company goals: what management wants.** At the end of the pricing season the vice-president for aftermarket would call a meeting to present the price list, the current market strategy, the logic behind the price changes, and the profitability, revenue, and market share

goals to the sales force. Although representatives of the sales force participated in the list price process, they received the formal results at the annual meeting (and sometimes were surprised by the outcomes). A member of the sales force said, “That is when we talk about strategy. This is one of the things that would come out of there: we need to change the pricing and need to get more aggressive and we need to do this and that.”

In addition to presenting the new price list, the meeting served other organizational goals. For example, the location of the meeting could be used for organizational purposes, as when the firm held the meeting at one of the new manufacturing plants. The meeting also confirmed a relationship between the sales force and headquarters wherein headquarters defined corporate goals and the sales force implemented them. That meant, for example, that the headquarters felt free to talk about the need to control the sales force incentive structure while the sales force had little input into the incentives of the headquarters staff. This relationship, which was a clear theme throughout informant conversations about prices and the pricing process, suggests that the language of incentives that Ferraro, et al. (2005) observe is so common may be less about individual interests than it is about establishing and affirming hierarchical relationships.

**Step 2 –Does the new list price affect the distributor?** After the meeting, the sales force began its work. That task had an important effect on the role of the sales representative. As the major link for the firm to the marketplace, sales representatives were often torn between the company interests and distributor interests. On the one hand, they needed to take the firm’s prices and strategy to the distributors. On the other hand, they needed to consider distributor circumstances.

In assessing the effects, the sales force considered distributor costs (and margins) given the proposed list price. Distributor profits depended on the difference between the price for which

they purchased products and the price at which they sold those products. When they received a lower price, the distributors might be able to increase their business. Conversely, a significant price increase could indeed affect their profit margins, so distributors complained when they believed the firm's prices cut into their profits or prevented them from competing for business. A pricing manager said distributors might complain about a price change or request a lower price, saying "We are a loyal distributor," or, "You have to make me more competitive." The task for the sales force was to analyze such complaints, considering the distributor incentives, distributor status, and specific distributor concerns. This was addressed in the subsequent steps.

**Step 3 – Have the customer circumstances changed?** According to the sales force, customizing the price to the particular needs of the distributor was the essence of what they did. A pricing manager explained: "I get phone calls and my salesmen in NY say this distributor has an end user he is doing business with or wants to do business with that [a major competitor] has been in there and they want to sell them at [40 percent off of list] and we have the business at [30 percent off of list]. What can we do? And I have to make that decision. What are the factors?" When customer circumstances changed, the sales representative needed to evaluate different distributor circumstances. Depending on the competition in the specific market, customer pricing needs could vary substantially. The products that the distributors needed to stock varied by distributor and region. Costs also varied by distributor and region. When calculating a bid, the discounts, rebates, and special terms the sales representative offered varied by the size of the deal and by specific customer circumstances. The pricing terms allowed the sales force to divide the customer population into segments based on order value.

**Step 4 – Does the price put the business at risk?** Faced with a new list price or a distributor request for a lower price, the sales manager needed to determine whether a customer was at risk.

This meant evaluating customer price sensitivity. The sales force generally believed that distributors were sensitive to the magnitude of a price change. They used various criteria to establish that sensitivity. One important criterion was the emotion in the distributor complaints. For example, a sales representative said, “The only time it was an issue is when—a lot of it is emotion—but when they lose sales it gets bad because you took money out of their pocket.” The sales force used the emotion as a signal to distinguish between the ongoing complaints about prices and the complaints about price changes that really presented distributors with a problem.

While emotion served as a signal, the sales force often used a variety of other factors to address the effects of a price change. In many cases, they analyzed the effects on distributor costs, margins and profits for a given price change. When necessary, they brought in the financial analyst to help with this work. In some cases, they would consider the status of the competitor and the status of the distributor. Some competing suppliers had better reputations and were considered greater concerns. Similarly, some distributors were more important to the firm and so were more likely to get the business. In assessing the effects of a new price the sales representatives balanced the distributor incentives—which clearly favored a lower price—and their own incentives, which took into account both volume sold and profit margins. In addition, for the sales force identity, status, and power were built around their reputations as a sales representative. Losing a major distributor was a significant concern for a sales representative.

**Step 5 - How to sell the price within the company.** When calculating pricing terms, the sales force needed to consider whether a negotiated price would be accepted by the corporate hierarchy. They used arguments about the price sensitivity of the distributor and the significance of the competition to justify lower prices. An incentive plan also encouraged the sales representatives to consider the firm’s profits on a bid. A sales manager said that the sales

representatives were “paid more on sales,” but their managers were paid for “a combination of sales and profitability.” The marketing group also controlled the structure of the prices. Members of the sales force began negotiations with a standard discount set by marketing. Exceptions to the policy could be made, but those exceptions required that the sales representative submit a request for special pricing for approval. The approval policy asked that the sales representative submit a detailed report. Depending on the size of the discount or rebate, the approval process went to higher levels of the hierarchy. The incentive plan and the approval process reified the relationship between the sales force and the headquarters staff. It gave clear status to corporate. It also introduced a lack of trust. The headquarters staff complained that the sales force couldn’t be trusted to make good pricing decisions, while the sales representatives felt constrained by the marketing group.

#### **Pricing structure: summary**

The ongoing pricing process covers the range of economic criteria by allocating jurisdiction of the price adjustment process to both the marketing group and the sales force. (See Tables 1 and 2 for the summary.) Three things are particularly important about the information summarized in these tables. First, no single step in the routine covers all aspects of the economics, but across the steps, the economic coverage is quite comprehensive. Second, very rarely does the analysis reach the depth of econometric analysis that either economic or marketing theory would suggest. Third, and perhaps most significantly, the findings show how internal elements have a substantial influence on the pricing routines. While the discussion over price addresses what we think of as “market forces,” internal organizational forces are at least as significant—indeed, the in the case of the marketing group’s analysis, perhaps more significant.

These internal elements become more important when we move away from the ongoing routine price adjustments. As a solution to the ongoing problem of price adjustment, this process was fairly effective. Both global and local rationality could take precedent when necessary: first the marketing group could deal with the broad market trends and then the sales force could deal with specific exceptions. The process also stored market knowledge through the procedures of the two groups. The structure, process, and routines worked well for the firm's typical modest three to four percent price increases. Behind the routines, however, lay considerable latent conflict both over the economics and over the organizational features of the routines. For small price changes, there was little need to engage in that latent conflict, so the firm made ongoing price adjustments easily and at minimal cost. More major changes were a different story, however, as the next section demonstrates.

### **Structuring price**

During the first price season that we studied, the firm members had the opportunity to make a price change large enough that they could not maintain the coalition that worked so effectively for small price changes. The vice-president for aftermarket products had persuaded the board of directors to commit the largest capital investment in the firm's history, more than \$20 million, to build new facilities that would reduce labor costs on the firm's newest product line. One facility had an automated production line. A second facility was developed outside the country to take advantage of lower labor costs. The firm had been purchasing those products from competitors and repackaging the products under its name. With the new line, they could eliminate the competitor's markup on the products. The result was a thirty percent cost reduction for that product line, and a chance to reduce price significantly.

To implement this price cut the vice-president for aftermarket (who said he had been given the nickname “Let’s make a deal” in the firm) created a pricing team which he said included “both field [sales] and inside [marketing] people.” That, he said, was “the only way to build consensus on both sides.” He asked them to decide what to do with the prices on the newest product line: “When I gave the initial presentation I laid out a number of different scenarios that they could look at and various ways of how things might look at the end of the day, but I had no ownership. I put them out so they could understand the range of things that they could look at.”

In principle, it should have been an easy price change to implement. The vice-president, the marketing group and the sales force all agreed on the basic market conditions. Figure 4 analyzes the market forces using the relevant economic tools drawn from Nagle’s (1987) marketing approach to setting price. Given the substantial decrease in relevant costs, the potential margins—the difference between costs and prices—had clearly increased. All agreed that the customers were price sensitive, so a price decrease would lead to increased quantity sold. Moreover, in looking at the firm’s competitive position, all also agreed that there was little difference between various competitors’ offerings on that product line. And they agreed that the firm’s prices were generally higher than its competitors for that product line. Even if competitors responded with their own price decrease, the firm would be in a better position. A price decrease would help across all product segments and through the entire market channel, from the firm to its end users. In the end, the firm should expect greater profitability. In short, organizational members agreed that the ostensive aspects of routines based in marketing and economics favored a price cut. Yet in practice, the price cut opened up an enormous rift.

## **The fight over the economics**

As addressed above, the ongoing understandings of economics in marketing and sales was situated in the standard operating procedures of the economics and marketing groups. Faced with a need to reduce prices, differences in interpretation of the market forces led to a dispute over the economics of price. Each group interpreted the ostensive aspects of the routines in terms of its ongoing practice. When faced with a need to reconcile those conflicting interpretations, the result was a battle over the economics, rooted in each of the steps of the marketing routine for setting list prices. (See Table 3 for a summary of the contrasting positions about the ostensive aspects of the routines for each of the five steps in the marketing routine.)

**Step 1 –Establish pricing strategy.** Both groups accepted the vice-president’s strategy for the new product line. They saw that costs would be lower so margins would be higher. Beyond such basic facts, however, the two groups diverged. For example, the two groups approached competition quite differently (c.f. White, 1981). The marketing group believed that the firm had not used list price effectively to position themselves against their competition, especially for high volume parts. The marketers believed that the customer perception of high prices on high volume products reduced sales. In response, they wanted to price aggressively on those products. As a financial analyst said, “Our belief was that if we wanted to drive volume we needed to get a price reduction to the market”. Aggressively reducing list prices and “promoting the hell out of it” were the best ways to accomplish this. A lower price would signal to competitors that the firm was serious about competing.

In contrast, the sales force saw competition in terms of the competition for business with distributors. The sales representatives argued that the sales people could customize the price to the particular needs of each distributor; that was what the sales force did. Because competition

varied by market segment, many customers didn't need a lower list price. Instead of a lower list price, a member of the sales force said, "Now we could have given that in the form of a discount or growth program. A lot of different ways to get the impact that you want."

**Step 2 –Gather data on competitive position.** In defense of their different positions, the two groups brought different evidence and models of customer responses to prices to their understandings of competitive position. The director of pricing had said that the market data they had gathered demonstrated that "the people who did know about us considered us one thing: high price." The customers, he believed, were sensitive to list price and a lower list price would increase sales. He said, "I believe the velocity [high volume] parts are driving the market and I need to present to my end users that we have really great value on these part numbers."

The sales force, on the other hand, didn't believe that customers paid attention to list price. Instead, they argued that customers were sensitive to discounts, because price was determined in negotiations with distributors about the acquisition price. A list price might be a useful starting point, but the task of the sales force was to provide a discount structure dealt with the varying customer circumstances. They drew on their extensive experience of negotiating prices. "In our industry the list price don't [*sic*] mean anything to anybody," said one sales manager. Discounts were useful when the firm needed a particularly competitive price, but otherwise prices could be left higher.

**Step 3 – Discuss current position.** The marketing group grounded their approach in the perception of the customers that had developed over years of looking at aggregate market behavior. This led them to focus on the high-volume parts. The director of price said, "Our competitors had been set up to go screaming down their production line. When you went into almost every customer those were the parts they asked you what the price was."

The sales force was instead much more attuned to differences between customers in the marketplace. They assessed competition at the level of the individual bid, rather than the marketplace as a whole. To understand the competitive landscape, one sales manager said, “We have to go in and say, ‘What are your top numbers? OK, what drives your business?’” For example, some distributors purchased very few products from that new line; for those customers, despite the desire to create a value perception, the lower prices would have no effect at all. For customers who bought large volumes of the new product line on which costs had been reduced, however, the price cut would be essential.

**Step 4 – Simulate possible prices.** A critical element of the approach to setting prices was the effect that it would have on the firm’s goals. As the discussion of the ongoing pricing routines showed, the marketing group analyzed the effects of different list prices on the firm’s profit and revenue goals. For the marketing group, the logic of price sensitivity meant that higher volumes for the entire market would make up for the lower price. They expected both revenues (total volume sold times price) and profits (because of the higher volume and the lower cost) to go up. The marketing group analyzed the effects of the price change on profits, but they didn’t have data to calculate price sensitivity. For smaller price changes, it hadn’t been a concern. As a result, the consequences of the price change on volume sold, revenues, and profits were perhaps the greatest uncertainty of the marketing plan. Even the pricing manager who was one of the strongest advocates of lowering list price said, “I am afraid right now and concerned about our ability to gain the volume back in the first year, quite honestly.”

The sales force members argued that list price reductions, because they are given to all distributors, wouldn’t address market segment differences. A sales representative said a list price cut would mean that “80 percent of our business we lowered for no reason at all.” In terms of the

ostensive aspects of the routine for calculating profitability, a lower list price meant lower profits on the existing sales. As the sales director said, “when you change it with it up front [list price] then you’re limiting yourself. You’re right off the bat giving away some profitability and hoping you get the return with increase in margins or volumes.”

**Step 5 – Sell new list prices to upper management.** By the end of the pricing season in which the task force had tried to work out an approach to reducing prices, the consequence of these different perspectives was a deep disagreement over the economics and the ostensive aspects of pricing routines. Members of the marketing group argued that list prices were the most visible prices in the marketplace. This visibility increased the awareness of the price cut across other distributors. Distributors knew that list prices were the same across other distributors, although discounts, rebates and other terms could vary. So a list price cut would be seen equally clearly by all distributors. Perhaps more importantly, list prices are most visible to competitors. This made list prices the easiest to identify and interpret, making list price a more effective signaling tool. Discounts, rebates and other pricing terms were too customer-specific and too fragmented to effectively signal a new market position to end customers and competitors. Moreover, distributors might pocket the discounts rather than passing them on to end users. A well-publicized list price reduction would ensure that end users knew about the price decrease, creating pressure for distributors to pass on the price cut or risk looking bad in their customers’ eyes.

The sales force disagreed. They argued that the distributors had no reason to pass on a list price reduction. A member of the sales force said, “If I am a distributor and I am already selling to this guy and [you] lower my [list price] do you think I am going to pass that along to this guy? I don’t think so. I am going to put that in my pocket. So what did it gain us? It cost our company

money.” They wanted to pick price reductions that targeted customer circumstances, so that they knew the price reduction would be passed along, because competitive forces would mandate the lower price to the end user.

### **The dispute over organizational roles**

The disputes over the ostensive aspects of routines went beyond a fight over the economics of pricing, however. Behind the fight over the economics was a deeper battle over the organizational roles of the different members of the organization. Throughout (and after) the process of working out how to reduce prices, the ostensive aspects of the routines included who had standing to interpret and respond to the market. The task of interpreting events outside the firm therefore led to interpretive flexibility regarding the internal structure of the organization. As with the task of interpreting the economics, these disputes were woven throughout the process. (See Table 4 for a summary of these different positions.)

**Step 1 –Establish pricing strategy.** One important theme throughout the process of deciding to adjust prices was over the expertise of the two groups. In principle the charter given the task force by the vice-president accorded equal status to both the marketing group and the sales force. In practice, however, the grounds for the battle were not so even. Given the recent focus on hiring MBAs within the firm, the marketing group began with an advantage. In addition to their credentials, their physical proximity meant more time and ties in headquarters, which also gave them greater status. They had begun to establish themselves as pricing experts.

More significantly, recent strategic discussions at the firm had begun to question the value of the sales force. Following a seminar by Michael Porter, the firm had begun to analyze the cost and the value added by various activities along the “value chain.” Externally, that analysis had

called into question the value added by the distributors. Internally, the discussion also called into question the contribution to product cost from the sales force. The firm had begun to reduce the number of sales representatives and a significant theme throughout the process was the notion that the sales force was an expense that should be eliminated. Indeed, part of the pricing strategy of the marketing group was to develop systems and processes that would allow the firm to market directly to end customers without the added expense of the sales force.

**Step 2 –Gather data on competitive position.** This theme spilled over into the analysis of competitive position. The routines for gathering data on the marketplace depended significantly on the sales force as a conduit for information. Competitive information came from competing bids and from competitor price lists that the sales force acquired in their interactions with the distributors. These were used in the data bases that the marketing group maintained. But once the data went into the data bases, the marketing group controlled its use and interpretation. Their claims of expertise on interpreting aggregate market behavior and their control of the list price and discount structure devalued the pricing experience of the sales force. This was a significant factor in the subsequent analysis.

**Step 3 – Discuss current position.** One effect of this disagreement was on the standing of each group to interpret the firm's current market position. The perspective of the sales force reflected their focus on individual distributors and their experience of negotiating with each distributor to address the particular circumstances. Members of the sales force were proud of their ability to adapt to local conditions and spoke in detail about the variations in the market across regions and across product lines. That knowledge was encoded in part in a set of what one of the pricing analysis at the firm called the "pink books," a set of large three ring binders that included all the rebates that the firm had approved over the past several years.

Members of the marketing group tended to dismiss that knowledge and the actions of the sales force. They felt that the sales force wanted to be seen as “heroes” to the distributors. Several members of headquarters argued that it wasn’t clear whether the sales force worked for the customer or for the firm. Moreover, a deep theme from informants at headquarters was the value (or lack thereof) of the rebates that the sales representatives negotiated. The director of pricing, for example, argued that the negotiated pricing was an inefficient and inappropriate way to arrive at price. The financial analyst had studied the costs of rebates and the director of pricing said that the data on the programs “speaks volumes.” He said, “we had a situation where somebody like 70 percent of the rebates didn’t bring in 5,000 worth of business and that was constant fight between marketing and sales.” He said that he “hated rebate programs because they need to deal with exceptions. . . . They easily get out of hand. They are driven by not making decisions up here.” He advocated control of the market position from headquarters, not from the sales representatives, because he believed that the sales force couldn’t be trusted to make good pricing decisions.

**Step 4 – Simulate possible prices.** Central to the approach of the pricing director was the analytic work done by the sales force in their part of the pricing routines. But his approach was, in turn, called into question by the sales force. The director of sales argued that the marketing group lacked experience with the market. In comparing the marketing group and the sales force, he argued “what you had in my opinion was very minimal experience with this industry [in marketing] up against people with a lot of experience in the industry [in sales].” The effect was that neither group trusted the insights of the other. “What happened was you get a natural following in the sales organization. Those in sales follow the sales organization, and these in marketing follow the marketing director and so even though we empowered them to be a team

and work and come up with their own decision they already know what the answer was from their director of marketing. ... So like I said the team was deadlocked.”

**Step 5 – Sell new list prices to upper management.** In the end, the team made a decision that reflected the wishes of the marketing group: they advocated reducing list price. Behind that decision, however, was contention over the status of the two groups, the identity of each group and the value each added to the process. The sales force was described by the marketing group as “champions of high price” while the marketing group was described by the sales force as “mahogany row.” As one member of the headquarters said, it became an “emotional issue”—so much so, that a pricing analyst commented on a meeting of the pricing team where “there was one argument on Tuesday morning that I thought they were going to throw punches.”

## **Resolution**

### **The vice-president’s decision**

The task force handed the vice-president a recommendation to reduce list price, backed by dissenting opinions over what he described as the “biggest knock down, drag out” dispute. The large price change had amplified the latent conflict. He saw the logic of both sides. He agreed that the firm charged high prices for the new product line even though there could be little product differentiation on a product that they had been purchasing. He dealt with both end users and distributors, so he was familiar with the issues for each group. And he recognized both arguments on the risk that the lower list price wouldn’t be passed on to the end users. He saw a role for both list price and discounts, and readily used both, depending on the circumstances.

A recommendation to lower list price was, he said, “probably not what I would have gone with.” The recommendation threatened his revenue goals, which were critical given the \$23

million capital investment for the new production facilities. As he said, “Each July I get the wonderful opportunity to stand in front of the board of directors and talk about our strategy.” Whatever the disputes about the meaning of list price to customers, list price had clear meaning inside the firm: it was used to measure revenue for that strategy. There was little formal evidence that demonstrated the customers were truly price sensitive and there was no formal elasticity analysis built into the process. Neither the lack of evidence nor the lack of formal analysis is unusual for a firm of this type (see, for example Nagle, 1987). With the price cuts, however, the vice-president would have to project the same volume sold as the past year, but at the lower price. The revenue projections would not meet firm goals, an embarrassing prospect for him.

In response he agreed to lower prices on the high volume parts and said that “all other parts ... would have no change in price.” He made one change to the recommendations. He said, “We had to have this thing revenue neutral.” To accomplish this, he said “I kind of preempted the pricing on [our traditional product line] and raised that price by four and a half percent.” The effect was that the list prices and thus the revenues on the old product line *increased*. The projected revenues would meet the revenue plan.

### **Denouement**

The vice-president’s decision had ironic effects. The coalition had broken down over how to lower list price, but it reformed in response to the vice-president’s decision. The decision gave the director of pricing the outcome that he wanted on the new product line. But to accomplish that, he had raised list prices on the older product line, and for internal reasons alone. Both marketing and sales agreed that the increase in list price for the other product lines was a bad pricing decision; it fit neither of their logics.

The implications of the economics went further than the effects on the price of the two product lines. For example, the director of pricing who had worked so hard to establish a rationalized approach to pricing moved across the country. He believed so firmly in the pricing approach he proposed—and was so frustrated by what he perceived as the irrationality of the pricing process at the firm—that he decided to take over one of the distributors. He intended to demonstrate to the executives at the firm how profitable his approach could be.

Meanwhile the acquisition price (the price after rebates) for the old product line didn't increase. A member of the sales force said, “[We said] we are going to raise the pricing and we did. It made the model look like it was revenue neutral and I have heard some people say that our [traditional product] pricing is high as a result of that in the market. But once again we adjust with the deeper discount or deeper rebate or whatever and make up for that on a case by case basis.” Though the director of pricing had built his argument for a lower list price around a claim that discounts were out of control, the support of the sales force with their discounts and rebates were essential to making possible his lower list prices. They disagreed with the decisions, but the director of sales said, “You’ve got to move on. You can't keep fighting it. It is pointless. You have to move on and make it work.”

## **DISCUSSION**

In this paper, we seek to answer a deceptively simple question: How do firms adjust prices? In our findings, we have presented the process in layers. First, there is the ongoing process of price adjustment, wherein the marketing group and the sales force have different tasks and hence different perceptions of the market. Second, there is a moment when a price change demands that the marketing group and the sales force confront their different perceptions of the market. In that

moment, the perceptions of the market, the underlying economics, and the internal organization are in all play. Third, there is a moment of resolution that doesn't look at all like what we might have expected. The price outcome may be consistent with our stylized understandings of economic theory, but the ongoing practice of price adjustment only loosely follows what we would expect.

Our findings are consistent with an idealized image of markets in that prices do seem to adjust to market forces. In a competitive market the firm members used their lower costs to reduce prices. Yet from the standpoint of price theory, however, these findings are puzzling. The managers had been working hard to implement the very kinds of economics-based pricing practice marketing texts advocate (e.g., Nagle, 1987; Dolan and Simon, 1996). Moreover, the firm we studied was highly successful. Yet the managers appear ineffective at setting prices. Our findings present three major deviations from what we might expect, given a stylized model of market behavior. First, even though everyone agreed that prices need to be reduced, the price change was extraordinarily difficult. As the vice-president said, the "biggest knock-down, drag-out" fight was between the sales force and the marketing group over whether to reduce list price or to negotiate with distributors. Second, while that fight was largely over the economics of the decision, the economic practice appeared to be a highly distorted version of the relevant economic theory. For example, the decision raised questions about customer price sensitivity, but there was no systematic evidence of customer price sensitivity. Third, when the vice-president intervened, he agreed to reduce the list prices on the product line with the lower costs but he also raised prices on a second product line. No logic based in market forces justified his decision and neither the sales force nor the marketing group supported that decision.

Rather than treat these deviations from a market ideal as failures by the managers, however, we might do better to use them as an opportunity to consider price from the standpoint of practice. One of the longstanding problems in dealing with economic theory is the gap between the theory and the practice of economics. As we argued in the introduction, however, our understandings of price adjustment begin from the ground of neoclassical price theory, a highly stylized and abstract image of how markets work. By beginning from the ground of formal theory, however, we treat deviations from that formal theory as shortcomings in practice rather than as shortcomings in our understanding of human behavior. If we begin from the ground of practice, however, and move to theory, we might develop a better understanding of both theory and practice. In this section, we therefore return to the problem of price adjustment to consider what our study suggests about economic theory in practice.

### **Economic theory in practice**

Our approach to the practice of economics seeks to begin from the ground of the substantive problem of price adjustment and proceed towards formal theory. The challenge in our approach is to balance the implications of both theory and practice. To get at the relationship between the theory and practice, we move from the findings back to the theoretical problems we addressed in the introduction. There is a parallel structure in our findings and in the set of theoretical problems we raised at the outset. In the introduction we observed that price theory has difficulty addressing why firms might be slow to change prices, yet in our findings we observe difficulties in changing prices. We also observed that the prescriptive implications of economics don't seem to match firm behavior, yet your findings demonstrated just that. Finally, we observed that economic theory treats hierarchy as an alternative to the market, yet here we find hierarchy used

in ways that are inconsistent with the market. In this section, we return to these three themes from both the standpoint of economic theory but then from the standpoint of organizational theories of practice to arrive at a more organizational perspective on what Krippner (200x) calls the “elusive market,” but also to arrive at a better theoretical understanding of the recursive relationship between practice and theory.

### **Costs of adjustment: The practice of adjustment and the adjustment of practice**

As we argued in the introduction, one of the puzzles for economists is how institutions adjust. Macroeconomic theory treats these difficulties as “costs of adjustment” but cannot distinguish between competing images of adjustment (Blinder, et al., 1998). One model treats the cost of the price change as constant with the size of the price change (Mankiw) while a second proposes the cost of changing prices varies with the size of the price change (Rotemberg). This notion that change is costly should not surprise organizational scholars. While our data cannot test these models, by beginning from the ground of organizational practice we can say a great deal about such costs of adjustment that economic theory cannot. Our process data offer an image of price adjustment that is both continuous and episodic. The structure that we delineate in the section “Pricing structure” is very adaptive to modest ongoing price changes. Per the behavioral theory of the firm (Cyert and March, 1963), through sequential attention to goals (among other mechanisms) the ongoing adjustment process tolerates goal conflict and allows the firm to make small price changes with only modest costs. As adaptive as the pricing structure was, however, when the firm faced such major changes, that structure was no longer adequate. Major price changes are episodic because they require that the firm restructure its pricing practice. The latent conflict that firm members could suppress with the ongoing process began to

emerge. The effect is that the costs of adjustment are much more significant for large price changes.

But from the standpoint of theories of practice, costs of adjustment are not the significant issue; they are simply an example of a more general problem of stability and change in routines. As Feldman and Pentland (2003: 114) observe, theories of “punctuated equilibrium” suggest that “routines create inertia and resist change as long as possible, until exogenous forces overwhelm the structure and revolutionary change occurs.” Such an argument is quite consistent with notions of costs of price adjustment, which would suggest that firms follow routines until they face an exogenous shock—market forces that suggest the need to change prices. As long as price changes remain small, the ongoing pricing structure permits continuous change.

But our findings suggest a more complex story. First, there is more to the relationship between routines and change is more complex. In our findings, up to a point, rigid routines permit flexible prices. The constraints of the pricing structure permitted the different functional groups to enjoy considerable agency. The marketing group was responsible for the pricing strategy for a \$100 million dollar business and could, by setting list price, pursue market share goals. The sales representatives managed accounts sometimes worth millions of dollars, and could adapt to local market conditions with considerable autonomy given the constraints of the ongoing structure. The rigid routines also permitted the firm members to monitor the market in a way that tolerated different perspectives.

At some point, however, rigid prices demand flexible routines. When changes were modest the market forces did not particularly impinge on ongoing activities. The firm used the rigid routines to adapt within a small range of price changes. At the same time, the process permitted monitoring for major changes. Those routines were the ground for the \$25 million dollar

investment in new facilities, for example. But prices were much more rigid for major price changes, because they demanded that the firm restructure its pricing—and, in so doing, analyze assumptions about the economics of the market and about the structure of the firm. In short, major price changes asked the firm members to analyze how they practiced economics, which takes us to what may be the most problematic ground of this research.

### **On the practice of economics**

As our findings show, when we begin from the ground of the substantive problem of adjusting prices, we find that the need to change prices does put a variety of economic questions in play. Indeed in their practice the firm members are engaging in the same questions that marketers advocate for pricing practice when drawing on economic theory, though not necessarily in the language of economists. But as compared with economists and marketers, the firm members face several constraints. First, not all economic themes can be addressed at once. Our findings demonstrate how in practice economic theory is diffused over both space and time. We show fairly comprehensive use of the basic insights of economic theory (though often in the language of the practitioners, not the language of economists). But that use of economics is distributed across both people—as, for example, the different approaches of the marketers and the sales representatives—and time—as, for example, in the attention first to the market share goals and then to the sales volume goals. Perceptions of the market (and hence the economic questions that might be in play) are diffused through the various actors and across the various stages of the pricing practice.

These basic findings should not be a surprise to organizational scholars, as they are deep themes in the behavioral theory of the firm (Cyert and March, 1963)—which addresses standard

operating procedures and sequential attention to goals—and the evolutionary theory of the firm (Nelson and Winter, 1982)—which addresses the use of routines and truces. But here we are at what is the problematic moment in both economic theory and theories of practice. First, both our economic theories and our theories of practice are theories of stability, not of change.

Economists recognize that markets adjust with difficulty (Caplin, 1988), but cannot show how markets adjust. And theories of routines which in principle should give us insight into the nature of change have instead become the ground for theories of stability (Feldman and Pentland, 2003).

Second, these are theories of organizations only; they don't take into account an institutional context. In particular, our theories of routines treat social science theory as though it is stable and largely irrelevant. This is particularly true in both behavioral (Cyert and March, 1963) and evolutionary (Nelson and Winter, 1982) theories of the firm as they address the practice of economics in general and of pricing in particular. For example, though the behavioral theory of the firm sought to develop alternatives to neoclassical price theory, Cyert and March bracketed even the most basic economic principles, treating economic theory as a set of file drawers full of economic variables (folders) and factors affecting the variables (the contents of those folders). Similarly, Nelson and Winter (1982) address the problem of pricing, but treat economic theory as exogenous to the problem of skills and routines in the practice of pricing in firms.

In contrast, our findings show that the routines are sometimes stable and sometimes dynamic, but (perhaps more importantly) the need to change routines also implicates the use of economic theory. For ongoing practice of pricing, the routines are stable, but when the firm members faced a major price change, the latent conflict that was suppressed by the ongoing routines and by the sequential attention to goals erupted in overt functional conflict and the routines are subject to

debate. In that conflict members of the sales force drew more from their experiences with the distributors as an exogenous influence. Members of the sales force tended to turn to concrete encounters with distributors to ground their arguments for negotiating a lower price. In comparison, the members of the marketing turned to economic and marketing models of price to ground their arguments for reducing list price. The members of the marketing group used these economic models to define what Fligstein (1996) calls “conceptions of control”—their models of how to understand and respond to market conditions. Their arguments incorporated an economic and marketing language as they more explicitly introduced such concepts as “price sensitivity” (c.f. Nagle, 1987; Dolan and Simon, 1996), though the ongoing pricing routines did not incorporate these economic and marketing conceptions of control.

This example suggests one reason why we need to attend to moments of conflict (rather than stability) when we study routines: the conflict reveals the fault lines in the conceptions of control. Those moments are when both the routines and the practice are up for debate. Perhaps more importantly, however, is that the moments of conflict reveal something of the nature of the social order behind the practice (Contu and Willmot, 200x). Our theories of practice tend to treat practice as a communal activity that unites people. Our findings, however, suggest that practice involves conflict. It is important that we take this conflict into account, because those moments of conflict are when the actors draw on economic theory and that theory subsequently implicates the hierarchy and social structure of the firm.

### **Economics and images of order**

For theories of price and price adjustment, perhaps the most interesting implication of our findings is the notion that the need to change prices implicates questions of order in the firm.

This was the problem that the vice-president encountered when his pricing team presented the end of its dispute over prices. As we argued in the introduction, organizational questions are not new to economics. Following Coase (1937) economists recognize that markets may not always be the ideal choice, so they have developed theories of hierarchies in response to the price system (Williamson, 1985; Milgrom and Roberts, 1992). But organizational theorists have, historically, treated hierarchies as an alternative to markets. Here, we suggest that hierarchies create markets.

That argument is consistent with arguments Granovetter's (1985) embeddedness arguments, with Fligstein's (2001) "markets as politics" perspective, and with recent arguments that firms perform economics (Callon, 1998). The analytic challenge, however, is to understand how hierarchies create markets. To understand market behavior, we suggest that we need to understand how firms structure the price system. To accomplish that, we propose to invert the problem. Rather than begin from the ground of neoclassical price theory, we suggest that we begin from the ground of theories of practice, wherein pricing practice is simply one instance of broader category of practice. From that point of view, economics is simply one example of a theory that firms practice. If we return to these puzzles from the standpoint of practice, we suggest that we will not only arrive at insights into the problems of price adjustment, we can arrive at insight into the practice of theory more generally.

As we showed in the introduction, economists have treated hierarchies as an alternative to markets in which coordination problems can be addressed by using the organizational hierarchy. Hence, efforts to develop formal models of firm behavior treat organizational problems by trying to understand the incentives of rational actors in organizations (e.g., Gibbons, 1999; Rotemberg and Saloner, 19xx; Milgrom and Roberts, 1992). As Granovetter (1985) has argued, such a view

has two major problems. First, it treats social relations as frictions on economic action. While that view is consistent with the costs of adjustment arguments in the economic literature (Blinder, et al., 1998), it understates the nature of the problem. Second, it also represents an undersocialized image of human behavior: it presumes that individuals respond primarily to incentives. These images begin from the ground of formal theory in economics—primarily theories of individual rational action and, as Ferraro, et al. (2005) show, have come to shape organizational action.

By beginning with the substantive problem of adjusting price we arrive at images of negotiated order that offer a more accurate picture of what happens. Certainly our findings demonstrate that incentives do play a role; indeed, we found direct language among members of the marketing group discussing what they perceived to be incentive problems with the sales force. But, consistent with the literature on negotiated order (Orlikowski, Barley, Bechky, etc., Giddens) our findings also suggest that the ongoing price behavior in the organization was shaped by the social structure, especially the organizational roles and routines that defined behavior. Within that structure, the different actors enjoyed considerable agency, but the structure was up for negotiation only for major events.

When those major events did occur, however, they became the grounds for debates over jurisdiction. Those jurisdiction battles suggest one reason why economic theory may be so dominant: the language of economics allows actors to define their role in the organization. Our findings are quite consistent with Fligstein's arguments that "conceptions of control" are used by actors to define both the firm's response to the market, but also how to structure inside the market. For the marketing group, then, arguments about how the firm should position itself in the market were in part used to define a response to the market, but were also used to sustain their

role as the group responsible for such decisions. While they were concerned about maintaining a competitive market position, in the end for the marketing group it may have mattered less whether they were right as long as they could maintain a superior position in the firm hierarchy.

### **Theories of practice and the practice of theory**

For Ferraro et al., (2005) the “hegemony of economics” is a problem because, they argue “Perhaps the most important implication ... is that theories become dominant when their language is widely and mindlessly used and their assumptions become accepted and normatively valued, regardless of their empirical validity. This is the case whether the language and assumptions are problematic and harmful ... or beneficial.” On the surface, it might appear that such is the case here. But we suggest that to reach such a conclusion is to misunderstand theory in practice. Economic theory sits at what Schutz (1943) treats as the intersection of the social world and the theoretical world of the scientist, where everyday assumptions may be called into question. To understand economic behavior, Schutz argues, we need to understand “the peculiarity of [the] theoretical level by contrasting it with other levels of our experience of the social world.” What makes sense in abstract theory may not make the same kind of sense when it encounters the everyday reality that people create. The “market realities” and “market primitives” are constructed—and our findings suggest that the people in these organizations recognize that.

As social scientists, we need to provide theoretical and empirical tools that help address that problem. In our approach to the problem of price adjustment, we have sought to take economics seriously, but only in order to put it in its place. First, we suggest that the instrumental value of economics lies largely in its interpretive applications. As Lave and Wenger observe, “The

generality of any form of knowledge always lies in the power to renegotiate the meaning of the past and future in constructing the meaning of present circumstances,” (1991: 34). In the organization that we studied, the power of the economic theory lies in part in that instrumental value: it helps negotiate the meaning of a price change. That certainly gave power to the group that possesses the knowledge—in this case, the marketing group. But that power depends on whether people find the knowledge useful. Who is in control depends on who can resolve the fundamental ambiguities that a change in prices presents. In this sense, the power that the marketers gain is much like the relationship between the radiologists and radiographers in Barley’s (1986) study of hospital technology. The radiographers gained power only where they were the ones that practiced the theory. When they used the machines, they could offer useful interpretations and set the structure for exchange and order. The problem isn’t just theory in practice; it is access to theory.

It is also the application of that theory in practice. Our notions of economics, rooted in images of economics as a science, ask us to define constructs precisely. To understand the instrumental or the interpretive nature of an economic construct, we need to pay attention to the structure of the social field in which the economics are situated. If we treat the organizational field in Bourdieu’s (1984: 94) terms as akin to a physical field, as “a ‘field of possible forces,’ a ‘dynamic situation’” we can see, as our evidence demonstrates, that the meaning of an economic construct can vary depending on the structure of the field. When the actors meet the social world, as Bourdieu (1984: 94) argues, the effect is that “the same practices may receive opposite meanings and values in different fields, in different configurations or in opposing sectors of the same field.” In this sense, our example of the construction of a pricing structure is simply an instance of a much more general instance of the problem of social construction. We were focused

on how firms use economics in pricing practice, but our findings could be extended to a variety of different practices. The task of adjusting prices, we suggest, involves negotiating meaning and social order, which is a profoundly sociological and organizational problem.

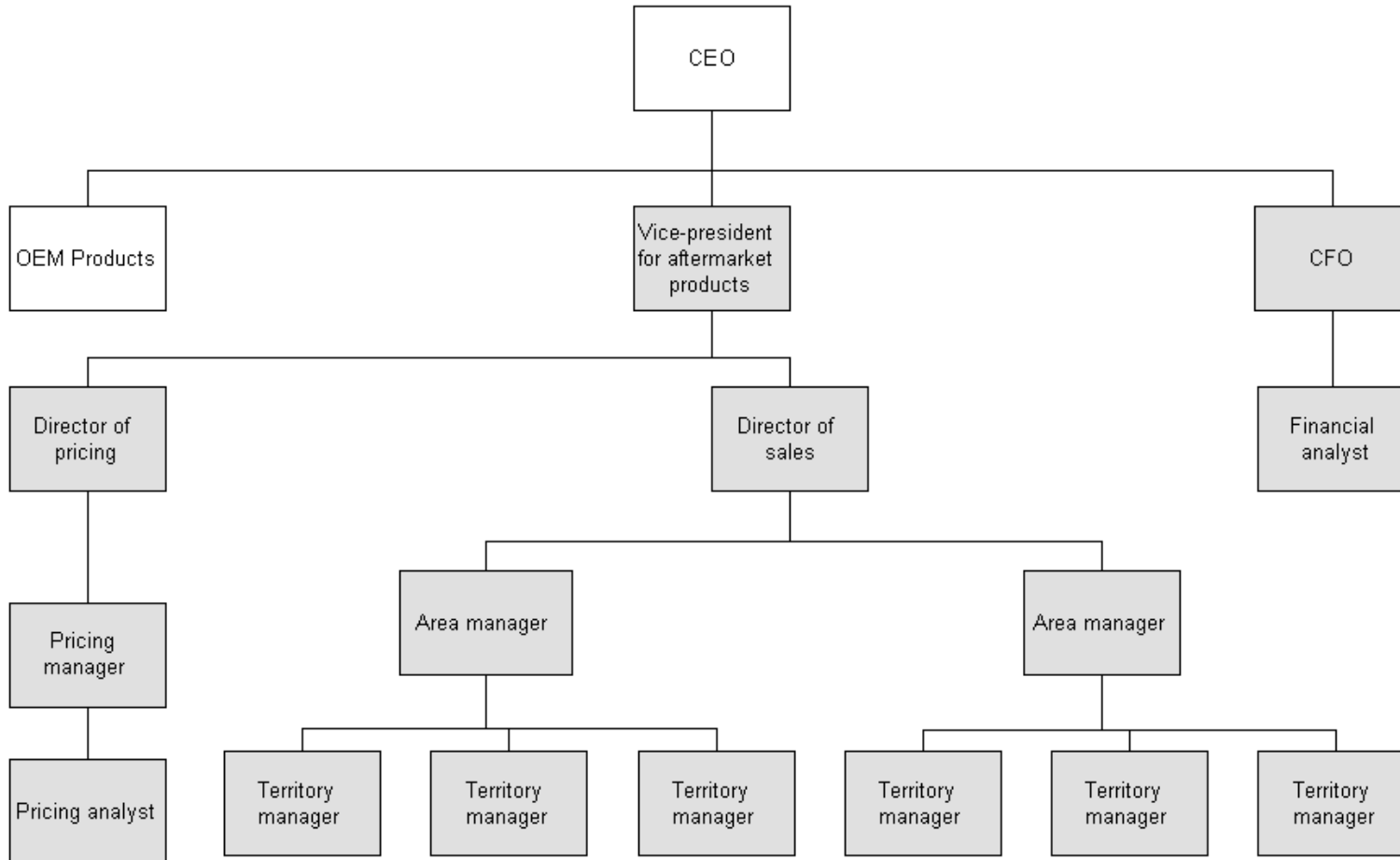
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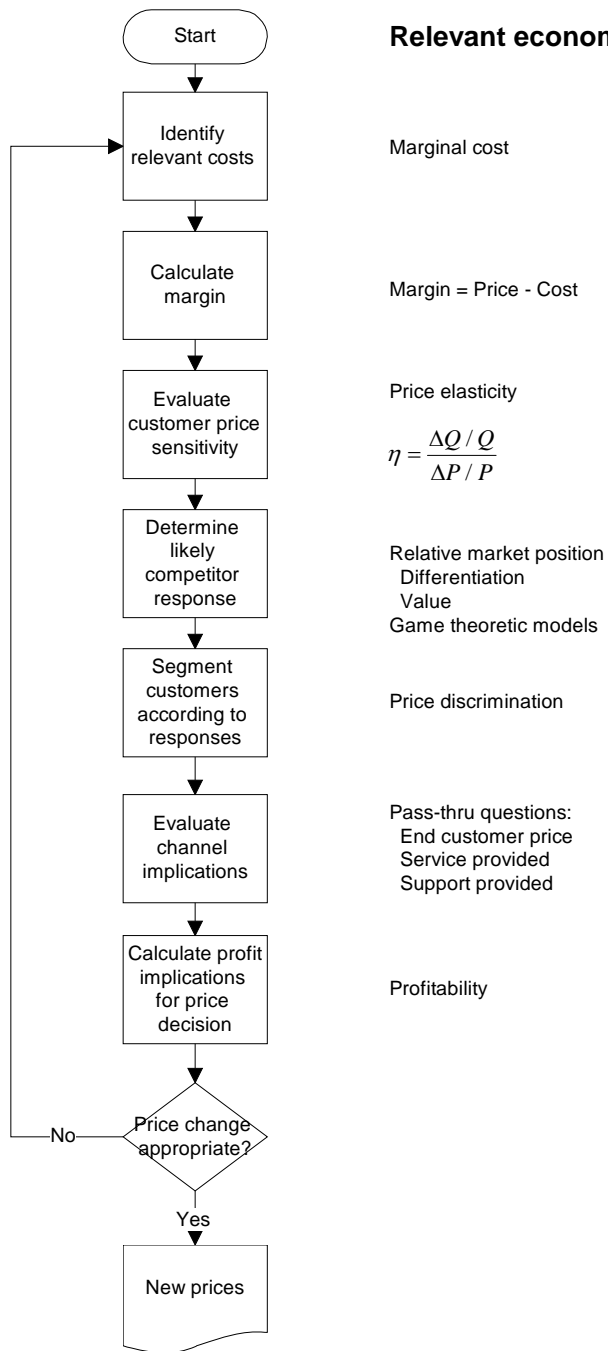
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**Figure 1: Organization chart**





**Figure 2: Pricing process model**

Marketing: List price process

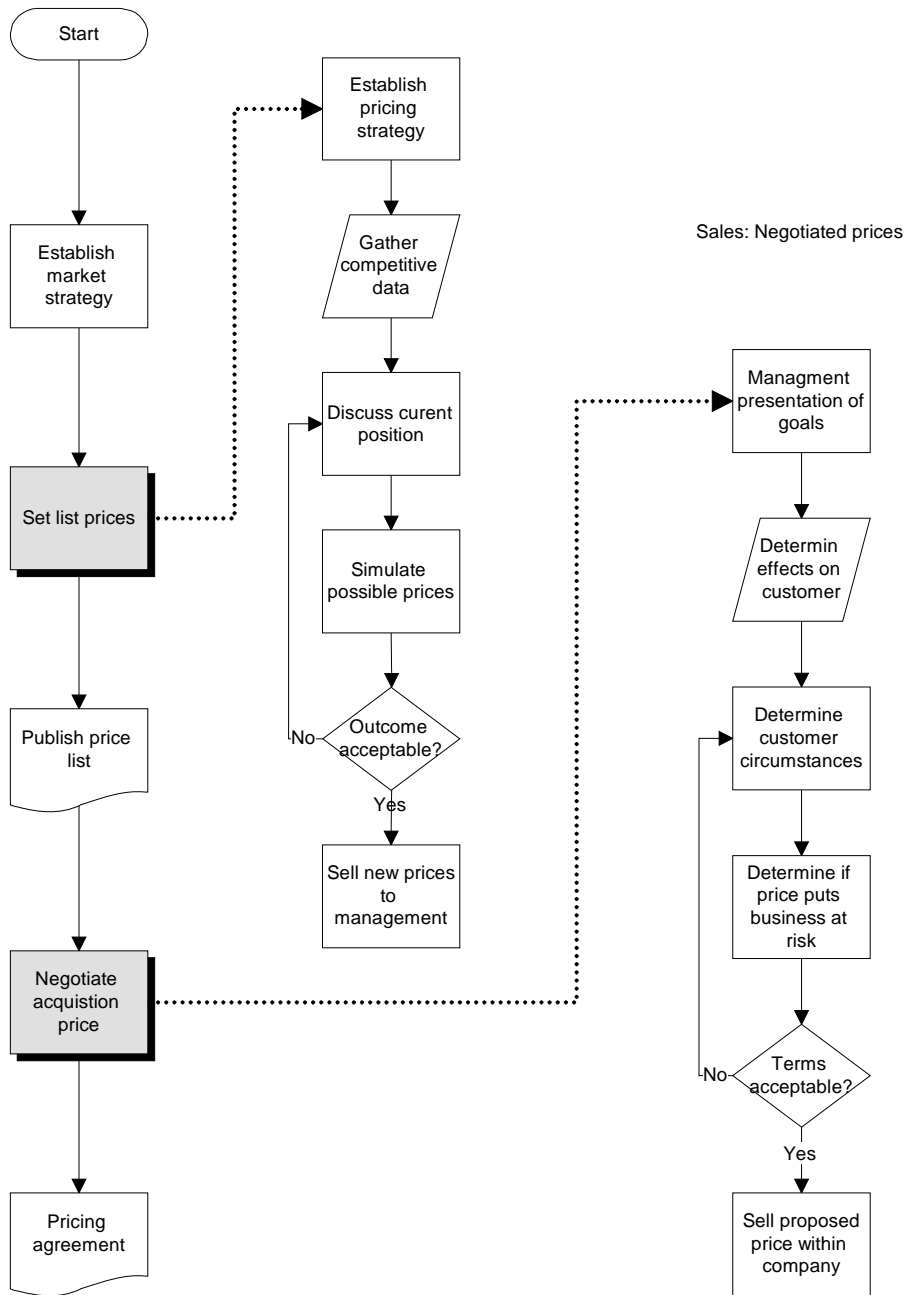
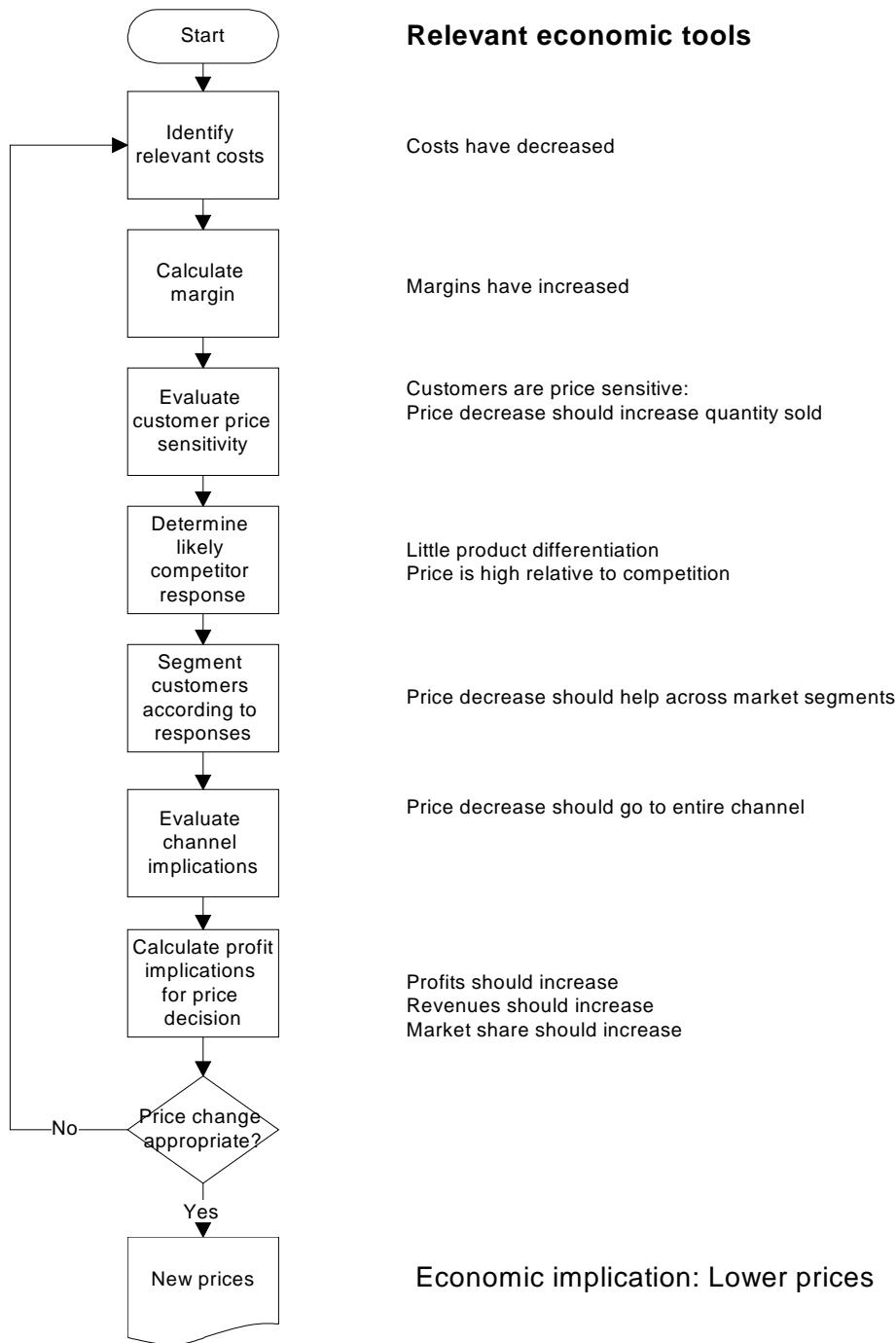


Figure 3: Detailed overall flow chart



**Figure 4: Economic implications of price reduction**

**Table1: List price and standard discount**

<b>Step in routine</b>	<b>Cost, margin, profits</b>	<b>Price sensitivity</b>	<b>Competition</b>	<b>Incentives</b>	<b>Status and power</b>	<b>Identity</b>	<b>Trust</b>	<b>Artifacts</b>
<b>Establish pricing strategy</b>	Defined by HQ: Across products, Aggregate trends			Org position	Determined by expertise and position: Favors corporate, VP, and marketing			
<b>Gather data on competitive position</b>	Relative Aggregate Gross ←		Aggregate comparisons Individual competitors		Firm status vs. competition <i>Example: Competitive data</i>	Of firm Relative to competition ↑	Of sales force data	Big changes Stories Data base
<b>Discuss current position</b>		Market reaction Heuristics		Organizational position	MBA knowledge valued	Expertise: what they control		Processes Package Heuristic Meeting notes E-mails
<b>Simulate possible prices</b>	For candidate price changes Heuristics		Heuristic: Top 100 parts Key competitors		Finance Marketing Director of pricing defines goals, not powerful			Calculating tools Data on effects of change
<b>Sell new list price to upper management</b>	Across products, Aggregate		Focus on key competitors	Sales force Org position	Favors corporate, VP, and marketing	Role in firm Role on team		Price list Past year data

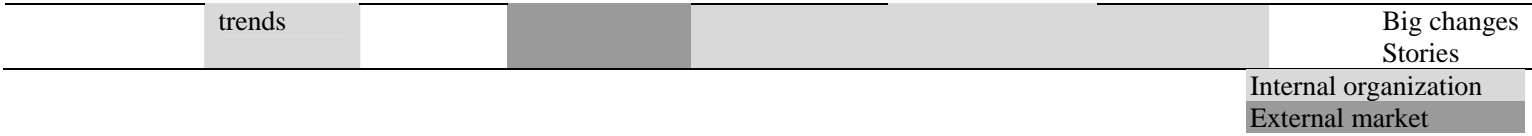


Table 2: Negotiated price and sales force:

Step in routine	Costs, margins, profits	Price sensitivity	Competition	Incentives	Status	Identity	Trust	Artifacts
<b>Company goals: What management wants</b>	Presented to the sales force Relevant logic		Identify a competitor Positioning		Corporate greater than sales Value of the sales force			
<b>Does the new price affect the distributor</b>	Distributor concerns				Distributor status	Sales representative torn between company and distributor		Price list Past purchases Distributor margins
<b>Have the customer circumstances changed</b>		Distributors become more or less price sensitive Complaints	Entry/exit Aggressive or cooperative	Distributor incentives change	Status/power changing wrt. other distributors	Roles affected by changes <i>Example: Restructured their business</i>		
<b>Does the price put the business at risk?</b>	Comparison of distributor costs, margins, and profits versus competitor prices	Belief of sensitivity to the magnitude of change End customer bids		Sales force rewards Distributors choices	Loss of status in the firm Loss of status with distributor Status of distributor Status of competitor	Am I valued? Am I a good sales representative?		Discounts Competitor prices Distributor info: conversations
<b>How to sell</b>	Analysis on		Justification	To make	Reifies	Language of	Support	Spread sheets

<b>within the company</b>	profits, goals Form for justification	for price	the sale Programs incent the distributor to sell	corporate status	description	Lack of trust with each We can't trust you to make a good decision	Approval forms Approval process Distributor quotes
						Internal organization	External market

Table3: Major price cut meetings fight over economics

Marketing perspective					Sales perspective			
Step in routine	Costs, margins, profits	Price sensitivity	Competition	Incentives	Costs, margins, profits	Price sensitivity	Competition	Incentives
<b>Establish pricing strategy</b>	Goals defined by HQ		Other producers making inroads		Goals defined by HQ		Risk of losing distributors Competitors in distributors	
<b>Gather data on competitive position</b>		End customers are price sensitive			Distributor margins suffer	Distributors are sensitive to discounts		
<b>Discussion of current position</b>			Heuristic: Top 100 parts Key competitors	Sales force not incented to sell			Depends on distributor circumstances	Distributor incentives to take advantage of lower list price
<b>Simulate various possible prices</b>	Lower list prices will lead to great margins			Sales force not incented to sell	Lower list prices put margins at risk			Marketing wins
<b>Sell new list price to upper management</b>	Profits will increase	End customers are price sensitive	Other producers are competitors	Sales force not incented to sell	Margins and profits will decrease	Distributors are promotion sensitive	Competition varies by distributor	Distributors will pocket the price difference
							Internal organization	
							External: Distributor	
							External: End customer	

**Table 4: Major price cut meetings fight over organizational roles**

Marketing perspective					Sales perspective			
Step in routine	Status	Identity	Trust	Artifacts	Status	Identity	Trust	Artifacts
<b>Establish pricing strategy</b>	HQ, VP, Marketing	Pricing experts		Charter given by VP	Low	An expense to be eliminated		Charter given by VP
<b>Gather data on competitive position</b>		Pricing expertise				Sales force as important conduit of information		Pricing experiences of sales force
<b>Discussion of current position</b>			Sales force wants to go in as heroes	Past quotes Past year volume			What is decided is what a certain set of people want	Pricing experience of sales force
<b>Simulate various possible prices</b>				Marketing pricing runs	Lower list prices put margins at risk		Marketing doesn't know the market	
<b>Sell new list price to upper management</b>	Responsible for pricing decision	Marketing: Pricing experts Sales: An unnecessary expense	Sales force as "champions of high price"	New list price	Have their own perspective	Sales: Pricing experts Marketing: MBAs with no business	Marketing as representing "mahogany row"	Provides only anecdotal evidence

experience

**Table 5: The questions set in motion**

Question	Marketing view	Sales view
<b>Questions regarding the economics</b>		
Who is the customer?	End user	Distributor
What is the relevant price?	List price	Acquisition price
How do we address competition?	Use a lower list price as a signal to end customers and competitors	Use list price as the starting point for developing a bid that secures business from the competition
What will happen to profits?	A logic of price sensitivity means that a lower list price will lead to volume increases.	A lower list price means passed-up profits.
<b>Questions regarding the organization</b>		
What information is valid?	Quantitative data (e.g., price elasticity)	Customer experience
Who has standing?	“There is no incentive [for the sales force] to sell with a fixed salary.”	“...some people were so adamant on their opinions that they pushed to make sure the team came up with that answer.”
What role do I play?	Engages in market analysis to arrive at the correct list price	Serves as the bridge between the firm and the distributors
How do we address the information of others?	“[The sales representative] isn't calling on the end users. ... this was the fundamental problem.”	“The sales people did feel they were closer to the market and understood the market much better than the marketing people.”