Managerial and Customer Costs of Price Adjustment: Direct Evidence from Industrial Markets

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Theoretical Background and Questions

- The distinction between managerial, customer, and menu costs
- The effects of managerial and customer costs on price rigidity
- The convexity of managerial and customer costs
- How to quantitatively measure the magnitude of managerial and customer costs and the price rigidities caused by such costs

Data and Methodology

- Firm-level ethnographic study of the price-setting activities of a "one-billion-dollar industrial firm"

- Data sources: (1) ethnographic interviews, (2) nonparticipant observations of pricing activities by researchers, and (3) data taken from firm-level documents (price lists, meeting minutes, emails, etc.)

- Time study methods of industrial engineering used to estimate price adjustment costs

TABLE 1.—MANAGERIAL COSTS OF CHANGING PRICES

A. Information-Gathering and Decision-Making Costs

Managerial Time Spent on Information Gathering and Decision Making: Fraction of Month Spent on Pricing

Pricing Season	Information Technology	Pricing Coordinator	Pricing Manager	Financial Analyst	Staff Assistant	Marketing Manager	Vice President	Territory Managers	Sales Manager	Total
January	1.0	0.1	0.05	0.1	0.1	0.05	—	—	—	1.4
February	1.0	0.1	0.05	0.1	0.1	0.05	—	—	—	1.4
March	1.0	0.1	0.05	0.1	0.1	0.05	—	—	—	1.4
April	1.0	0.1	0.05	0.1	0.1	0.05	—	—	—	1.4
May	1.0	0.1	0.05	0.1	0.1	0.05	—	—	—	1.4
June	1.0	0.2	0.1	0.1	0.1	0.05	—	—	—	1.55
July	1.0	0.4	0.2	0.2	0.2	0.1	0.1	—	—	2.2
August	1.0	1.0	1.0	1.0	0.5	0.1	0.1	0.1	0.1	4.9
September	1.0	1.0	0.8	0.5	0.4	0.15	0.05	0.05	0.05	4.0
October	1.0	1.0	0.6	0.4	0.3	0.15	0.05	0.05	0.05	3.6
November	1.0	0.8	0.4	0.3	0.2	0.05	0.05	0.05	0.05	2.9
December	1.0	0.6	0.2	0.2	0.2	0.05	0.05	0.05	0.05	2.4
Total months	12	5.5	3.55	3.2	2.4	0.9	0.4	0.3	0.3	28.55
Total hours[a]	2,112	968	625	563	422	158	70	53	53	5,025
Total cost @ $50/hour	$105,600	$48,400	$31,250	$28,150	$21,100	$7,950	$3,500	$2,650	$2,650	$251,250

B. Internal Communication Cost

Task	Measure	Cost[b]	Source
Flights to HQ	17 @ $1,200 per trip	$20,400	Measure based on other reported costs; approved by management
Meeting	(1 day per area or territory manager) × (8 hours per day) × (17 area and territory managers) = 136 hours	$6,800	Measure based on interview data
Feedback	(2 hours per area or territory manager) × (17 area and territory managers) = 34 hours	$1,700	Measure based on interview data
Total		$28,900	

C. Total Cost

Task	Cost
Information-gathering and decision-making (from panel A)	$251,250
Internal communication (from panel B)	$28,900
Total cost	$280,150

[a] Months × 176 hr./mo.

[b] Costs are based on average annual salary, fully loaded for benefits and expenses, at $100,000 per year. Assuming 2,000 hours per year, the annual employee cost translates to $50 per hour.

Managerial Costs

- Information gathering and decision making costs
  - Cost of gathering information on customer, company, and competitor data
  - Cost of building a database
  - Costs of price simulations and impact analyses
  - Costs of reanalyzing and reviewing price changes
- Internal communication costs
  - Costs of internal dissemination of price changes
  - Costs of developing a communication strategy and projecting that strategy
  - Costs of negotiating internally price changes

Customer Costs

- Communication of new prices
  - Costs of discussing/refining communication strategy for particular customers
  - Costs of explaining the new prices with customers
- Negotiation costs
  - Costs of meeting with customers hesitant to accept price changes
  - Costs of reversing prices

> At that time I was a territory manager so I had no pricing authority. The only authority I had was to go to my boss and I would say, “O.K., here is the problem I’ve got.” He would say “Fill out a request and we will lower the price for that account.” So that is how the pricing negotiations went. At that time I went up the chain to make any kind of adjustments I had to make . . . My five guys have a certain level [of discount] they can go to without calling me. When they get to the certain point they have to get my approval. . . . Then I have a price level before I have to go to Y. . . .

The increased activity occurs for both managers and customers. The managerial costs of price adjustment increase with the size of the adjustment because the decision and internal communication costs are higher for larger price changes. First, the increased costs occur because more

agerial costs. The resistance led to calls from participants who did not agree with this suggestion, for more information about effects on the customers. For instance, the sales force was concerned about the effects on key customers. Consequently, the pricing team needed to do additional analysis on those customers in order to see what the effect would be, which demanded more time of the pricing and financial analysts.

Third, the increased cost occurs because larger price changes lead to more attention and controversy, making the resulting change process much less linear. For instance, quite frequently questions raised during the impact analysis will send the price-setting team back to reconsider the assumptions or even gather additional information.

Customer costs of price adjustment also increase with the size of the adjustment because larger price changes lead to both higher negotiation costs and higher communication costs. Larger price changes generate an increased amount of

Findings & Takeaway Points

- Costs of adjustment result in price rigidities
  - Customer negotiations reverse price changes
  - Price adjustments require productive inputs
  - Avoid customer antagonization costs
- Managerial and customer costs are convex, while menu costs are fixed
  - The larger the price change, the larger the adjustment cost
- Internal structure of the firm is important in pricing decisions
  - Culture and social structure of the firm
- Modeling the social dimensions of price adjustment in future research