

Restaurant and Supermarket Lobster Price Perceptions, Responses, and Strategies

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The lobster industry of North America is an important component of the economies, especially the coastal rural economies, of New England and the Atlantic Provinces of Canada. Estimates of the direct, indirect and induced income generated by the Canadian and U.S. industry in 1990 are on the order of \$550,000,000. The harvesting sector of the industry consists of individually owned and operated fishing boats with a few very minor exceptions. First buyer, pounding (live inventory operations), processing, wholesaling and distribution are similarly atomistic in structure, although the size of firms in this sector of the industry is somewhat larger than in the harvesting sector.

The market problems of the lobster industry are compounded by the effects of intensive public regulation. Product attributes, volume and the seasonal timing of supplies all can be affected. In addition, it is often the case that the constraints posed by the market influence the cost or feasibility of regulatory approaches.

To assist in policy formulation researchers in New England are attempting to develop a simulation model which integrates the biological, harvesting, and marketing sectors. A needed input for the model was an understanding of the retail sector.

Previous studies on marketing of North American Lobster in the U.S. have contributed substantially to an understanding of the market by concentrating on the structure of the industry (Richardson, 1992; DFO, 1990; Tavel Limited, 1990). In particular, a very comprehensive pricing study was sponsored by the Dept. of Fisheries and Oceans in Ottawa, Ontario (1990). The report gives a broad description of trends in the U.S.

lobster market, the industry structure, competitive status and general patterns of distribution.

This study attempts to broaden the depth of understanding by analyzing the decision making process of pricing lobster in terms of the attitudes, motivations, and signals perceived by retail and foodservice buyers. The focus is on the response to wholesale price changes, how they are interpreted under various conditions and how buyers react under different situations. Both a quantitative and qualitative evaluation are provided.

Survey Procedures

To obtain information from retailers a two-step survey process was enacted in 1994-1995. Initially independent and chain restaurants, and supermarkets were mailed a one page mail questionnaire asking if they sold lobster and if they were willing to discuss their purchasing and pricing strategies. The directories of High Volume Independent Restaurants 1994, Chain Restaurant Operators 1994 and Progressive Grocer's 1993 Marketing Guidebook published by C.S.G. Information Services were used to obtain a sample. The sample included all supermarket and chain restaurant headquarters and all independent restaurants who specialized in seafood or white table cloth restaurants with an average check of \$15.00. There was an overall response rate of 7.6 percent after two mailings (Table 1).

Of the 226 retailers who returned surveys, more than two thirds were presently selling North Atlantic Lobster. Approximately 22 percent were not presently selling lobster, but said they occasionally sold them for specials or holidays. Only 11 percent of the respondents had never sold North Atlantic lobster.

The lower incidence of lobster sales coincided with the low response rates in particular regions. To get a better picture of lobster sales and the type of sample obtained in this preliminary survey, follow-up phone calls were made to

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non-respondents. A random sample of non-respondents was taken to find out if they handled lobster. Out of 25 phone calls, 21 buyers said they either did not handle live North Atlantic lobster at all, or sold it only on occasion. In the Midwest and Southwest regions, buyers were most likely to report that lobster simply did not fit into their menu theme.

Of the 226 retailers who returned their initial survey 131 indicated that they sold lobster and would be willing to discuss their business operations and pricing strategies (Table 2). A telephone interview form was developed and pre-tested. The interview included questions about general business characteristics, lobster purchasing habits, seasonality of purchasing and pricing, and specifics on pricing strategy. All 131 potential respondents were contacted. It required an average of 6

phone call attempts to either reach or determine the status of the contact person. During the interim between the initial survey and attempted telephone interview, numerous contact people had changed positions. Some restaurants were closed during the months of the phone interviews, and some contact people couldn't be reached in any reasonable time period. However, 72 detailed telephone interviews were completed and analyzed. Due to the number of observations and similarities among regions, the data were re-grouped using three regional delineations. New England; East Coast (includes the Mid-Atlantic and the Southeast states); and the remaining states which is termed "Rest of U.S." The numbers of retailers that completed the detailed telephone interviews in these combined regions are presented in Table 3.

Table 1. Restaurant and Supermarket Mail Survey Response.

Geographical Region	Independent Restaurants		
	Number Mailed	Number Returned	Percent Response
New England	186	29	15.6
Mid-Atlantic	515	39	7.6
Southeast	238	18	7.6
East Central	129	8	6.2
West Central	189	19	10.1
Southwest	82	4	4.9
Pacific	280	19	6.8
Total Numbers and Average Response Rate	1,619	136	8.4
Geographical Region	Chain Restaurants		
	Number Mailed	Number Returned	Percent Response
New England	35	5	14.3
Mid-Atlantic	111	6	5.4
Southeast	118	11	9.3
East Central	49	2	4.1
West Central	77	3	3.4
Southwest	56	3	5.4
Pacific	121	9	7.4
Total Numbers and Average Response Rate	567	39	6.9
Geographical Region	Supermarkets		
	Number Mailed	Number Returned	Percent Response
New England	95	3	3.2
Mid-Atlantic	118	9	7.6
Southeast	138	8	5.8
East Central	94	7	7.4
West Central	136	9	6.6
Southwest	83	3	3.6
Pacific	116	12	10.3
Total Numbers and Average Response Rate	780	51	7.6

Table 2. Number of Respondents Willing To Discuss Pricing Strategies By Selected Business Type.

Business Type	Number of Willing Respondents	Number Interviewed
Independent Restaurants	85	46
Chain Restaurants	25	7
Supermarkets	21	19
Total	131	72

Table 3. Number of Respondents Completing Telephone Interview by Location and Business Type.

	Type of Business		
	Independent Restaurants	Chain Restaurants	Supermarkets
New England	17 (81)	1 (5)	3 (14)
East Coast	20 (71)	2 (7)	6 (22)
Rest of U.S.	9 (41)	4 (8)	10 (41)

Row percentages are in Parenthesis

Price Perceptions and Responses

Buyers in the foodservice and retail sectors were questioned about their price expectations, perceptions of consumer response, and their pricing behavior. Generally, the price they expect to pay during their dominant season is the lowest in the New England region and the highest in the "Rest of U.S." region (Table 4). For independent restaurants whose dominant season is the summer, there was an expectation to pay \$4.32 per pound for lobster in the New England region as compared to \$4.97 in the East Coast region and \$7.14 in the "Rest of U.S." region (delivered price). Expected summer prices for supermarkets were \$3.83, \$4.56, and \$6.28 for the New England, East Coast, and "Rest of U.S." regions, respectively.

When asked what was the highest price they expected to pay in their dominant season, retailers in the "Rest of U.S." region expected to pay the most for lobster, and those from New England the least. (Table 5). For independent restaurants, the most they expected to pay ranged from \$6.58 in the New England region to \$9.66 in the "Rest of U.S." region. For supermarkets the range indicated was \$5.25 in the New England region and \$8.99 in the "Rest of U.S." region. Chain restaurants responded with a value of \$9.50 in the win-

ter in the "Rest of U.S." region, while the single chain restaurant responding in the New England region said the maximum they would pay was \$3.85.

In addition to the most they would pay, retailers were asked what was considered a low price in their dominant season. Chain restaurants indicated the lowest prices (Table 6). The responding chain restaurant in the East Coast region reported a price expectation of \$2.35, and a price of \$2.50 was expected by the chain restaurant in the New England region. For independent restaurants the lowest average price expectation was \$3.25 reported by firms in the New England region for both the spring and summer. The highest average response was \$5.91 for the winter in the "Rest of U.S." region. Supermarket responses were very similar. The lowest average price indicated was \$3.33 by supermarkets in the New England region in the summer. The highest price they indicated was \$5.90 in the spring for the "Rest of U.S." region.

Respondents were next asked what menu or retail price would induce their customers to substantially increase their lobster purchases. As expected, the price levels that generated major volume increases, and the price identified as the highest that could be charged to customers varied substantially. (Tables 7 and 8). In general, price levels had to be lower in the New England region to generate significant volume increase. The only exception was during the spring where the average price level needed in the East coast region was lower than that indicated in the New England region. The responses to the highest price that could be charged deviated further from this region pattern. The average highest price that could be charged was actually higher in the "Rest of U.S." region than the others for the summer and fall seasons.

Supermarket responses to the price level that generates significant volume increases and the highest they felt could be charged provided the typical regional pattern. (Tables 9 and 10). Price levels for both were the lowest in the New England region followed by the East Coast region, with the highest prices indicated being from the "Rest of U.S." region.

Table 4. Typical Price Respondents Expect To Pay for Lobster In Their Dominant Season For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Independent Restaurants</u>					
			(Dollars)		
New England	4.25 (1)	4.32 (15)	5.00 (1)	--	4.36 (17)
East Coast	5.42 (3)	4.97 (9)	6.00 (1)	6.10 (7)	5.49 (20)
Rest of U.S.	5.05 (1)	7.14 (3)	6.75 (2)	7.33 (3)	6.89 (9)
<u>Chain Restaurants</u>					
			(Dollars)		
New England	--	3.00 (1)	--	--	3.00 (1)
East Coast	--	3.75 (1)	--	--	3.75 (1)
Rest of U.S.	--	7.50 (2)	--	7.32 (2)	7.41 (4)
<u>Supermarkets</u>					
			(Dollars)		
New England	--	3.83 (3)	--	--	3.83 (3)
East Coast	--	4.56 (4)	--	6.75 (2)	5.29 (6)
Rest of U.S.	--	6.28 (3)	5.50 (1)	6.60 (5)	6.37 (9)

Number of respondents are in parenthesis.

Table 5. The Highest Price Respondents Expect to Pay for Lobster In Their Dominant Season For Selected Geographical Areas.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Independent Restaurants</u>					
			(Dollars)		
New England	7.50 (1)	6.58 (15)	7.00 (1)	--	6.66 (17)
East Coast	7.66 (3)	7.66 (9)	7.00 (1)	8.49 (7)	7.92 (20)
Rest of U.S.	6.90 (1)	9.66 (3)	8.00 (2)	9.16 (3)	8.82 (9)
<u>Chain Restaurants</u>					
			(Dollars)		
New England	--	3.85 (1)	--	--	3.85 (1)
East Coast	--	6.25 (2)	--	--	6.25 (2)
Rest of U.S.	--	8.65 (2)	6.75 (1)	9.50 (2)	9.07 (4)
<u>Supermarkets</u>					
			(Dollars)		
New England	--	5.25 (2)	--	--	5.25 (2)
East Coast	--	8.16 (4)	--	8.00 (1)	8.12 (4)
Rest of U.S.	--	8.99 (3)	6.75 (1)	8.53 (5)	8.49 (9)

Number of respondents are in parenthesis.

Table 6. Respondents' Lowest Purchase Price Expectation For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Independent Restaurants</u>					
			(Dollars)		
New England	3.25 (1)	3.25 (14)	4.00 (1)	--	3.29 (16)
East Coast	3.92 (3)	3.94 (9)	--	4.67 (7)	4.21 (19)
Rest of U.S.	4.25 (1)	5.33 (3)	4.80 (2)	5.91 (3)	5.29 (9)
<u>Chain Restaurants</u>					
			(Dollars)		
New England	--	2.50 (1)	--	--	2.50 (1)
East Coast	--	2.35 (1)	--	--	2.35 (1)
Rest of U.S.	--	6.25 (2)	--	5.50 (2)	5.88 (4)
<u>Supermarkets</u>					
			(Dollars)		
New England	--	3.33 (3)	--	--	3.33 (3)
East Coast	--	4.00 (4)	--	4.00 (1)	4.00 (5)
Rest of U.S.	5.90 (1)	4.50 (3)	4.60 (1)	4.55 (5)	4.68 (10)

Number of observations are in parenthesis.

Table 7. Menu Price Which Generates Significant Customer Purchasing Increases For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Independent Restaurants</u>					
			(Dollars)		
New England	16.75 (1)	16.15 (15)	13.50 (1)	--	16.03 (17)
East Coast	14.98 (3)	26.37 (9)	18.95 (1)	19.91 (7)	22.03 (20)
Rest of U.S.	20.00 (1)	17.50 (3)	18.45 (2)	29.83 (3)	22.10 (9)
<u>Chain Restaurants</u>					
			(Dollars)		
New England	--	5.50 (1)	--	--	5.50 (1)
East Coast	--	8.95 (1)	--	--	8.95 (1)
Rest of U.S.	--	22.75 (2)	--	24.48 (2)	23.61 (4)

Number of observations are in parenthesis.

Table 8. Respondents' Indication of the Highest Menu Price That Can Be Charged in Restaurants For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Independent Restaurants</u>					
			(Dollars)		
New England	28.00 (1)	23.24 (15)	26.00 (1)	--	23.69 (17)
East Coast	33.33 (3)	31.54 (9)	22.00 (1)	26.00 (3)	29.39 (20)
Rest of U.S.	30.00 (1)	21.15 (3)	20.95 (2)	41.17 (3)	28.76 (9)
<u>Chain Restaurants</u>					
			(Dollars)		
New England	--	11.95 (1)	--	--	11.95 (1)
East Coast	--	14.95 (1)	--	--	14.95 (1)
Rest of U.S.	--	32.50 (2)	--	33.00 (2)	32.75 (4)

Number of observations are in parenthesis.

Table 9. Retail Price Levels In Supermarkets Which Generates Significant Increases in Customer Purchases For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Supermarkets</u>					
			(Dollars)		
New England	--	4.32 (3)	--	--	4.32 (3)
East Coast	--	4.96 (4)	--	5.49 (2)	5.14 (6)
Rest of U.S.	5.99 (1)	5.53 (3)	5.40 (1)	5.59 (5)	5.59 (10)

Number of observations are in parenthesis.

Table 10. Respondents' Indication Of The Highest Price That Can Be Charged For Supermarkets For Selected Geographical Regions.

Business Type and Location	Dominant Season				Overall
	Spring	Summer	Fall	Winter	
<u>Supermarkets</u>					
			(Dollars)		
New England	--	7.32 (3)	--	--	7.32 (3)
East Coast	--	7.66 (3)	--	9.99 (1)	8.24 (4)
Rest of U.S.	--	10.66 (3)	8.99 (1)	9.39 (5)	9.77 (9)

Number of observations are in parenthesis.

Retailers were questioned about their typical markup and likely responses to 25 percent price changes during their dominant season. Their responses simply averaged over the selected retail groups and as weighted averages, using lobster sales as weights, are presented in Table 11. Considerable variation in both markups and elasticities were evident. Among independent restaurants, typical percentage markups were the highest in the East Coast region where they averaged 389 percent, and were 525 percent when weighting retailers responses by lobster sales. Weighted markups at supermarkets were 21 percent in the East Coast region, 25 percent in the "Rest of U.S." region, and the highest, 39 percent, in the New England region.

From retailers responses as to how they would adjust quantities purchased given a 25 percent increase in wholesale price and a 25 percent decrease, demand elasticities were calculated. The weighted demand elasticity based on their responses among independent restaurants to a 25 percent increase in wholesale price was inelastic in the New England and East Coast regions and elastic in the "Rest of U.S." region. For a 25 percent decrease in wholesale price the elasticities were inelastic in all regions. Supermarket response to the 25 percent increase in wholesale price was elastic in the New England and East Coast regions and inelastic in the "Rest of U.S." region. For a wholesale price decrease of 25 percent, supermarket response was extremely elastic.

The simple and weighted averages of retail price markup after 25 percent wholesale price changes are presented in the last two columns of table 11. Examining the weighted averages for independent restaurants, one finds markups generally decreasing with a 25 percent increase in wholesale price and increasing with a 25 percent decrease in wholesale price as compared to markups at the typical price. Changes in markups after a 25 percent change in wholesale price varied by region among supermarkets. With a 25 percent increase in wholesale price, markups decreased in supermarkets in the New England and the "Rest of U.S." regions and increased in the East Coast region. With a 25 percent decrease in wholesale price, markups increased in the New England and East Coast regions and slightly decreased in the "Rest of U.S." region.

Price Strategies

Results derived from the qualitative component of the survey provide additional insight into pricing behavior. Pricing lobster in the foodservice and retail ranges from predictable to the seemingly bizarre. The risk in attempting to formalize pricing practices is that the explanation oversimplifies the procedure; averages and standard mark-ups, cost plus systems, etc. do not adequately tell the story. These are formulas that buyers use for an initial footing, but most of the decision is based on a combination of other considerations. An understanding of these factors is what buyers who were interviewed often referred to as "intuition," "6th sense" or "gut instinct". In fact, they represent a variety of key factors including the expected behavior or impact on competition, customer counts, risk assessment, weather conditions.

Foodservice Sector

Menu pricing strategies emphasize food cost, but also incorporate considerations regarding the menu mix, the psychological effects of pricing as well as the competitive environment. Moreover, menu prices dictate the type of clientele attracted to the restaurant and this has substantial impact on the range of prices that buyers have as options. Added to this, variation in clientele is still extensive even among establishments categorized within the same segment; one white tablecloth restaurant might be positioned to attract business patrons while another attracts people who dine out for special occasions. These are all important features in the pricing decision.

Foodservice is dominated by the food cost percentage approach to pricing. When asked how they set price, respondents typically said that they aim for a 33% food cost. For example, if a particular entree was costed out at \$5.00 per plate, the menu price would be set at \$15.15. However, in practice, this figure is only a starting point. First of all, the buyers are looking for a particular food cost, usually from 30 to 35%, on the overall price mix of the menu. Consequently, some entrees on the menu may correspond to a 40% food cost, while a dessert item may be based on a food cost of 25%. Also, the food cost is averaged out

Table 11. Respondents' Typical Margin and Responses To Wholesale Price Changes For Selected Regions During Their Dominant Season.

Business Type and Location	% Markup at Typical Price	Weighted % Markup at Typical Price	After a 25% Increase in Wholesale Price		
			Retailer Demand Elasticity	Weighted Retailer Demand Elasticity	Weighted % Markup
Independent Restaurants					
White Table Cloth Restaurants					
New England	401 (9)	241 (9)	-.52 (9)	-.25 (9)	316 (9)
East Coast	526 (11)	759 (11)	-1.46 (11)	-.22 (11)	451 (9)
Rest of U.S.	268 (9)	215 (9)	-1.76 (9)	-1.33 (9)	364 (8)
Family Restaurants					
New England	267 (8)	289 (8)	-.75 (8)	-.03 (8)	225 (8)
East Coast	220 (9)	191 (9)	-1.56 (9)	-1.39 (9)	183 (7)
Rest of U.S.	--	--	--	--	--
All Independent Restaurants					
New England	338 (17)	279 (17)	-.63 (17)	-.08 (17)	273 (17)
East Coast	389 (20)	525 (20)	-1.50 (20)	-.61 (20)	334 (16)
Rest of U.S.	268 (9)	215 (9)	-1.76 (9)	-1.33 (9)	364 (8)
Chain Restaurants					
New England	165 (1)	165 (1)	0.00 (1)	0.00 (1)	138 (1)
East Coast	273 (1)	273 (1)	-1.00 (1)	-1.00 (1)	218 (1)
Rest of U.S.	317 (4)	304 (4)	-1.35 (4)	-1.32 (4)	283 (3)
Supermarkets					
New England	39 (3)	39 (3)	-1.66 (3)	-1.60 (3)	33 (3)
East Coast	27 (6)	21 (6)	-1.48 (5)	-1.97 (5)	20 (5)
Rest of U.S.	27 (9)	25 (9)	-2.40 (9)	-0.86 (9)	16 (8)

Number of observations is in parenthesis. Weighting is done on the basis of weekly lobster sales.

Table 11 (continued). Respondents' Typical Margin and Responses To Wholesale Price Changes For Selected Regions During Their Dominant Season.

	After a 25% Decrease in Wholesale Price		
	Retailer Demand Elasticity	Weighted Retailer Demand Elasticity	% Markup
Independent Restaurants			
White Table Cloth Restaurants			
New England	- 1.00 (9)	- .73 (9)	483 (9)
East Coast	- .62 (9)	- .21 (9)	657 (11)
Rest of U.S.	- 1.24 (9)	- .76 (9)	317 (9)
Family Restaurants			
New England	- 1.23 (8)	- .69 (9)	305 (8)
East Coast	- 2.82 (9)	- 1.76 (9)	210 (9)
Rest of U.S.	--	--	--
All Independent Restaurants			
New England	- 1.11 (17)	- .70 (17)	399 (17)
East Coast	- 1.72 (18)	- .77 (18)	456 (20)
Rest of U.S.	- 1.24 (9)	- .76 (9)	317 (9)
Chain Restaurants			
New England	- 1.40 (1)	- 1.40 (1)	144 (1)
East Coast	0.00 (1)	0 (1)	433 (1)
Rest of U.S.	- .65 (4)	- .57 (4)	340 (4)
Supermarkets			
New England	-12.00 (3)	-11.00 (3)	48 (3)
East Coast	-59.20 (5)	-25.90 (5)	32 (5)
Rest of U.S.	- 9.56 (9)	-14.20 (9)	28 (9)

Number of observations is in parenthesis. Weighting is done on the basis of weekly lobster sales.

over the course of a particular period, usually a year. This allows for price fluctuations in purchasing without requiring constant changes in the menu price. Chain restaurants also have another advantage in that they are able to average their food costs over several units.

One consistent finding is that respondents claimed lobster was not profitable because they generally could not price it at a 33% food cost figure, the standard center-of-the-plate target percentage. Nevertheless, they felt they had to menu lobster because of the positioning of their restaurant and menu. These complaints were especially common among buyers who sold few lobster, perhaps 5 to 6 dinners over a weekend. Pricing strategies among the larger volume buyers, predominantly those in the seafood specialty restaurants, revealed other relevant considerations in their pricing decision that modified the pervasive "lobster is not profitable" assertion.

The majority of respondents stated that because lobster corresponds to high food cost, the gross profit margin was a far more important consideration than the food cost figure in setting the price of a lobster dinner. This relates to the price/volume relationship in which the operator weights the different levels of sales volume at several different prices. For example, a lobster dinner might be priced at \$18.95 at a 40% food cost but yield a gross profit of \$11.37 whereas a chicken dinner entree menued at \$9.25 at a 30% food cost level yields a gross profit of \$6.47. Obviously the sale of a lobster dinner is more profitable than the sale of a chicken dinner. The key to determining which item is more profitable is an accurate estimate of the customer count and the percentage of people likely to purchase lobster on any given night. Most restaurant owners indicated they monitor these figures and maintain very precise estimates.

Other considerations warrant further modifications to any fundamental price figure. Several buyers emphasized that lobster has perceived value. This allows them to menu it at a relatively higher price and still sell it. As one respondent explained, "there is absolutely nothing I could do with chicken that would ever allow me to menu it above \$12.00." Similarly, another respondent said, "lobster and filet mignon are about the only

items people will accept as the most expensive items on the menu."

In fact, there was a clear consensus among respondents that setting the price too low was as dangerous as setting it too high. A low price creates suspicion and they felt that customers would interpret it as "something wrong with the product" or as "some kind of scam." A buyer in the Midwest elaborated, "lobster is perceived as an accepted high end product. You don't want to confuse that image by setting price too low." Nevertheless, their attention to the intrinsic messages of pricing and the consumer's expectation was also balanced against the effects of pricing lobster too high and creating an impression that the entire menu is too expensive.

Many respondents said they complied with another guiding pricing principle; the most expensive item on the menu should not be more than three times the price of the cheapest item on the menu. This pertains to the price mix of their menus. While this rule generally limits how high a price can be set for lobster since lobster is the high price point, it also has psychological impact. Two buyers stated that even if they didn't sell lobster dinners, lobster served as a good high price point making other seafood items appear to be a good value. A strategy related to this point is fairly typical in the New England market. When soft-shell lobsters are being harvested in New England, many restaurants offer twin specials featuring two lobsters for a dollar or two more than the price of single lobster. According to one restaurateur, "this makes the soft-shell twin lobsters look like a great bargain."

Buyers also emphasized the importance of understanding the local market and the demographics of the targeted clientele. This point was most often noted by the buyers in chain restaurants. Many set prices for various restaurants having different positioning strategies and locations. The procedure is not an easily defined process since much of it is based on the buyer's experience with setting prices and fine tuning. One respondent clarified that this entails a clear understanding of the customer and the nature of demand, "during the summer I'm dealing with tourists in my coastal establishments. In the winter I've got my business and special occasion

customers. Just knowing those two details alone tells me that I can price higher in the winter than I can in the summer." In other words, this buyer is observing an elastic demand curve in the summer and an inelastic demand curve in the winter.

In addition, awareness of the competitive situation is critical and all respondents had a very clear understanding of where they stood relative to other restaurants in the area. Some reported there were no other restaurants in the immediate area that menued lobster and this allowed them greater freedom in setting the menu price of lobster. Buyers from restaurants located in the more urban areas, particularly New York and Boston, said that competition was especially strong and effectively constrained their pricing latitude.

Pricing competition was especially aggressive in the Boston market during the summer due to the marketing of both soft-shell and hard-shell lobster. They explained that most customers were naive about the differences between hard-shell and soft-shell and could easily be "hooked" into buying the cheaper, "inferior" soft-shell. In comparison, a bit further out into the east-central regions, a few buyers felt that their customers preferred the soft-shell lobster because it was easier to handle.

Foodservice Reactions to Wholesale Price Fluctuations

For a market to function smoothly accurate information about the market has to be widely available, particularly about price and quantities. Restaurant owners seem to be especially aggressive in tracking this information. Many have prices faxed to them weekly with projected prices and market conditions include in the profile. This service can be purchased through several sources. Further inquiries indicate that these projections are generally quite accurate. The problem is that most buyers are not able to lock into a buying price with enough leeway that allows them to plan their marketing outside of the immediate short term. As with most seafood, the price of lobster varies substantially over the course of a typical year. Experienced buyers are familiar with this and have a general understanding of when to expect increases and decreases.

An interesting finding is that substantial price fluctuations of several dollars or more were most often reported by buyers in New England while those in the Midwest and other non-coastal areas recalled only marginal fluctuations over the year, often less than a dollar variation. It was not uncommon to hear reports from buyers in the western areas that they encountered their highest lobster prices in the summer, just when the supplies are increasing and the New England buyers anticipate their low cost season for lobster. These contradictory experiences can be attributed to the fact that buyers outside of New England are purchasing the more expensive hard-shell lobster which are able to withstand the stress of transportation and distribution.

Menu pricing in light of changing prices in the wholesale market is especially challenging in foodservice. Buyers strongly resist changing prices once they are printed on the menu. This holds true even among those who use the simplest approach to dealing with price fluctuations by menuing lobster "at market price." Respondents felt that consumers were uncomfortable about asking for prices and that it was important to maintain an image of consistency in both the quality of their food and their menuing. Even weekly price changes meant that wait staff would have to constantly recall new prices which potentially added more confusion to an already hectic environment.

The market pricing option most often was used by buyers who were not eager to handle lobster. They said that customers generally interpreted an item menued at market price as probably exorbitant. The market price strategy then became an effective demand inhibitor, enabling buyers to include lobster on the menu, thereby satisfying the upscale image they wanted to achieve. At the same time, it conveyed the message that the price is beyond the control of the restaurant.

For the most part, respondents adhered to the precept of keeping menu prices stable. To do this with lobster, several employed creative pricing strategies. As one option, some buyers based the menu price on the worst case scenario and hoped that over the course of the year the cost of lobster did not exceed the highest expected figure for too long. Usually this was effective, but it meant that

the menu price was set high for the most part. This strategy was used more often by restaurant owners in the noncoastal areas. It seemed to work best in these areas because the restaurant owners generally faced less aggressive competition in comparison to their east coast counterparts. They also did not seem to be experiencing the significant variation in the price of lobster over the course of the year.

Another strategy described by several respondents in the eastern regions is a hybrid between the "market price" and the "worst case scenario" approach. These buyers printed a menu price based on the worst case scenario. They then supplemented their menus with a daily "special" board in which they often featured lobster at a much lower price. Customers then perceived the lobster dinner featured on the daily special as a "good deal."

The most common approach was to revise the menu prices several times a year and base the price of the lobster dinner on the cost they expected over that period. The experienced buyers who have a commitment to handling lobster are willing to ride out short term fluctuations in the prices they face for lobster and for the most part, they are good at anticipating these fluctuations due to their depth of experience. They indicate they are well aware of the uncertainty involved, especially concerning weather and its effects on the market. But they also expressed frustration over the price instability which they generally attribute to the speculative actions of the wholesalers.

To gain a better understanding of pricing and the motivations underlying the decisions, respondents were asked how they would react to hypothetical changes in the prices they faced for lobster. The reactions to high prices can be categorized into two groups. The experienced, high volume buyers interpret an extremely high price as a temporary glitch in the system. Even at extreme increases in price during any given season, these buyers were not willing to discontinue menuing lobster. Most were acquiescent about the ups and downs of lobster prices and for seafood in general. They expressed a willingness to wait out these intermittent glitches, maintain their current price level and accept a higher food cost knowing that they'd be able to make up for it when prices

are lower. Most related anecdotes about dealing with inflated prices and noted that they are usually followed by a dramatic drop in price due to the decrease in demand. They then expected this to be followed by a rise back to normal prices fairly quickly.

Since these comparatively high volume buyers maintain their price levels and correspondingly, exhibit only a marginal decline in their demand for lobster, the large number of small volume buyers account for the decline in demand at the wholesale level during a high price scenario. They are much less secure about the functioning of this market and they interpret a high price as a signal to move out of lobster. This characteristic would most likely be exhibited by the buyers who menu at "market price". They reflect the high cost in their market menu price and let their customers respond accordingly. In turn, the predictable decrease in customer demand for lobster is then effectively passed back to the wholesale level.

On the other hand, when prices drop most buyers described a wait-and-see behavior in which they maintained the status quo until they could get a better idea of which direction price would move. Again, most interpreted a drop in price as a temporary situation. Virtually all buyers were not inclined to reduce their prices at an initial price drop because this period allowed them to recuperate the losses from the high price periods. If price seemed to be moving in a consistently downward track, they would typically respond by adding lobster items, usually a salad or bisque, with only marginal, if any, reduction in the price of the featured lobster dinner entree. Nevertheless, the net effect would obviously be an increase in their demand for lobster at low prices.

There is also a distinct lower limit. A further reduction in wholesale price does not result in significant increases in purchases past a certain point. But there is the problem of pricing too low which makes customers suspicious about quality of the lobster or the integrity of the restaurant. All buyers mentioned a lower limit menu price that they would simply not go below even if the wholesale price dropped to a dramatically low level. Most echoed a similar concern, "I hate getting stuck with it." The possibility of having to dedicate limited labor to boiling weak or dying

lobster and picking the meat is not an attractive recourse to most foodservice buyers.

To summarize the reactions in the foodservice industry to changes in wholesale price of lobster, there is no dramatic response to initial price changes, either up or down. Most spoke of "riding it out". At a certain level however, it becomes worth their time to use staff to boil and clean lobster for other lobster menu items. The typical response is to reduce the price of the lobster entree only slightly to maintain competitiveness and take advantage of the low price by adding lobster items which are then priced at the target food cost level, with the extra labor factored into that cost.

Pricing in the Retail Sector

"You must understand, this isn't about mark-up, it's about volume. How much can I move." This statement typifies the response of retail buyers in the retail sector to questions about how they set price and react to price changes in the wholesale market. The retail sector is capable of handling large volumes of lobster and therein lies their power in the market.

The seemingly bizarre pricing schemes that defy all forms of theoretical economic logic are most likely to be found in the retail sector; lobster is very often used as a loss leader in the more creative seafood marketing arena. It has given birth to such high volume movers as the "Lobstermania" promotions yielding accounts of customer lines trailing all the way out of the stores drawn out by unusually low lobster prices.

Supermarket buyers often referred to a particular price as "the magic number," one that would increase demand to a level they described as "off the charts." The exact price figure varied somewhat across regions, as indicated in the previous tables, but all buyers were able to quickly identify it. Their ability to reduce price to the "magic number" price and subsequently stimulate such a dramatic response in demand is tied into their relationship with their suppliers.

Buyers in supermarkets have significantly greater buying power than those affiliated with most independent restaurants. For the most part they are purchasing lobster for at least 5 units, usually more in the range of 20 to 100 units. Typically they work with one major supplier. But

for insurance, they maintain a secondary supplier to whom they give just enough business to keep interested. These relationships between the store chain and the major supplier are usually long term and have evolved over many years of business. Although not always amicable, the strength of the relationship gives some security on both ends.

The major advantages in their buying power is that because of the potential for big sales volumes, the supplier is willing to work on a smaller margin. On some occasions buyers are able to purchase an entire truckload which results in further reductions in the price. Moreover, the supplier is often able to lock into a price with enough advance to allow the buyer to promote the lobster sale. This is a crucial point since most buyers pointed out that price reductions mean nothing if they are unpredictable or if there is insufficient lead time for them to advertise.

Retailer Reactions to Wholesale Price Changes

In response to increases in wholesale price, buyers said they would have continued purchasing lobster, although in smaller quantities, even if the price increased by as much as 50% or higher. Their major concern is to turn over the inventory of lobsters in the tank at least once a week. This puts a cap on the price they can charge. Even in the western areas of the U.S., buyers were averse to charging anything above \$10.00 per pound. They pointed out that the majority of stores have lobster tanks and they cannot allow their stores to display weak, dying lobsters nor can they let the tanks go empty.

Another key influencing factor in their pricing decision is that the supermarket industry is very competitive. For the most part, their responses to falling wholesale prices is to shrink their own margin and pass the reduction on to their customers. If planned in advance, low prices result in the loss leader promotions, since lobster specials always serve as an effective competitive strategy. These special promotions, however, can have some unintended side effects. Several buyers mentioned that the precedents set by the competition will have a direct impact on what can be charged in the market and they also create customer expectations. Most buyers generally believed that with so many chains running lobster

specials over the years, customers now have been "trained" to wait out the higher, more realistic prices with the expectation that sooner or later one store chain will offer a promotion. They felt that it has become harder and harder to move lobster at the higher prices. Nevertheless, they did agree with foodservice buyers that there is a limit on how low they can price lobster without arousing consumer suspicions about the quality of the product.

Summary and Conclusion

This inquiry used both qualitative and quantitative information obtained from surveys of buyers in the foodservice and retail sector to gain a better understanding of the lobster market. The information was obtained initially from a mailed survey and elaborated through an extensive telephone interview with buyers in the foodservice and retail sector who regularly handle lobster.

The first area of inquiry concerned price expectations from buyers in the foodservice and retail sectors. Not surprisingly, buyers located in the New England area tended to have lower price expectations overall. Supermarket buyers in all regions generally expected to pay lower prices per pound for lobster than independent restaurant buyers. Foodservice buyers in the "Rest of the U.S." regions reported the highest wholesale price expectations for lobster in their dominant season. Responses to what the highest price they're willing to pay during their dominant season followed a similar pattern. Both Foodservice and Supermarket buyers in the "Rest of the U.S." regions referenced a higher figure for their top purchase price at the wholesale level.

Respondents also reported the selling prices at which they expected substantial increases in sales to their customers. For restaurants and supermarkets, the key menu and retail price needed to induce dramatic increases was generally lowest in New England. Not surprisingly, the highest menu and retail prices that could be set were reported by buyers in the "Rest of the U.S." indicating that these customers generally have higher price expectations. In comparison, the range of prices reported by the New England buyers in Supermarkets was the lowest overall.

Markups and elasticities showed great variation. Among restaurants, those in the East Coast generally had the highest markup. In comparison, supermarket buyers in New England reported the highest percentage markups.

When asked about reactions to changes in wholesale price, the demand among foodservice buyers was inelastic in the New England and East Coast regions and elastic in the "Rest of the U.S." This is consistent with the qualitative analysis that suggests foodservice buyers in the New England and East Coast regions were skeptical and consequently, less reactive to extreme price changes. Their response generally was to decrease their markup with a 25 increase in wholesale price. This is in response to a perceived upper limit threshold among their customers. In turn, they increase their markup with a 25 percent decrease in wholesale price and "makeup for the low margin periods." Reactions among supermarket buyers were more extreme particularly with wholesale price decreases generating an extremely elastic response.

The major difference between the foodservice and supermarket buyers is in their buying power. Generally, supermarket buyers described a more predictable market, were more positive in their appraisals of handling lobster, and reported fewer problems, especially in comparison to the independent restaurants. They also tended to have longer term relationships with their suppliers which seems to result in greater stability, either real or perceived, and more importantly, their purchase price expectations were lower than those of the independent restaurant buyers. Chain restaurants shared some of the characteristics of the supermarket buyers in that they had greater purchasing power and consequently, faced comparatively lower wholesale prices. It seems that suppliers are generally willing to shrink their margins for high volume purchases.

One earlier study estimates that more than 60% of the lobster sold in the U.S. is consumed at restaurants and that because of this, lobster suppliers should concentrate on foodservice marketing (Gardner Pinfold Consultants, 1990). Similarly, another study conducted by TAVEL Limited researchers (1990) concludes that the greatest potential for profitable market expansion is in foodservice because they believed supermarket

buyers were more likely to buy on price and consequently, were more fickle in their relationship with suppliers. Their conclusions were drawn from discussions with brokers and distributors.

This study provides another perspective on the basis of interviews with the buyers directly. Supermarket buyers appear to be far more loyal in their supplier relationship than what was suggested in the TAVEL report, and more satisfied with their suppliers and the lobster market in general, in spite of fluctuations in the market. Their price sensitivity can be attributed to the fact that they purchase tremendous quantities of product and as result, are motivated to aggressively seek out the lowest possible price. But security, or in other words, service and reliability from their supplier, clearly has some intrinsic value according to these buyers. The overall satisfactory nature of these relationship seems to correspond to their belief that the lobster market is more stable and less frustrating than other fisheries they deal with on a daily basis. If this is a more accurate portrayal of the situation, suppliers might be better advised to target their marketing efforts on the retail sector.

Nevertheless, the lobster market in the retail and foodservice sector is extremely complicated. The responses to price changes translate into disparate elasticities between sectors and across regions. However small sample sizes and only cross-sectional data precluded a more detailed analysis and explanation of why these differences exist across regions and sectors. Certainly the best way of assessing these differences is to conduct additional surveys over a much longer period of time gathering wholesale and retail prices at different seasons and during periods of promotion and nonpromotions.

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