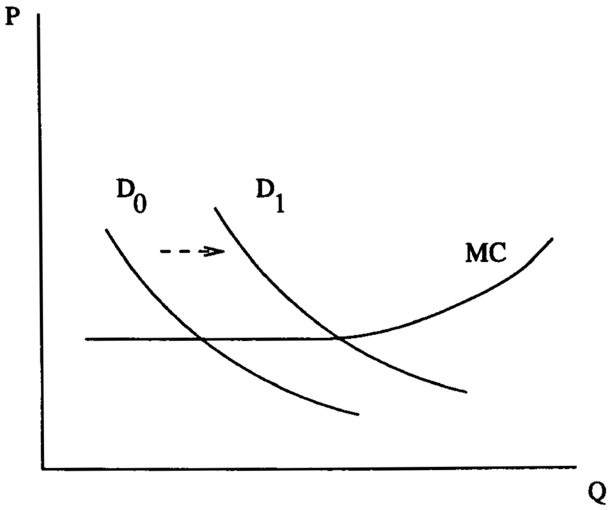
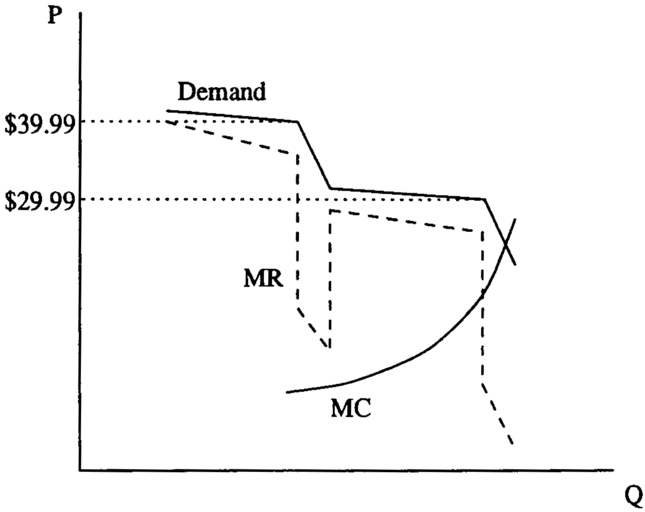
Figure 2.1 Constant Marginal Cost



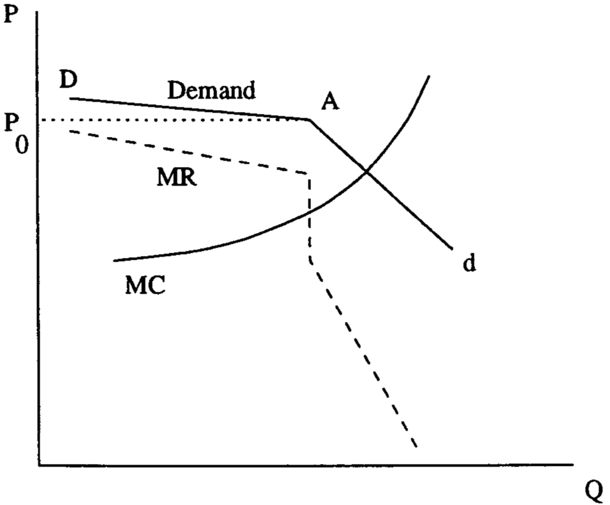
P = price
Q = quantity
D = demand
MC = marginal cost

Figure 2.2 Pricing Points



P = price
Q = quantity
MR = marginal revenue
MC = marginal cost

Figure 2.3 Kinked Demand Curve



P = price
Q = quantity
MR = marginal revenue
MC = marginal cost

Table 3.1 GDP by Industry, Northeast and Overall United States

Industry	(1) Northeast	(2) Overall U.S.
Manufacturing	21.5%	19.7%
Trade	16.5	16.7
Services[a]	35.6	33.3
Construction and mining	4.8	7.0
Transportation, communications, and utilities	9.2	9.3

[a] This category includes financial, insurance, and real estate firms.

Table 3.2 Distribution of Firms, by One-Digit SIC Code

Industry	SIC Code	(1) Sample	(2) Sampling Frame	(3) GDP[a]	(4) Response Rate
Agricultural services	0	0.0%	0.3%	0.7%	0.0%
Mining and construction	1	11.0	8.8	7.7	75.9
Nondurable manufaturing	2	13.0	13.3	11.7	61.4
Durable manufacturing	3	21.5	18.8	13.6	69.4
Transportation, communications, and utilities	4	8.5	8.5	6.1	60.7
Wholesale trade	5	10.0	11.5	9.2	52.6
Retail trade	5	8.5	11.8	13.1	43.6
FIRE	6	10.5	11.8	17.0	53.8
Services	7,8	16.5	15.2	20.9	66.0

[a] Private, nonfarm GDP excluding regulated utilities, owners' equivalent rent, household production, and nonprofits, 1991.

Table 3.3 Distribution of Firms, by State

State	(1) Sample	(2) Sampling Frame	(3) GDP[a]	(4) Response Rate
Connecticut	2.5%	2.1	4.1%	71.4%
D.C.	2.0	1.5	1.1	80.0
Delaware	2.5	1.8	0.9	83.3
Illinois	17.0	17.3	11.9	59.6
Indiana	7.0	5.8	4.9	73.7
Mass.	6.5	7.6	6.7	52.0
Maryland	4.0	3.6	4.3	66.7
Maine	0.5	0.9	0.9	33.3
Michigan	6.0	8.2	8.0	44.4
Missouri	0.5	0.3	0.0	100.0
New Hampshire	1.0	0.9	1.1	66.7
New Jersey	8.0	8.2	8.9	59.3
New York	22.5	21.8	20.0	62.5
Ohio	7.5	7.6	9.7	60.0
Pennsylvania	7.0	7.9	10.7	53.8
Rhode Island	0.0	0.0	0.9	—
South Carolina	0.0	0.3	0.0	0.0
Virginia	5.0	3.9	5.4	76.9
Vermont	0.5	0.3	0.5	100.0

[a] Private, nonfarm gross state product in the states surveyed, 1991.

Table 3.4 Distribution of Firms, by Size

Size	(1) Sample[a]	(2) Sampling Frame[a]	(3) GDP[b]	(4) Response Rate
Less than $10 million	0.0%	0.0%	26.4%	n.a.
$10 to $24.99 million	22.5	20.3	7.1 (9.6)[c]	67.2
$25 to $49.99 million	13.5	12.7	5.0 (6.8)[c]	64.3
$50 million or more	64.0	67.0	61.5 (83.6)[c]	57.9

[a] Based on the Trinet database for 1986.

[b] IRS Statistics of Income. Share of 1992 business receipts in each size category, all industries excluding agriculture.

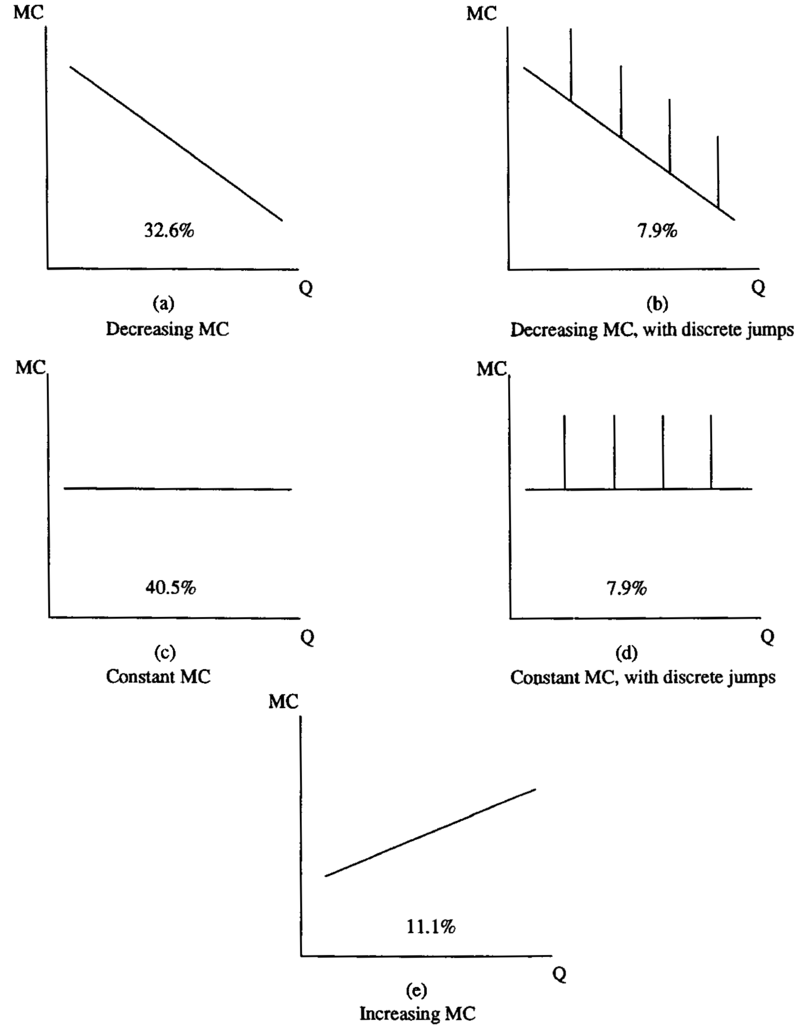
[c] Numbers in parentheses exclude firms with sales below ten million dollars.

Table 3.5 Job Titles of Respondents

President, CEO, COO, owner, partner	51
Vice president	83
Manager, director of...	40
CFO, comptroller	9
Economist	6
Chairman of the board	3
Other	8
Total	200

Note: Some respondents had multiple titles and some companies were represented by more than one person. In such cases, the most senior job title is recorded.

Figure 4.1 Possible Marginal Cost Curves



MC = marginal cost
Q = quantity

Table 4.1 Number of Price Changes in a Typical Year (n = 186 Responses)

Frequency	Percentage of Firms	Cumulative Percentage
Less than 1	10.2%	10.2%
1	39.2	49.4
1.01 to 2	15.6	65.0
2.01 to 4	12.9	77.9
4.01 to 12	7.5	85.4
12.01 to 52	4.3	89.7
52.01 to 365	8.6	98.6
More than 365	1.6	100.0
Median = 1.4		

Table 4.2 A10(a): Why Don't You Change Prices More Frequently Than That? (n = 196 Responses from 151 Firms)

Response	Number of Firms
It would antagonize or cause difficulties for our customers	41
Competitive pressures	28
Costs of changing prices (B8)	28
Our costs do not change more often (B6)	27
Coordination failure, price followership (B10)	15
Explicit contracts fix prices (B1)	14
Custom or habit	11
Regulations	7
Implicit contracts with regular customers (B2)	5
Miscellaneous other reasons	20
Total	196

Table 4.3 Lags in Price Adjustments, in Months

Type of Shock	Mean Lag	Standard Deviation	Number of Responses	Number of "Never Happens"
Increase in demand	2.9	3.2	128	52
Increase in cost	2.8	3.0	163	23
Decrease in demand	2.9	3.7	132	52
Decrease in cost	3.3	3.9	101	73

Table 4.4 Distributions of Lags in Price Adjustment

Lag (in Months)	A13(a) Demand Up	A13(c) Cost Up	A13(b) Demand Down	A13(d) Cost Down
Zero	22.7%	23.9%	18.9%	22.8%
0.1 to 1.0	19.5	20.9	29.5	22.8
1.1 to 3.0	25.8	22.1	22.0	17.8
3.1 to 6.0	21.1	23.3	16.7	20.8
Above 6	10.9	9.8	12.9	15.8
Median (months)	2.0	1.5	1.2	2.0

Table 4.5 Mean Lags in Price Adjustment, by Industry, in Months

Industry	A13(a) Demand Up	A13(c) Cost Up	A13(b) Demand Down	A13(d) Cost Down
Manufacturing	3.0	3.2	2.5	4.1
Services	3.4	3.6	3.4	4.8
Trade	2.3	0.9	2.0	1.4
Construction and mining	2.4	1.8	3.8	2.0
Transportation, communications, and utilities	3.0	4.2	3.2	5.0

Table 4.6 Correlations Among Alternative Measures of Price Stickiness

	A10	A13(a)	A13(b)	A13(c)	A13(d)
A10	1.00	−.18	−.18	−.14	−.21
A13(a)		1.00	.64	.58	.46
A13(b)			1.00	.42	.50
A13(c)				1.00	.73

Table 4.7 Interval Between Periodic Price Reviews (n = 121 Responses)

Interval	Percentage of Firms
Daily	5.8%
Weekly	5.8
Between a week and a month	14.0
Two to three months	13.2
Six months	16.5
Yearly	44.6

Table 4.8 A10(b): When You Do Raise or Lower Prices, Do You Normally Do It All at Once or in a Series of Smaller Changes? (n = 198 Responses)

Response	Percentage of Firms
Normally all at once	74.0%
It varies	9.6
Normally in small steps	16.4

Table 4.9 Share of Sales Under Written Contracts (n = 195 Responses)

Type of Customer	Percentage of Firms					
	All	Manufacturing	Services	Trade	Construction and Mining	Transportation, Communications, and Utilities
None or almost none (0–10%)	37.4%	38.8%	30.2%	67.6%	23.8%	5.9%
A minority (10–40%)	24.4	26.9	17.9	21.6	23.8	41.2
About half (40–60%)	8.2	10.4	6.6	5.4	14.3	2.9
A majority (60–90%)	15.1	13.4	18.9	2.7	19.0	32.4
Almost all (90–100%)	14.9	10.4	26.4	2.7	19.0	17.6

Table 4.10 A8(a). Do These Contracts Normally Set Prices for a Stated Period of Time? (n = 127 Responses)

Response	Percentage of Firms
Rarely or never	13.4%
Sometimes	8.3
Most of the time	11.8
Always or almost always	66.5

Table 4.11 Distribution of Sales Among Customers, by Sector

Type of Customer	Percentage of Sales					
	All	Manufacturing	Services	Trade	Construction and Mining	Transportation, Communications, and Utilities
Consumers	20.8%	6.4%	40.6%	30.5%	13.9%	16.8%
Businesses	70.4	86.7	57.4	62.6	53.6	75.9
Other[a]	8.7	6.9	2.0	6.5	32.1	7.3

[a] Principally government.

Table 4.12 Share of Sales Made to Regular Customers, by Sector

	Percentage of Sales				
Range	All	Manufac-turing	Services	Wholesale Trade	Retail Trade
50% or less	10.7%	4.3%	15.1%	0.0%	23.5%
50.1 to 90%	34.5	28.6	43.4	25.0	52.9
90.1 to 99.9%	24.4	25.7	20.8	40.0	11.8
100%	30.5	41.4	20.8	35.0	11.8
Mean share	85.2	91.6	80.4	93.9	71.2

Table 4.13 Estimated Price Elasticity of Demand (n = 159 Responses)

Elasticity	Percentage of Firms
Zero	40.6%
0.1 to 0.5	28.8
0.51 to 1.0	14.4
1.01 to 2.0	8.8
2.01 to 5.0	5.0
Above 5.0	2.5
Mean = 1.10 Median = .25	

Table 4.14 Percentage of Costs That Are Fixed (n = 182 Responses)

Percentage Fixed	Percentage of Firms
20 or less	24.7%
20.1 to 40	27.5
40.1 to 60	22.5
60.1 to 80	17.0
Above 80	8.2
Mean = 43.9% (std. dev. = 25.4%)	
Median = 40.0%	

Table 4.15 Percentage of Output Produced to Stock

Percentage to Stock	Percentage of Firms in All Industries	Durable Manufacturing	Nondurable Manufacturing	Trade
Zero	15.6%	22.5%	13.0%	5.9%
0.1 to 25	21.1	27.5	21.7	5.9
25.1 to 50	11.0	17.5	8.7	8.8
50.1 to 75	8.3	5.0	4.3	14.7
75.1 to 99.9	26.6	20.0	17.4	41.2
100	17.4	7.5	34.8	23.5
n	109	40	23	34
Mean	54.4%	38.8%	58.4%	77.6%
Std. dev.	40.1	37.8	42.5	29.4
Median	60.0	27.5	80.0	90.0

Summary of Selected Factual Results

Price Policy	
Median number of price changes in a year	1.4
Mean lag before adjusting price months following	
Demand Increase	2.9
Demand Decrease	2.9
Cost Increase	2.8
Cost Decrease	3.3
Percent of firms which	
Report annual price reviews	45
Change prices all at once	74
Change prices in small steps	16
Have nontrivial costs of adjusting prices of which related primarily to	43
the frequency of price changes	69
the size of price changes	14
Sales	
Estimated percent of GDP sold under contracts which fix prices	28
Percent of firms which report implicit contracts	65
Percent of sales which are made to	
Consumers	21
Businesses	70
Other (principally government)	9
Regular customers	85
Percent of firms whose sales are	
Relatively sensitive to the state of the economy	43
Relatively Insensitive to the state of the economy	39
Costs	
Percent of firms which can estimate costs at least moderately well	87
Mean percentage of costs which are fixed	44
Percentage of firms for which marginal costs are	
Increasing	11
Constant	48
Decreasing	41

Table 5.1 The Twelve Theories

Theory Number and Name		Brief Description
B1	Nominal contracts	Prices are fixed by contracts.
B2	Implicit contracts	Firms tacitly agree to stabilize prices, perhaps out of "fairness" to customers.
B3	Judging quality by price	Firms fear customers will mistake price cuts for reductions in quality.
B4	Pricing points	Certain prices (like $9.99) have special psychological significance.
B5	Procyclical elasticity	Demand curves become less elastic as they shift in.
B6	Cost-based pricing	Price rises are delayed until costs rise, and these delays cumulate through a multi-stage production process.
B7	Constant MC	MC is flat and markups are constant.
B8	Costly price adjustment	Firms incur costs of changing prices.
B9	Hierarchy	Hierarchical delays slow down decisions.
B10	Coordination failure	Firms hold back on price changes, waiting for other firms to go first.
B11	Inventories	Firms vary inventory stocks instead of prices.
B12	Nonprice competition	Firms vary nonprice elements such as delivery lags, service, or quality.

Table 5.2 Ratings of the Twelve Theories: Full Sample

(1) Rank	(2) Theory	(3) Name	(4) Mean Score	(5) s.d.	(6) *t*-stat[a]	(7) Accept Rate	(8) Premise?
1	B10	Coordination failure	2.77	1.25	1.0	61.9%	100.0%
2	B6	Cost-based pricing	2.66	1.26	0.6	56.8	100.0
3	B12	Nonprice competition	2.58	1.20	1.6	56.9	77.0
4	B2	Implicit contracts	2.40	1.26	2.1**	51.0	64.5
5	B1	Nominal contracts	2.11	1.25	1.8*	37.2	65.1
6	B8	Costly price adjustment	1.89	1.18	0.4	31.0	64.3
7	B5	Procyclical elasticity	1.85	1.07	0.8	31.3	58.5
8	B4	Pricing points	1.76	1.04	1.8*	25.0	50.8
9	B7	Constant MC	1.57	1.03	0.1	19.7	48.4
10	B11	Inventories	1.56	0.97	1.9*	21.4	86.5[b]
11	B9	Hierarchy	1.41	0.87	1.2	14.1	100.0
12	B3	Judging quality by price	1.33	0.77	—	10.5	21.5

[a] This is the test statistic for the hypothesis that the mean score is significantly greater than that in the row below.

[b] The question was not asked of firms producing services. Thus 86.5 percent is the percentage of these firms that report holding inventories of finished goods.

* denotes significant at the 10 percent level

** denotes significant at the 5 percent level.

Table 5.3 Ratings of the Twelve Theories, by Industry

Rank	Manufacturing (n = 70)		Services (n = 37)		Trade (n = 54)		Construction and Mining (n = 22)		Transportation, Commu-nications, and Utilities (n = 17)	
1	B12	(2.66)	B10	(3.09)	B10	(2.87)	B6	(3.00)	B6	(3.03)
2	B10	(2.63)	B6	(3.08)	B12	(2.68)	B1	(2.82)	B10	(2.76)
3	B2	(2.61)	B12	(2.51)	B1	(2.38)	B10	(2.45)	B1	(2.71)
4	B6	(2.51)	B2	(2.40)	B2	(2.32)	B12	(2.26)	B12	(2.44)
5	B8	(2.09)	B7	(2.19)	B6	(2.29)	B2	(2.02)	B2	(2.29)
6	B5	(2.01)	B4	(1.93)	B8	(2.13)	B7	(1.73)	B8	(2.03)
7	B1	(1.96)	B5	(1.88)	B4	(1.90)	B5	(1.57)	B9	(1.91)
8	B4	(1.74)	B8	(1.54)	B5	(1.76)	B11	(1.50)	B5	(1.80)
9	B11	(1.56)	B11	(1.48)	B3	(1.61)	B4	(1.39)	B7	(1.76)
10	B9	(1.49)	B1	(1.32)	B9	(1.48)	B3	(1.09)	B4	(1.47)
11	B7	(1.31)	B3	(1.20)	B7	(1.35)	B9	(1.09)	B3	(1.29)
12	B3	(1.27)	B9	(1.12)			B8	(1.09)		

Table 5.4 Rank Correlations of the Rankings in Table 5.3

	Trade	Services	Construction and Mining	Transportation, Commu- nications, and Utilities
Manufacturing	.74	.87	.60	.76
Trade		.56	.66	.54
Services			.67	.78
Construction and mining				.83

Table 5.5 Ratings of the Theories, by Cyclical Sensitivity

Rank	Total Sample (n = 200)		Relatively Insensitive (n = 83)		Relatively Sensitive (n = 88)	
1	B10	(2.77)	B10	(2.75)	B10	(2.80)
2	B6	(2.66)	B6	(2.70)	B6	(2.59)
3	B12	(2.58)	B12	(2.69)	B12	(2.52)
4	B2	(2.40)	B2	(2.46)	B2	(2.35)
5	B1	(2.11)	B8	(2.13)	B1	(2.16)
6	B8	(1.88)	B1	(2.09)	B5	(1.84)
7	B5	(1.85)	B5	(1.95)	B4	(1.81)
8	B4	(1.76)	B4	(1.73)	B8	(1.69)
9	B7	(1.57)	B7	(1.61)	B7	(1.53)
10	B11	(1.56)	B9	(1.46)	B11	(1.52)
11	B9	(1.41)	B11	(1.38)	B3	(1.36)
12	B3	(1.33)	B3	(1.37)	B9	(1.32)

Table 5.6 Ratings of the Theories, by Degree of Price Stickiness

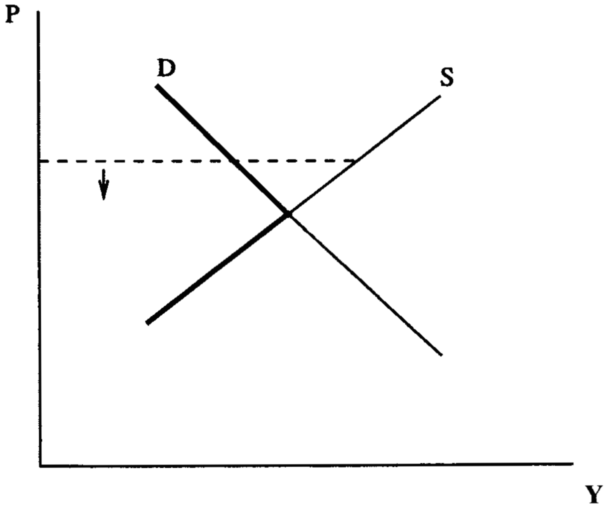
Rank	Total Sample (n = 200)	Relatively Sticky (n = 100)	Relatively Flexible (n = 100)
1	B10 (2.77)	B12 (2.84)	B10 (2.75)
2	B6 (2.66)	B10 (2.79)	B6 (2.73)
3	B12 (2.58)	B2 (2.61)	B12 (2.32)
4	B2 (2.40)	B6 (2.59)	B2 (2.18)
5	B1 (2.11)	B1 (2.27)	B1 (1.96)
6	B8 (1.88)	B8 (2.10)	B4 (1.75)
7	B5 (1.85)	B5 (1.96)	B5 (1.74)
8	B4 (1.76)	B4 (1.77)	B8 (1.68)
9	B7 (1.57)	B11 (1.63)	B7 (1.59)
10	B11 (1.56)	B9 (1.60)	B11 (1.52)
11	B9 (1.41)	B7 (1.55)	B3 (1.26)
12	B3 (1.33)	B3 (1.41)	B9 (1.22)
Memo			
Overall mean	2.01	2.11	1.90

Table 5.7 Associations Among the Theories[a]

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
B1	—	**−.24**	−.06	**−.19**	−.05	−.06	**−.20**	−.06	**.28**	**.14**	−.08	**−.14**
B2	.01	—	−.10	.00	**.18**	.08	.15	**.19**	.02	**−.17**	.01	**.19**
B3			—	**.41**	.14	−.19	−.25	.10	**.31**	−.12	−.03	**.33**
B4	.10*		.00	—	−.01	−.05	−.13	.13	.09	**.17**	**−.29**	.09
B5		.01			—	−.06	.14	−.03	.03	.06	−.03	**.21**
B6						—	**.34**	−.14	.02	.01	−.10	.02
B7						.00	—	.12	−.14	−.08	.12	.06
B8		.02				.08		—	**.33**	.09	**.26**	.07
B9	.01							.01	—	−.03	**.35**	**.18**
B10	.08*	.05	.07*	.05						—	.13	**−.13**
B11								.03	.02		—	.07
B12	.07*	.01	.00		.01							—

[a] The Goodman-Kruskal gamma is above the diagonal and the *p*-value from ordered probit is below the diagonal. Values of the Goodman-Kruskal gamma with asymptotic *p*-value smaller than .10 are in boldface. Only the ordered probit *p*-values that are smaller than .10 are shown. The nonlinearity of the ordered probit model implies that it matters which variable is the dependent variable. Values marked with * indicate that the alternative ordering gives a probability value greater than .10.

Figure 6.1 Predetermined Price Level



P = price
Y = output
D = demand
S = supply

Table 6.1 B1. How Important Are Nominal Contracts in Slowing Down Price Adjustments? (n=199 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant	49.5%
2	Of minor importance	13.3
3	Moderately important	13.6
4	Very important	23.6

Mean response = 2.11 (mean if > 1 = 3.19)
Rank = 5th

Table 6.2 The Importance of Nominal Contracts in Price Stickiness, by Sector (n=199 Responses)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant	53.6%	75.7%	43.5%	31.8%	17.6%
2	Of minor importance	14.5	18.9	10.2	4.5	17.6
3	Moderately important	14.5	2.7	11.1	13.6	41.2
4	Very important	17.4	2.7	35.2	50.0	23.5
	Mean response	1.96	1.32	2.38	2.82	2.71
	Rank	7th	10th	3rd	2nd	3rd

Table 6.3 Bivariate Correlates of the Importance of Nominal Contracts

Description	Variable Name	Question	Expected Sign	Correlation
General correlates of price stickiness				
Industry	INDUSTRY	—	undefined	$\chi^2_{24} = 61.7$ (p = .00)
Marginal cost	FLATMC	B7(a)	+	t = −0.9 (p = .38)
Fraction of costs that are variable	MCPCT	A12(b)	+	t = −1.8 (p = .08)
Elasticity of demand	ELAST	A4	−	t = −1.4 (p = .15)
Cyclically sensitive	CYCLICAL	A6	−	γ = .05 (p = .58)
Price stickiness	STICKY	A10, A13	+	t = 2.2 (p = .03)
Predicted correlates of this theory				
Implicit contracts	IMPLICIT	B2(a)	−	γ = −.23 (p = .04)
Fraction of sales under contract	WRITTEN	A8	+	γ = .67 (p = .00)
Fraction of sales to consumers	CONSUMER	A2(a)	−	t = −3.6 (p = .00)
Fraction produced to stock	STOCK	A15(a)	−	t = −3.3 (p = .00)
Has costs of price adjustments	ADJCOSTS	B8(a)	+	γ = −.11 (p = .26)
Fraction sold to regular customers	REGULARS	A3	+	t = 1.4 (p = .18)
Cost increases can be foreseen	FORESEEN	B6(d)	+	γ = .19 (p = .17)
Other correlates				
Fraction of sales to others (gov't)	GOVT	A2(c)	?	t = 3.4 (p = .00)
Unionization rate in industry	UNION		?	t = 1.7 (p = .09)
Index of coincident indicators	CYCLE		?	t = 2.0 (p = .04)

Table 6.4 The Behavior of Discounts When Sales Are Weak

Code	Response	Percentage of Firms Responding	
		More Prevalent? (n=100)	Deeper? (n=100)
1	No	68.5%	73.0%
2	Yes, a little	14.0	13.0
3	Yes, much more	17.5	14.0
	Mean response	1.49	1.41

Table 7.1 B2. How Important Are Implicit Contracts in Slowing Down Price Adjustments in Your Company? (n = 196 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	39.3%
2	Of minor importance	9.7
3	Moderately important	22.7
4	Very important	28.3

Mean response = 2.40
Mean if B2(a) = yes: 3.16 (n = 126)
Rank = 4th

[a] This category includes firms that answered "no" to question B2(a).

Table 7.2 The Importance of Implicit Contracts in Price Stickiness, by Sector (n = 196)

Code	Response	Percentage of Firms: Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant[a]	29.7%	36.1%	44.2%	56.8%	47.1%
2	Of minor importance	10.9	19.4	5.8	2.3	5.9
3	Moderately important	28.3	12.5	24.0	22.7	17.7
4	Very important	31.2	31.9	26.0	18.2	29.4
	Mean response	2.61	2.40	2.32	2.02	2.29
	Sample size	69	36	52	22	17
	Mean if B2(a)=yes	3.13	3.06	3.33	2.88	3.44
	Sample size	52	24	29	12	9
	Rank	3rd	4th	4th	5th	5th

[a] This category includes firms that answered "no" to question B2(a).

Table 7.3 B2(c). When Costs Increase, Our Customers Normally . . . (n = 111 Responses)

Code	Response	Percentage of Firms
1	Still want us to hold our prices	15.3%
2	Attitudes are mixed	13.5
3	Tolerate price increases	71.2
Mean response = 2.56		

Table 7.4 B2(e). When Our Costs Decline, Our Customers Normally . . . (n = 88 Responses)

Code	Response	Percentage of Firms
1	Let us keep prices fixed	34.1%
2	Attitudes are mixed	15.3
3	Insist on price decreases	50.6

Mean response = 2.16

Table 7.5 A13. How Much Time Normally Elapses After a Significant [Increase/Decrease] in [Demand/Cost] Before You [Raise/Reduce] Your Prices?

Question	Type of Shock	Mean Lag (Months)	# of Observations
A13(a)	Demand up	3.2	80
A13(c)	Cost up	2.9	105
A13(b)	Demand down	3.3	80
A13(d)	Cost down	3.4	63

Table 7.6 Bivariate Correlates of the Existence and Importance of Implicit Contracts

Description	Variable Name	Question	Expected Sign	Correlation with Importance (B2)		Correlation with Existence (B2[a])	
General correlates of price stickiness							
Industry	INDUSTRY	—	undefined	$\chi_{24}^2 = 28.1$	(p = .26)	$\chi_8^2 = 10.2$	(p = .26)
Marginal cost	FLATMC	B7(a)	+	t = 0.1	(p = .94)	t = 0.4	(p = .17)
Fraction of costs that are variable	MCPCT	A12(b)	+	t = 0.1	(p = .98)	t = 0.3	(p = .80)
Elasticity of demand	ELAST	A4	?	t = 1.2	(p = .22)	t = 0.8	(p = .45)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.02$	(p = .85)	$\gamma = -.11$	(p = .37)
Price stickiness	STICKY	A10, A13	+	t = 1.8	(p = .07)	t = 1.8	(p = .07)
Predicted correlates of this theory							
Fraction sold to regular customers	REGULARS	A3	+	t = 1.0	(p = .30)	t = 0.1	(p = .91)
Fraction of sales to consumers	CONSUMER	A2(a)	−	t = 0.6	(p = .55)	t = 0.5	(p = .63)
Lose least loyal customers first?	LOYAL	B5(a)	+	$\gamma = .20$	(p = .07)	$\gamma = .39$	(p = .00)
Fraction of sales under contract	WRITTEN	A8	−	$\gamma = -.17$	(p = .04)	$\gamma = -.21$	(p = .05)
Customary interval for price reviews	INTERVAL	A9	+	$\gamma = .16$	(p = .11)	$\gamma = .20$	(p = .12)
Prices based on costs	COSTS	B6	+	$\gamma = .08$	(p = .29)	$\gamma = .17$	(p = .11)
Has costs of price adjustment	ADJCOSTS	B8(a)	+	$\gamma = .21$	(p = .02)	$\gamma = .22$	(p = .06)
Has costs of adjusting output	ADJCOSTQ	B8(j)	−	$\gamma = .14$	(p = .32)	$\gamma = .39$	(p = .03)
Other correlates							
Sales-inventory ratio	S/I	A16	?	t = 1.8	(p = .07)	t = 1.0	(p = .30)
Firms adjust nonprice elements	NONPRICE	B12(a)	?	$\gamma = .24$	(p = .08)	$\gamma = .42$	(p = .00)
Log of firm's annual sales	SIZE	ln(A1)	?	t = −1.5	(p = .15)	t = −2.2	(p = .03)

Table 8.1 B3. How Important Is Judging Quality by Price in Discouraging or Delaying Price Decreases in Your Company? (n = 200 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	81.5%[a]
2	Of minor importance	8.0
3	Moderately important	6.3
4	Very important	4.3

Mean response = 1.33
Mean if quality is judged by price: 2.56 (n = 42)
Rank = 12th

[a] This category includes firms that said that their customers do not judge quality by price by answering "no" to question B3(a).

Table 8.2 B3(b). Does Judging Quality by Price Apply When Demand Declines or When Costs Decline? (n = 36 Responses)

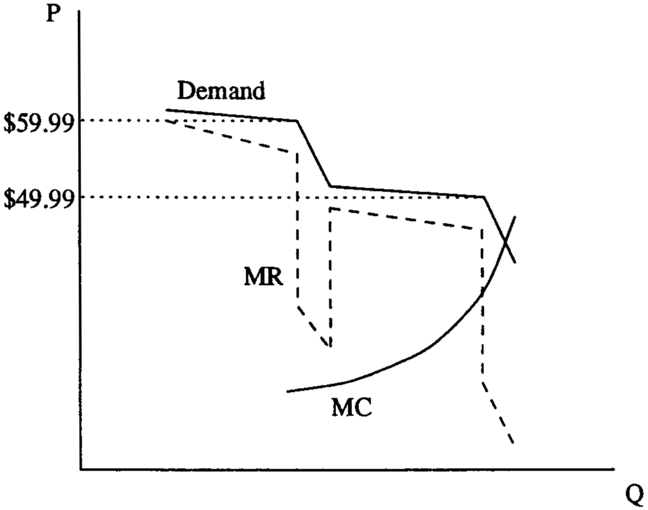
Code	Response	Percentage of Firms
1	Applies only to weak demand	31.9%
2	Applies to both	59.7
3	Applies only to lower costs	8.3

Mean response = 1.76

Table 8.3 Bivariate Correlates of the Importance of Judging Quality by Price

Description	Variable Name	Question	Expected Sign	Correlation
General correlates of price stickiness				
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 19.9$ ($p = .47$)
Marginal cost	FLATMC	B7(a)	+	$t = -.7$ ($p = .46$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = -1.2$ ($p = .23$)
Elasticity of demand	ELAST	A4	−	$t = -1.0$ ($p = .34$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.01$ ($p = .94$)
Price stickiness	STICKY	A10, A13	+	$t = 2.1$ ($p = .04$)
Predicted correlates of this theory				
Fraction of sales to consumers	CONSUMER	A2(a)	+	$t = 2.1$ ($p = .04$)
Fraction of sales to businesses	BUSINESS	A2(b)	−	$t = -2.4$ ($p = .02$)
Fraction sold to regular customers	REGULARS	A3	−	$t = -2.5$ ($p = .01$)
Fraction produced to stock	STOCK	A15(a)	+	$t = 1.9$ ($p = .06$)
Pricing points	POINTS	B4(a)	+	$\gamma = .56$ ($p = .00$)
Frequency of price changes	FREQ	A10	−	$t = -1.1$ ($p = .26$)
Lose least loyal customers first?	LOYAL	B5(a)	−	$\gamma = .16$ ($p = .36$)
Firms adjust nonprice elements	NONPRICE	B12(a)	?	$\gamma = .28$ ($p = .18$)
Other correlates				
Economic outlook affects prices	OUTLOOK	A7(a)	?	$\gamma = .26$ ($p = .08$)
Inflation outlook affects prices	INFLATION	A7(b)	?	$\gamma = .30$ ($p = .02$)
Unionization rate in industry	UNION	−	?	$t = -1.7$ ($p = .09$)

Figure 9.1 Pricing Points



P = price
Q = quantity
MR = marginal revenue
MC = marginal cost

Table 9.1 B4. How Important Are Threshold Prices in Deterring Price Increases in Your Company? (n = 200 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	59.5%
2	Of minor importance	15.5
3	Moderately important	15.0
4	Very important	10.0

Mean response = 1.76

Mean among those having threshold prices: 2.49 (n = 102)

Rank = 8th

[a] This category includes firms that said they do not have threshold prices by answering no to question B4(a).

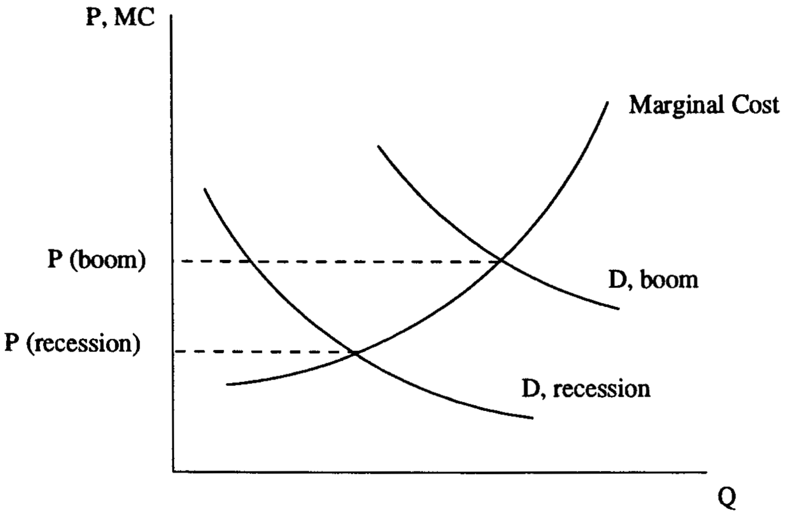
Table 9.2 B4(d). Do Thresholds Also Deter Small Price Decreases When Demand or Costs Fall? (n = 78)

1 = rarely or never	48.7%
2 = sometimes	22.4
3 = always or almost always	28.8
Mean response = 1.80	

Table 9.3 Bivariate Correlates of the Existence and Importance of Pricing Points

Description	Variable Name	Question	Expected Sign	Correlation with Importance (B4)		Correlation with Existence (B4[a])	
General correlates of price stickiness							
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 37.1$	(p = .01)	$\chi_8^2 = 14.5$	(p = .07)
Marginal cost	FLATMC	B7(a)	+	t = 0.0	(p = .97)	t = 0.9	(p = .35)
Fraction of costs that are variable	MCPCT	A12(b)	+	t = −0.2	(p = .83)	t = −1.0	(p = .32)
Elasticity of demand	ELAST	A4	−	t = 2.0	(p = .04)	t = 1.9	(p = .06)
Cyclically sensitive	CYCLICAL	A6	−	γ = .02	(p = .83)	γ = −.06	(p = .61)
Price stickiness	STICKY	A10, A13	+	t = 1.0	(p = .34)	t = 0.0	(p = .99)
Predicted correlates of this theory							
Fraction of sales to consumers	CONSUMER	A2(a)	+	t = 4.9	(p = .00)	t = 5.2	(p = .00)
Fraction of sales to businesses	BUSINESS	A2(b)	−	t = −4.0	(p = .00)	t = −4.8	(p = .00)
Fraction sold to regular customers	REGULARS	A3	−	t = −2.5	(p = .01)	t = −3.2	(p = .00)
Quality depends on price	QUALITY	B3(a)	+	γ = .39	(p = .00)	γ = .53	(p = .00)
Fraction of sales under contract	WRITTEN	A8	−	γ = −.21	(p = .02)	γ = −.16	(p = .10)
Other correlates							
Has costs of price adjustment	ADJCOSTS	B8(a)	?	γ = .25	(p = .01)	γ = .23	(p = .04)
Economic outlook affects prices	OUTLOOK	A7(a)	?	γ = −.02	(p = .85)	γ = −.25	(p = .06)
Inflation forecasts affect prices	INFLATION	A7(b)	?	γ = −.11	(p = .31)	γ = −.19	(p = .08)
Fraction produced to stock	STOCK	A15(a)	?	t = 1.7	(p = .10)	t = 2.2	(p = .03)
Unionization rate in industry	UNION	–	?	t = −2.1	(p = .04)	t = −2.6	(p = .01)
Concentration ratio	CONC	–	?	t = −0.8	(p = .44)	t = −2.7	(p = .01)

Figure 10.1 A Simple View of Procyclical Prices



P = price
Q = quantity
MC = marginal cost
D = demand

Table 10.1 B5. How Important Is Procyclical Elasticity in Slowing Down Price Adjustments in Your Company? (n = 195 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	55.9 %
2	Of minor importance	12.8
3	Moderately important	21.5
4	Very important	9.7

Mean response = 1.85
Mean if B5(a) = "yes" 2.46 (n = 114)
Rank = 7th

[a] This category includes firms that answered "no" to question B5(a).

Table 10.2 The Importance of Procyclical Elasticity in Price Stickiness, by Sector (n = 195 Responses)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant[a]	52.2%	50.0%	59.3%	61.9%	66.7%
2	Of minor importance	11.6	15.3	13.9	19.0	0.0
3	Moderately important	19.6	31.9	18.5	19.0	20.0
4	Very important	16.7	2.8	8.3	0.0	13.3
	Mean response	2.01	1.88	1.76	1.57	1.80
	Rank	6th	7th	8th	7th	8th

[a] This category includes firms that answered "no" to question B5(a)

Table 10.3 B5(c). How Important Is Procyclical Elasticity in Slowing Down Price Increases? (n = 108 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant	46.8%
2	Of minor importance	16.2
3	Moderately important	23.6
4	Very important	13.4

Mean response = 2.04

Table 10.4 Bivariate Correlates of the Existence and Importance of Procyclical Demand Elasticity

Description	Variable Name	Question	Expected Sign	Correlation with B5 (Importance)	Correlation with B5(a) (Existence)
General correlates of price stickiness					
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 18.9$ ($p = .53$)	$\chi_4^2 = 1.2$ ($p = .88$)
Marginal cost	FLATMC	B7(a)	+	$\gamma = -.04$ ($p = .75$)	$\gamma = -.05$ ($p = .76$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = -1.4$ ($p = .15$)	$t = -0.4$ ($p = .66$)
Elasticity of demand	ELAST	A4	−	$t = 0.0$ ($p = 1.0$)	$t = -0.1$ ($p = .96$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.08$ ($p = .39$)	$\gamma = -.32$ ($p = .00$)
Price stickiness	STICKY	A10, A13	+	$t = 1.2$ ($p = .25$)	$t = 1.4$ ($p = .16$)
Predicted correlates of this theory					
Implicit contracts	IMPLICIT	B2(a)	+	$\gamma = .40$ ($p = .00$)	$\gamma = .39$ ($p = .00$)
Fraction sold to regular customers	REGULARS	A3	+	$t = -0.4$ ($p = .70$)	$t = -0.0$ ($p = .98$)
Prices based on costs	COSTS	B6	−	$\gamma = -.06$ ($p = .52$)	$\gamma = -.13$ ($p = .21$)
How well can MC be measured	ACCURACY	A11	−	$\gamma = .03$ ($p = .72$)	$\gamma = -.04$ ($p = .76$)
Other correlates					
Log of firm's annual sales	SIZE	ln(A1)	?	$t = -1.5$ ($p = .13$)	$t = -1.9$ ($p = .06$)
Firms adjust nonprice elements	NONPRICE	B12(a)	?	$\gamma = .36$ ($p = .01$)	$\gamma = .22$ ($p = .17$)
Cost increases can be foreseen	FORESEEN	B6(d)	?	$\gamma = -.21$ ($p = .10$)	$\gamma = -.19$ ($p = .29$)

Table 11.1 B6. How Important Is Cost-Based Pricing with Lags in Slowing Down Price Adjustments in Your Company? (n = 200 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant	30.0%
2	Of minor importance	13.3
3	Moderately important	18.0
4	Very important	38.8

Mean response	2.66	
Mean if B6 > 1	3.36	(n = 140)
Rank = 2nd		

Table 11.2 The Importance of Cost-Based Pricing in Price Stickiness, by Sector (n = 200 Responses)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant	35.7%	16.2%	40.7%	18.2%	17.6%
2	Of minor importance	13.6	8.1	14.8	15.9	14.7
3	Moderately important	14.3	27.0	19.4	13.6	14.7
4	Very important	36.4	48.6	25.0	52.3	52.9
	Mean response	2.51	3.08	2.29	3.00	3.03
	Rank	4th	2nd	5th	1st	1st

Table 11.3 Mean Lags in Price Adjustment[a], by Sector (in Months)

Industry	Cost Increases (A13[c])	Cost Decreases (A13[d])
Manufacturing	3.24 (2.74)	4.06 (3.11)
Trade	0.90 (1.62)	1.36 (2.13)
Retail	0.42 (0.90)	1.25 (2.31)
Wholesale	1.27 (1.96)	1.43 (2.08)
Transportation, communication, utilities	4.23 (3.92)	5.02 (3.85)
Services	3.58 (3.03)	4.79 (5.92)
Construction and mining	1.78 (3.14)	2.00 (3.17)
All industries	2.76 (3.00)	3.27 (3.92)

[a] Standard deviations in parentheses

Table 11.4 B6(g). Why Do Not Firms Raise Their Prices in the Face of Anticipated Cost Increases?

	Reason	Number of Responses
1	It would antagonize or cause difficulty for our customers*	31
2	We lack confidence in our cost forecasts*	10
3	We worry that competing firms won't raise their prices*	32
4	Once costs rise, we can raise our prices promptly*	18
5	People who have to sign off on a price increase might not agree*	3
6	Contracts or regulations prohibit anticipatory price hikes	8
7	It is unethical or unfair to our customers	3
8	Other	16
	Total	121

* Represents "stock" answers.

Table 11.5 B6(a). Do Firms Change Prices Faster for Large or for Small Cost Changes? (n = 136 Responses)

Code	Response	Percentage of Firms
1	Faster for small cost changes	6.6%
2	About the same	23.2
3	Faster for large cost changes	70.2

Table 11.6 B6(b). Do Firms Change Prices Faster for Idiosyncratic or Industry-Wide Cost Changes? (n = 128 Responses)

Code	Response	Percentage of Firms
1	Faster for idiosyncratic cost changes	7.8%
2	About the same	15.6
3	Faster for industry-wide cost changes	76.6

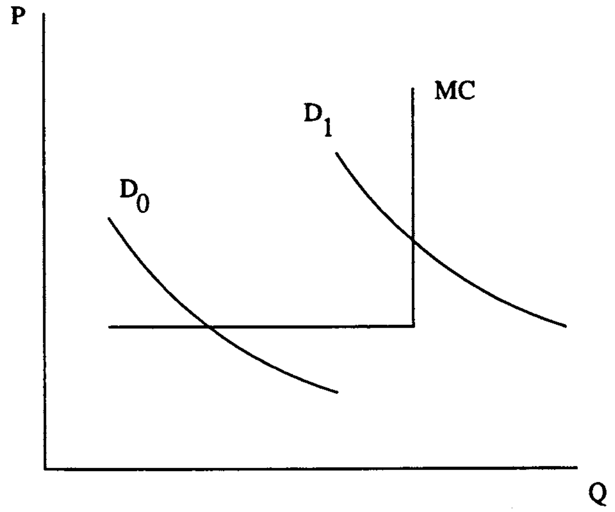
Table 11.7 B6(c). Do Firms Change Prices Faster for Permanent or Transitory Cost Changes? (n = 120 Responses)

Code	Response	Percentage of Firms
1	Faster for transitory cost changes	5.8%
2	About the same	28.3
3	Faster for permanent cost changes	65.8

Table 11.8 Bivariate Correlates of the Importance of Cost-Based Pricing

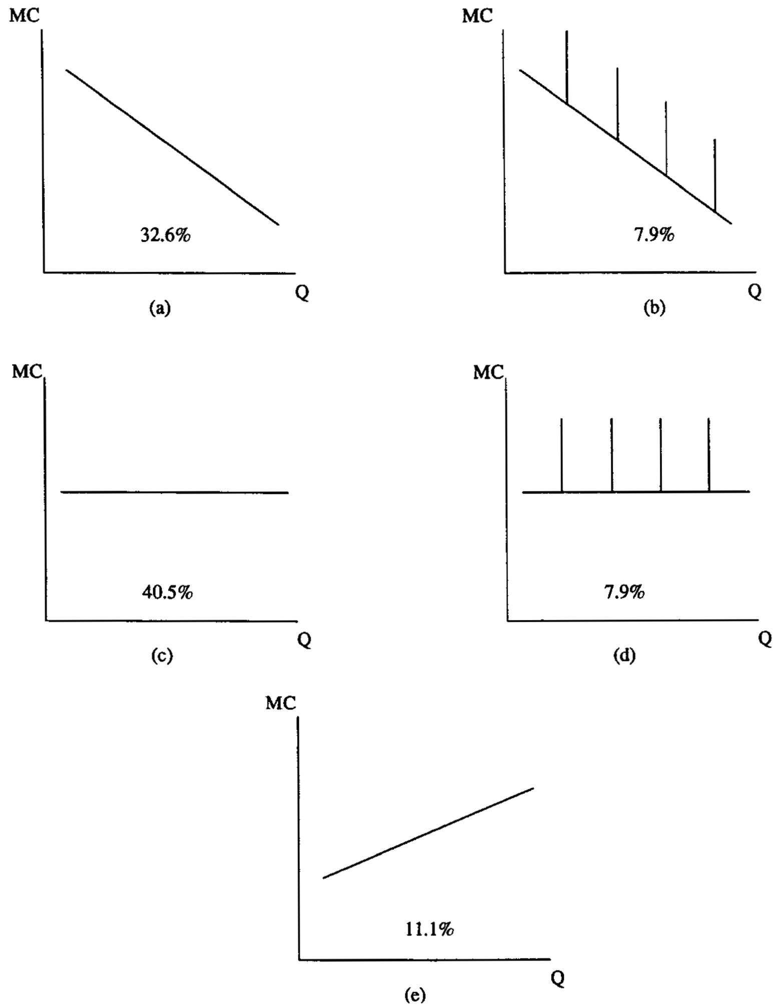
Description	Variable Name	Question	Expected Sign	Correlation with B6
General correlates of price stickiness				
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 24.4$ ($p = .23$)
Marginal cost	FLATMC	B7(a)	+	$\gamma = -.06$ ($p = .59$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = 2.7$ ($p = .01$)
Elasticity of demand	ELAST	A4	−	$t = 1.4$ ($p = .17$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.01$ ($p = .88$)
Price stickiness	STICKY	A10, A13	+	$t = -0.7$ ($p = .47$)
Predicted correlates of this theory				
Implicit contracts	IMPLICIT	B2(a)	+	$\gamma = .17$ ($p = .11$)
Fraction of sales to others (gov't)	GOVT	A2(c)	+	$t = 2.6$ ($p = .01$)
How well can MC be measured	ACCURACY	A11	+	$\gamma = -.11$ ($p = .22$)
Other correlates				
Customers are put on allocation	RATION	A5	?	$\gamma = -.14$ ($p = .12$)
Quality depends on price	QUALITY	B3(a)	?	$\gamma = -.29$ ($p = .01$)
Frequency of price changes	FREQ	A10	?	$t = -1.6$ ($p = .11$)
Sales-to-inventory ratio	S/I	A16	?	$t = -2.0$ ($p = .04$)
Concentration ratio	CONC	—	?	$t = -2.0$ ($p = .05$)
Log of firm's annual sales	SIZE	ln(A1)	?	$t = -3.3$ ($p = .00$)

Figure 12.1 Hall's Presumed Marginal Cost Curve



P = price
Q = quantity
D = demand
MC = marginal cost

Figure 12.2 Possible Marginal Cost Curves



MC = marginal cost
Q = quantity

Table 12.1 B7. How Important Is Constant Marginal Cost in Explaining the Speed of Price Adjustment in Your Company? (n = 190)

Code	Response	All Firms	Percentage of Firms with Flat MC
1	Totally unimportant	73.1%[a]	43.9%
2	Of minor importance	7.2	15.0
3	Moderately important	9.0	18.9
4	Very important	10.6	22.2
	Mean response	1.57	2.19
	Number of responses	190	90
	Rank	9th	

[a] This category includes firms that said MC was not constant by choosing responses 1, 2, or 5 to question B7(a).

Table 12.2 The Importance of Constant MC for Price Stickiness, by Sector

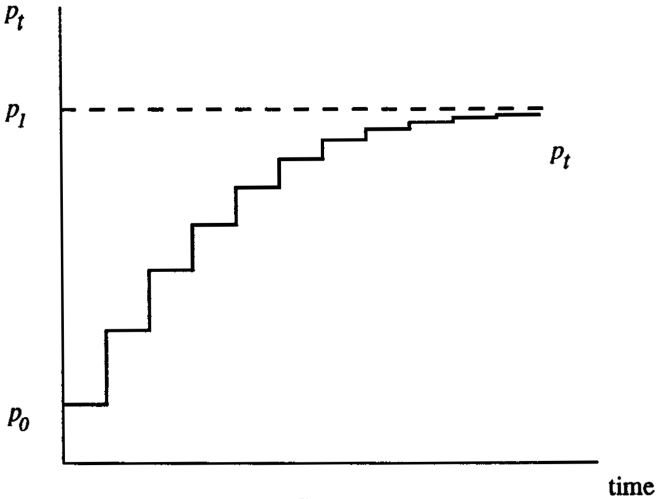
Code	Response	Percentage of Firms: Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant[a]	82.3%	51.4%	81.6%	68.2%	64.7%
2	Of minor importance	8.5	5.7	6.1	4.5	11.8
3	Moderately important	5.4	15.7	8.2	13.6	5.9
4	Very important	3.8	27.1	4.1	13.6	17.6
	Mean response	1.31	2.19	1.35	1.73	1.76
	Sample size	65	35	49	22	17
	Mean if B7(a) = 3 or 4	1.67	3.18	1.74	2.78	2.44
	Sample size	30	19	23	9	9
	Rank	11th	5th	11th	6th	9th

[a] This category includes firms that said MC was not constant by choosing responses 1, 2, or 5 to question B7(a).

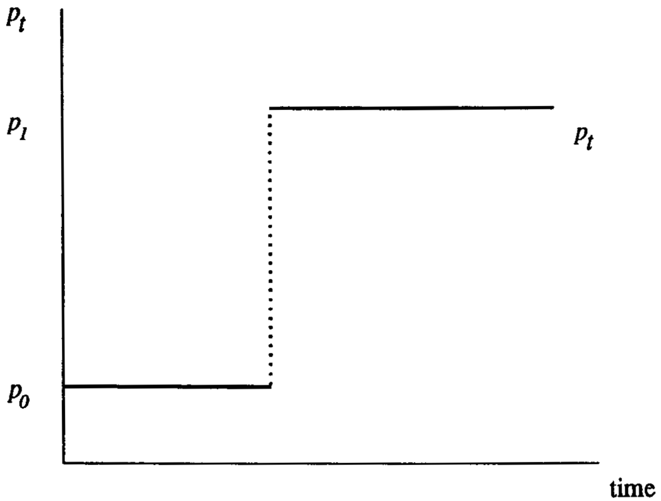
Table 12.3 Bivariate Correlates of the Importance of Flat Marginal Cost

Description	Variable Name	Question	Expected Sign	Correlation with B7	FLATMC	SLOPE
General correlates of price stickiness						
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 26.5$ ($p = .15$)	$\chi_4^2 = 1.2$ ($p = .88$)	$\chi_8^2 = 8.5$ ($p = .38$)
Elasticity of demand	ELAST	A4	?	$t = -0.8$ ($p = .43$)	$t = -1.4$ ($p = .17$)	$t = 1.4$ ($p = .16$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.03$ ($p = .81$)	$\gamma = -.07$ ($p = .55$)	$\gamma = -.07$ ($p = .46$)
Price stickiness	STICKY	A10, A13	+	$t = -0.6$ ($p = .53$)	$t = -0.7$ ($p = .46$)	$t = 0.4$ ($p = .72$)
Predicted correlates of this theory						
Fraction of costs that are variable	MCPCT	A12(b)	−	$t = 0.5$ ($p = .61$)	$t = -1.4$ ($p = .17$)	$t = -0.9$ ($p = .36$)
Prices based on costs	COSTS	B6	+	$\gamma = .34$ ($p = .00$)	$\gamma = -.06$ ($p = .59$)	$\gamma = .01$ ($p = .88$)
Other correlates						
Log of firm's annual sales	SIZE	ln(A1)	?	$t = -2.6$ ($p = .01$)	$t = -0.3$ ($p = .76$)	$t = 0.1$ ($p = .93$)
Some prices regulated	REGULATE	A14	?	$\gamma = -.29$ ($p = .10$)	$\gamma = -.05$ ($p = .78$)	$\gamma = .09$ ($p = .54$)
Implicit contracts	IMPLICIT	B2(a)	?	$\gamma = .27$ ($p = .09$)	$\gamma = .06$ ($p = .70$)	$\gamma = .03$ ($p = .84$)
Holds inventories	INVENTORY	B11(a)	?	$\gamma = .54$ ($p = .00$)	$\gamma = .13$ ($p = .47$)	$\gamma = -.19$ ($p = .27$)
Pricing points	POINTS	B4(a)	?	$\gamma = -.09$ ($p = .55$)	$\gamma = .10$ ($p = .50$)	$\gamma = -.29$ ($p = .02$)
Has costs of price adjustment	ADJCOSTS	B8(a)	?	$\gamma = -.07$ ($p = .58$)	$\gamma = .01$ ($p = .93$)	$\gamma = .20$ ($p = .05$)

Figure 13.1 Price Adjustment with Convex Costs and Menu Costs



a. Convex costs



b. Menu costs

p = price

Table 13.1 B8(a). Does Your Company Have Explicit Costs of Price Adjustment? (n = 200 Responses)

Code	Response	Percentage of Firms
1	No	35.8%
2	Yes, but trivial	21.3
3	Yes	43.0

Mean response = 2.07

Table 13.2 Presence of Explicit Costs of Price Adjustment, by Sector (n = 200 Responses)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	No	18.6%	48.6%	32.4%	86.4%	23.5%
2	Yes, but trivial	26.4	23.0	21.3	4.5	17.7
3	Yes	55.0	28.4	46.3	9.1	58.8
	Mean response	2.36	1.80	2.14	1.23	2.35
	Sample size	70	37	54	22	17

Table 13.3 B8(b). What Is the Nature of Adjustment Costs for Changing Prices in Your Company?

	Type of Cost	Number of Responses
1	Printing new catalogs, new price lists, new packaging, etc.	51
2	Informing salespeople and customers	43
3	Getting the sales force to cooperate	8
4	Decision making time of executives	28
5	Loss of future sales by antagonizing customers	49
Total		179

Table 13.4 B8(c). Do These Costs of Changing Prices Come Mainly from Changing Prices Often or Mainly from Changing Them by Large Amounts? (n = 81 Responses)

Code	Response	Percentage of Firms
1	Mainly from often	69.1%
2	Mainly from large amounts	13.6
3	Both	17.3

Table 13.5 A10(b). When You Do Raise or Lower Prices, Do You Normally Do It All at Once or in a Series of Smaller Changes? (n = 198 Responses)

Code	Response	Percentage of Firms
1	Normally all at once	74.0%
2	It varies	9.6
3	Normally in small steps	16.4

Table 13.6 B8. How Important Are Costs of Changing Prices in Slowing Down Price Adjustments in Your Company? (n = 200 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	59.3%
2	Of minor importance	9.8
3	Moderately important	14.3
4	Very important	16.8

Mean response = 1.89
Mean if B8(a) = "yes" 2.97 (n = 85)
Rank = 6th

[a] This category includes seventy-one firms that answered "no" to question B8(a).

Table 13.7 The Importance of Adjustment Costs in Price Stickiness, by Sector (n = 200 Responses)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant[a]	47.9%	70.3%	53.7%	95.5%	52.9%
2	Of minor importance	13.6	13.5	7.4	0.0	5.9
3	Moderately important	20.0	8.1	11.1	4.5	26.5
4	Very important	18.6	8.1	27.8	0.0	14.7
	Mean response	2.09	1.54	2.13	1.09	2.03
	Rank	5th	8th	6th	12th	6th

[a] This category includes firms that answered "no" to question B8(a).

Table 13.8 B8(d). Do You Incur These Special Costs of Changing Prices When You Decrease Prices as Well? (n = 77 Responses)

Code	Response	Percentage of Firms
1	No	14.3%
2	Yes, but smaller	26.0
3	Yes (about equal)	57.1
4	Yes, even larger	2.6

Mean response = 2.48

Table 13.9 Firms' Reactions to Changes in Demand

B8(f). When Your Demand Rises, Do You Normally Prefer to Raise Your Production, Increase Your Prices, or Both? (n = 78)

Code	Response	Percentage of Firms
1	Prefer to raise production	61.5%
2	Prefer to raise prices	4.5
3	Prefer to raise both	34.0

B8(h). When Your Demand Falls, Do You Normally Prefer to Decrease Your Production, Cut Your Prices, or Both? (n = 76)

Code	Response	Percentage of Firms
1	Prefer to decrease production	36.8%
2	Prefer to decrease prices	27.0
3	Prefer to decrease both	36.2

Table 13.10 Why Do Firms Prefer to Raise Output Rather Than Price When Demand Rises?

	Reason	Number of Responses
1	Some aspect of the cost structure (for example, declining costs)	12
2	Desire to maintain or increase market share	9
3	Competitive pressures make price hikes difficult or impossible	9
4	Don't want to antagonize customers, or want to build future sales	7
5	Menu costs of changing prices	5
6	Implicit contracts	3
7	Fairness	3
8	Other	10
Total		58

Table 13.11 Why Do Firms Prefer to Reduce Output Rather Than Price When Demand Declines?

	Reason	Number of Responses
1	Demand is relatively inelastic	10
2	Some aspect of the cost structure	4
3	Implicit contracts	3
4	Other	12
Total		29

Table 13.12 B8(j). Does Your Company Have Explicit Costs of Output Adjustment? (n = 77 Responses)

Code	Response	Percentage of Firms
1	No	34.4%
2	Yes, but minor	26.6
3	Yes	39.0

Table 13.13 Why Do Firms with Adjustment Costs for Output Change Production Instead of Prices?

	Reason	Number of Responses
1	It is less costly to adjust output than it is to adjust price[17]	18
2	Competition or concern with market share	9
3	Some aspect of the cost structure	4
4	Demand is inelastic	2
5	Implicit contracts	4
6	Other	7
	Total	44

Table 13.14 Bivariate Correlates of the Existence and Importance of Adjustment Costs

Description	Variable Name	Question	Expected Sign	Correlation with B8 (Importance)		Correlation with B8(a) (Existence)	
General correlates of price stickiness							
Industry	INDUSTRY	—	undefined	$\chi^2_{24} = 36.1$	($p = .05$)	$\chi^2_{16} = 44.4$	($p = .00$)
Marginal cost	FLATMC	B7(a)	+	$\gamma = .33$	($p = .00$)	$\gamma = .01$	($p = .93$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = -1.4$	($p = .16$)	$t = -2.2$	($p = .03$)
Elasticity of demand	ELAST	A4	−	$t = -0.1$	($p = .91$)	$t = -0.5$	($p = .62$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.27$	($p = .00$)	$\gamma = -.17$	($p = .06$)
Price stickiness	STICKY	A10, A13	+	$t = 2.1$	($p = .03$)	$t = 2.9$	($p = .00$)
Predicted correlates of this theory							
Economic outlook affects prices	OUTLOOK	A7(a)	+	$\gamma = .12$	($p = .28$)	$\gamma = .25$	($p = .02$)
Inflation outlook affects prices	INFLATION	A7(b)	+	$\gamma = .21$	($p = .02$)	$\gamma = .31$	($p = .00$)
Psychological pricing points	POINTS	B4(a)	+	$\gamma = .22$	($p = .05$)	$\gamma = .23$	($p = .04$)
Fraction produced to stock	STOCK	A15(a)	+	$t = 1.5$	($p = .13$)	$t = 1.9$	($p = .06$)
Hierarchy slows pricing decisions	HIERARCHY	B9	+	$\gamma = .33$	($p = .00$)	$\gamma = .29$	($p = .02$)
Inventories slow price changes	BUFFERS	B11	+	$\gamma = .26$	($p = .09$)	$\gamma = .08$	($p = .62$)

Firm holds inventories	INVENTORY	B11(a)	+	γ = .28	(p = .06)	γ = .19	(p = .20)
Customary interval for price reviews	INTERVAL	A9	+	γ = .30	(p = .01)	γ = .37	(p = .00)
Implicit contracts	IMPLICIT	B2(a)	+	γ = .22	(p = .07)	γ = .22	(p = .06)
Some prices regulated	REGULATE	A14	+	γ = .21	(p = .11)	γ = .31	(p = .01)
Fraction of sales to consumers	CONSUMER	A2(a)	+	t = 1.4	(p = .16)	t = 1.7	(p = .09)
Fraction of sales to others (gov't)	GOVT	A2(c)	−	t = −1.7	(p = .08)	t = −1.8	(p = .07)
Log of firm's annual sales	SIZE	ln(A1)	+	t = 2.9	(p = .00)	t = 2.5	(p = .01)
Other correlates							
Frequency of price changes	FREQ	A10	?	t = −2.6	(p = .01)	t = −2.3	(p = .02)
Has costs of adjusting output	ADJCOSTQ	B8(j)	?	γ = .32	(p = .01)	γ = .48	(p = .06)
Index of coincid. indicators	CYCLE	—	?	t = 2.3	(p = .02)	t = 2.5	(p = .01)
Customers are put on allocation	RATION	A5	?	γ = .16	(p = .07)	γ = .13	(p = .19)
Lose least loyal customers first	LOYAL	B5(a)	?	γ = −.20	(p = .09)	γ = −.09	(p = .48)
Prices based on costs	COSTS	B6	?	γ = −.14	(p = .11)	γ = .02	(p = .81)
Cost increases can be foreseen	FORESEEN	B6(d)	?	γ = .29	(p = .07)	γ = .37	(p = .00)

Table 14.1 B9. How Important Is Hierarchy in Slowing Down Price Adjustments in Your Company? (n = 199 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant	78.9%
2	Of minor importance	7.0
3	Moderately important	8.3
4	Very important	5.8

Mean response = 1.41
Rank = 11th

Table 14.2 The Importance of Hierarchy in Slowing Down Price Adustment, by Sector (n = 199)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant	77.1%	89.2%	75.5%	95.5%	52.9%
2	Of minor importance	4.3	9.5	7.5	0.0	20.6
3	Moderately important	11.4	1.4	10.4	4.5	8.8
4	Very important	7.1	0.0	6.6	0.0	17.6
	Mean response	1.49	1.12	1.48	1.09	1.91
	Sample size	70	37	53	22	17
	Rank	10th	12th	10th	11th	7th

Table 14.3 The Importance of Hierarchy in Slowing Down Price Adjustment, by Firm Size

		Annual Sales		
Code	Response	Less than $1 billion	$1–10 billion	More than $10 billion
1	Totally unimportant	83.7%	74.6%	50.0%
2	Of minor importance	4.5	11.9	8.3
3	Moderately important	8.1	7.1	16.7
4	Very important	3.7	6.4	25.0
	Mean response	1.32	1.45	2.17
	Sample size	123	63	12
	Rank	12th	10th	6th

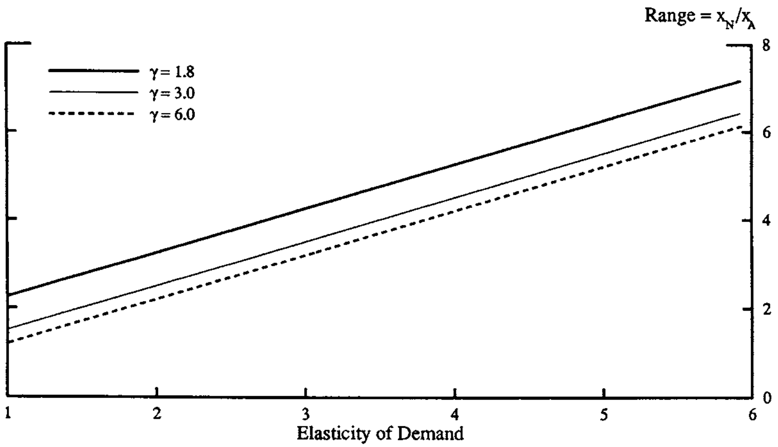
Table 14.4 B9(a). What Do You Think Causes These Delays?

Reason	Number of Responses
Several/many people have to sign off on a price change	27
Hierarchical organizations tend to be cautious	8
People worry about the public-relations aspects of price increases	6
Other	12
Total	53

Table 14.5 Bivariate Correlates of the Importance of Hierarchy

Description	Variable Name	Question	Expected Sign	Correlation with B9
General correlates of price stickiness				
Industry	INDUSTRY	—	undefined	$\chi_{20}^2 = 30.4$ ($p = .06$)
Marginal cost	FLATMC	B7(a)	+	$t = -0.9$ ($p = .36$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = -1.1$ ($p = .27$)
Elasticity of demand	ELAST	A4	−	$t = -0.5$ ($p = .65$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.14$ ($p = .25$)
Price stickiness	STICKY	A10, A13	+	$t = 4.0$ ($p = .00$)
Predicted correlates of this theory				
Log of firm's annual sales	SIZE	ln(A1)	+	$t = 2.9$ ($p = .00$)
Sales at least $10 billion	SIZE10B	A1	+	$\gamma = .59$ ($p = .00$)
Other correlates				
Economic outlook affects prices	OUTLOOK	A7(a)	?	$\gamma = .28$ ($p = .03$)
Inflation forecasts affect prices	INFLATION	A7(b)	?	$\gamma = .34$ ($p = .00$)
Fraction of sales under contract	WRITTEN	A8	?	$\gamma = .27$ ($p = .01$)
Some prices regulated	REGULATE	A14	?	$t = 3.2$ ($p = .00$)
Index of coincident indicators	CYCLE	—	?	$t = 2.0$ ($p = .04$)
Quality depends on price	QUALITY	B3(a)	?	$\gamma = .29$ ($p = .07$)
Has costs of price adjustment	ADJCOSTS	B8(a)	?	$\gamma = .29$ ($p = .02$)
Has costs of adjusting output	ADJCOSTQ	B8(j)	?	$\gamma = .42$ ($p = .01$)

Figure 15.1 Range of Multiple Equilibria in the Ball-Romer Model



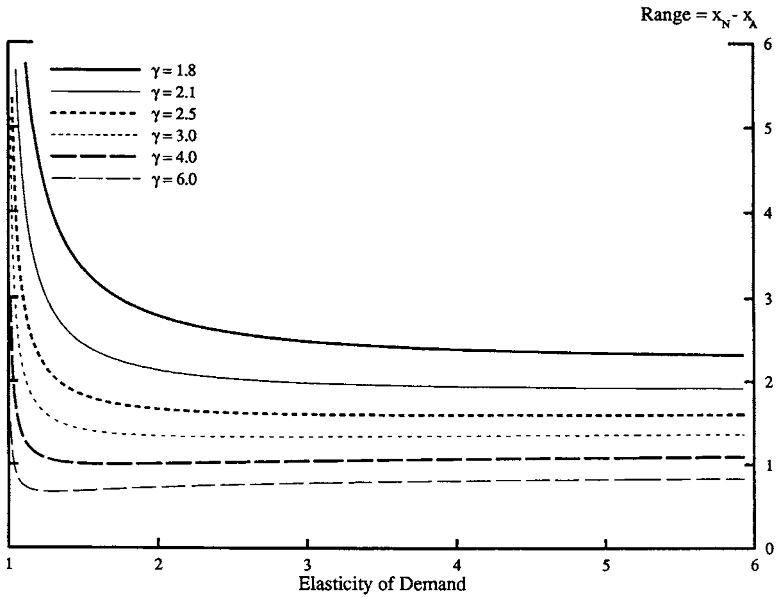


Table 15.1 B10. How Important Is Coordination Failure in Slowing Down Price Adjustments in Your Company? (n = 198 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant	27.5%
2	Of minor importance	10.6
3	Moderately important	19.4
4	Very important	42.4

Mean response = 2.77
Rank = 1st

Table 15.2 The Importance of Coordination Failure in Explaining Price Stickiness, by Sector (n = 196)

		Percentage of Firms				
Code	Response	Manufacturing	Trade	Services	Construction and Mining	Transportation, Commu-nications, and Utilities
1	Totally unimportant	32.1%	20.0%	25.0%	38.6%	17.7%
2	Of minor importance	14.3	8.6	3.7	9.1	23.5
3	Moderately important	12.1	14.3	30.6	20.5	23.5
4	Very important	41.4	57.1	40.7	31.8	35.3
	Mean response	2.63	3.09	2.87	2.45	2.76
	Sample size	70	35	54	22	17
	Rank	2nd	1st	1st	3rd	2nd

Table 15.3 B10(a). Why Not Raise Prices Ahead of Competitors?

Reason	Number of Responses
If we raised our prices first, we would lose too much business to low-price competitors	106
When other companies raise prices, we can raise ours without antagonizing our customers	36
We cannot sell anything at prices above those of our competitors	31
Other	15
Total	188

Table 15.4 B10(b). Do You Also Delay Price Cuts Because You Do Not Want to Be Among the First Firms in the Industry to Cut Prices?

Code	Response	Percentage of All Firms	Percentage of Firms with B10 > 3
1	Rarely or never	61.3%	53.8%
2	Sometimes	13.8	16.5
3	Usually or always	24.8	29.7
Mean response		1.63	1.76
Number of responses		163	106

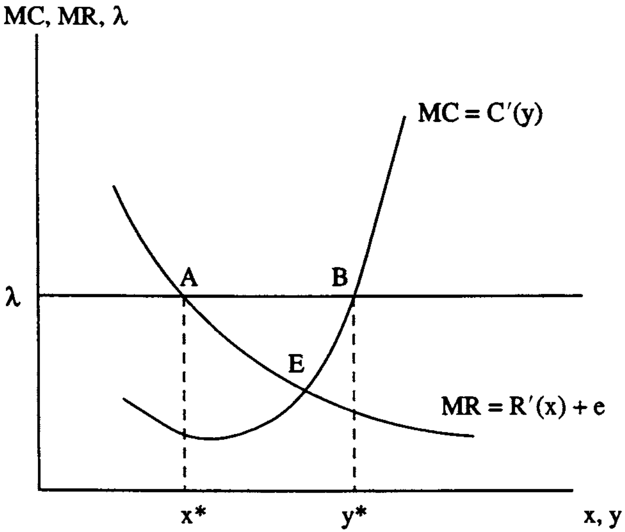
Table 15.5 B10(c). Why Not Cut Prices Ahead of Competitors?

Reason	Number of Responses
Lower prices would hurt our profits	47
We worry that the need for a price cut is temporary	6
If we cut prices first, we would get more business than we want or can handle	3
Other	16
Total	72

Table 15.6 Bivariate Correlates of the Importance of Coordination Failure

Description	Variable Name	Question	Expected Sign	Correlation with B10	
General correlates of price stickiness					
Industry	INDUSTRY	—	undefined	$\chi_{24}^2 = 33.4$	($p = .10$)
Marginal cost	FLATMC	B7(a)	+	$t = 1.7$	($p = .08$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = 0.8$	($p = .45$)
Elasticity of demand	ELAST	A4	−	$t = -1.7$	($p = .08$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = .03$	($p = .72$)
Price stickiness	STICKY	A10, A13	+	$t = 0.2$	($p = .82$)
Predicted correlates of this theory					
Concentration ratio	CONC	—	+	$t = -0.5$	($p = .62$)
Fraction sold to regular customers	REGULARS	A3	−	$t = 1.8$	($p = .07$)
Implicit contracts	IMPLICIT	B2(a)	−	$\gamma = -.16$	($p = .15$)
Fraction of sales under contract	WRITTEN	A8	−	$\gamma = .09$	($p = .25$)
Has costs of adjustment price	ADJCOSTS	B8(a)	+	$\gamma = -.05$	($p = .63$)
Customary interval between price reviews	INTERVAL	A9	−	$\gamma = -.24$	($p = .02$)
Firms adjust nonprice elements	NONPRICE	B12(a)	−	$\gamma = -.03$	($p = .85$)
Other correlates					
Inflation forecasts affect prices	INFLATION	A7(b)	?	$\gamma = -.30$	($p = .00$)
Know MC well	ACCURACY	A11	?	$\gamma = -.20$	($p = .03$)
Some prices regulated	REGULATE	A14	?	$t = 2.1$	($p = .03$)

Figure 16.1 The Inventory Theory



MC = marginal cost
MR = marginal revenue

Table 16.1 B11. How Important Are Inventories in Deterring Price Increases in Your Company? (n = 110 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	71.8%
2	Of minor importance	6.8
3	Moderately important	14.5
4	Very important	6.8

Mean response = 1.56
Mean among those holding inventories: 1.65 (n = 96)
Rank = 10th

[a] This category includes fourteen firms that said they do not hold inventories by answering "no" to question B11(a).

Table 16.2 B11(d). Why Change Inventory Rather than Prices?

Reason	Number of Responses
It costs less to let inventories vary than to change prices.	10
It does not antagonize customers.	7
We like to delay price changes until we are confident that the increase or decrease in sales is permanent.	5
Market forces may make it hard to make a price increase stick.	3
Other	7
Total	32

Table 16.3 Bivariate Correlates of the Importance of Inventories

Description	Variable Name	Question	Expected Sign	Correlation with B11
General correlates of price stickiness				
Industry	INDUSTRY	–	undefined	$\chi_{20}^2 = 15.6$ ($p = .74$)
Marginal cost	FLATMC	B7(a)	+	$t = 1.1$ ($p = .27$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = 1.6$ ($p = .11$)
Elasticity of demand	ELAST	A4	–	$t = -0.6$ ($p = .55$)
Cyclically sensitive	CYCLICAL	A6	–	$\gamma = .11$ ($p = .45$)
Price stickiness	STICKY	A10, A13	+	$t = 1.1$ ($p = .27$)
Predicted correlates of this theory				
Cost increases can be foreseen	FORESEEN	B6(d)	+	$\gamma = .40$ ($p = .10$)
Customers are put on allocation	RATION	A5	+	$\gamma = .25$ ($p = .07$)
Fraction produced to stock	STOCK	A15(a)	+	$t = 1.4$ ($p = .17$)
Sales-to-inventory ratio	S/I	A16	–	$t = -0.4$ ($p = .72$)
Other correlates				
Pricing points	POINTS	B4(a)	?	$\gamma = -.32$ ($p = .06$)

Table 17.1 B12. How Important Is Nonprice Competition in Slowing Down Price Adjustments? (n = 197 Responses)

Code	Response	Percentage of Firms
1	Totally unimportant[a]	30.2%
2	Of minor importance	12.9
3	Moderately important	25.9
4	Very important	31.0
	Mean response = 2.58	
	Mean among those with B12(a) = yes: 3.08	(n = 151)
	Rank = 3rd	

[a] This category includes forty-six firms that said they do not use nonprice competition by answering "no" to question B12(a).

Table 17.2 The Importance of Nonprice Competition in Price Stickiness, by Sector (n = 197)

Code	Response	Percentage of Firms: Manufacturing	Trade	Services	Construction and Mining	Transportation, Communications, and Utilities
1	Totally unimportant[a]	27.9%	31.4%	27.8%	38.1%	35.3%
2	Of minor importance	10.7	14.3	13.9	16.7	11.8
3	Moderately important	29.3	25.7	21.3	26.2	26.5
4	Very important	32.1	28.6	37.0	19.0	26.5
	Mean response	2.66	2.51	2.68	2.26	2.44
	Sample size	70	35	54	21	17
	Mean if B12(a) = yes	3.00	3.04	3.15	3.04	3.04
	Sample size	58	26	42	13	12
	Rank	1st	3rd	2nd	4th	4th

[a] This category includes firms that answered "no" to question B12(a).

Table 17.3 B12(b). What Nonprice Elements Are Important in Your Case?

Answer	Number of Responses
Improving service	59
Improving product quality	57
Shortening delivery lags	56
Greater selling efforts	55
Offering some ancillary good or service at a low or zero price	39
Increasing variety	5
Other	7
Total	278

Table 17.4 B12(e). Why Change Conditions of Service Rather Than Prices?

Reason	Number of Responses
It does not antagonize customers as much	55
It costs less to vary service than to vary prices	44
Demand is more elastic with respect to service than with respect to price	13
We like to delay price changes until we are confident that the increase or decrease in sales is permanent	13
Changes in service are easier to reverse, should that prove necessary	12
Other	24
Total	161

Table 17.5 Bivariate Correlates of the Importance of Nonprice Competition

Description	Variable Name	Question	Expected Sign	Correlation with B12
General correlates of price stickiness				
Industry	INDUSTRY	–	undefined	$\chi_{24}^2 = 16.8$ ($p = .86$)
Marginal cost	FLATMC	B7(a)	+	$t = 0.1$ ($p = .91$)
Fraction of costs that are variable	MCPCT	A12(b)	+	$t = -1.1$ ($p = .29$)
Elasticity of demand	ELAST	A4	−	$t = -0.2$ ($p = .84$)
Cyclically sensitive	CYCLICAL	A6	−	$\gamma = -.06$ ($p = .47$)
Price stickiness	STICKY	A10, A13	+	$t = 2.5$ ($p = .01$)
Predicted correlates of this theory				
Quality depends on price	QUALITY	B3(a)	+	$\gamma = .30$ ($p = .00$)
Fraction sold to regular customers	REGULARS	A3	−	$t = -1.8$ ($p = .07$)
Customers are put on allocation	RATION	A5	+	$\gamma = -.11$ ($p = .19$)
Other correlates				
Inflation outlook affects prices	INFLATION	A7(b)	?	$\gamma = .15$ ($p = .07$)
Implicit contracts	IMPLICIT	B2(a)	?	$\gamma = .35$ ($p = .00$)
Unionization rate in industry	UNION	–	?	$t = -1.9$ ($p = .05$)