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What we obtain too cheap,

We esteem too lightly;

'tis dearness only that gives everything its value.

--Thomas Paine, The American Crisis, No. 1 (December 23, 1776)

Price it Right

Every food company profits from putting food into the hands of consumers. The profits made depend on only three factors:

$$\text{PROFIT} = \text{QUANTITY} \times \text{PRICE} - \text{COST}$$

Increasing profits requires increasing quantity or price or decreasing cost. Marketing can work to increase sales and production can work to cut expenses, but what can be done about price? Let's ask the customer.

The Horse's Mouth

For a sale to occur, the customer must accept both the product and the price. We should be able to infer something about the importance of price in this decision from how much the customer knows about price. Therefore we asked 42 people who buy most of the groceries for their families to estimate the average prices of 30 different name brand foods.

Peanut Butter, 40 oz.	\$5.17	Tomato Sauce, 15 oz.	\$.56
Grape Jelly, 2 lb.	1.98	Pork & Beans, 31 oz.	.85
Chocolate Cookies, 19 oz.	1.69	Margarine, 1 lb.	.84
Instant Coffee, 10 oz.	5.14	Beef Steak, 1 lb.	3.12
Frankfurters, 1 lb.	1.98	Fryer Chicken, 4 lb.	4.96
Cheddar Cheese, 2 lb.	5.11	Frozen Orange Juice, 12 oz.	1.42
Oil, 38 oz.	2.25	Frozen Potato Pieces 32 oz.	1.40
Cake Mix, 18 oz.	.97	Frozen Peas, 10 oz.	.55
Flour, 10 lb.	2.68	Frozen Pizza, 12 oz.	1.66
Cinnamon, 1 oz.	.99	Frozen Fish Fillets, 12 oz.	2.32
Sugar, 5 lb.	1.81	Breakfast Cereal, 15 oz.	1.48
Tomato Juice, 46 oz.	.95	White Bread, 22 oz.	.93
Sliced Peaches, 29 oz.	.94	Milk, 1 qt.	.69
Ice Cream, half gal.	3.79	Potato Chips, 8 oz.	1.19
White Potatoes, 3 lb.	1.00	Lettuce, head	.59

What Consumers Know About Food Prices

Figure I shows the average prices estimated by the shoppers, compared to the actual prices prevalent in supermarkets in their area. For items with prices above \$3, the shoppers estimated consistently low. The worst cases were a premium ice cream (that might have been unfamiliar) and the fryer chicken (off by \$1.20). For prices below \$3, the shoppers' average estimates followed the actual price trend reasonably well ($R=.95$) but there was still substantial variation (Error = $\pm 2 S_e = \pm \$0.38$). For example:

Item	Actual	Estimate	Variation
Cinnamon	\$.99	\$ 1.35	+36%
White Potatoes	1.00	1.26	+26
Frozen Peas	.55	.69	+25
Sugar	1.81	2.22	+23
Frozen Orange Juice	1.42	1.06	-25

Figure 1

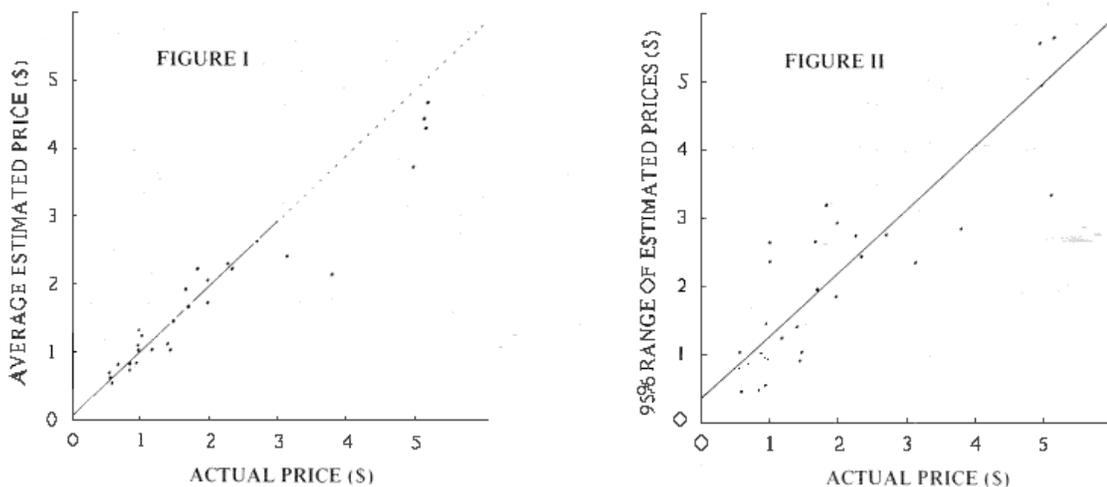


Figure 2

At this point, we have compared **average** estimates to actual prices of items and the agreement has not been outstanding. Individual estimates of course, varied a lot more. Figure 2 shows the range of estimates for individual items (95% confidence) compared with actual prices. This chart shows that as the price goes up, so does the uncertainty of the estimate. In fact, the range of estimates is about equal to the price. For example, flour at \$2.68 (actual) is estimated from \$1.27 to \$4.03, a range of \$2.76. This indicates that in addition to substantial errors in the average estimates, there is a lot of uncertainty – lack of agreement – on prices of individual items. This also holds true for market basket totals: estimate = $\$54.72 \pm \12.46 vs. actual = $\$59.01$. In addition, a detailed comparison of individual shopper's estimates shows that no single shopper was much better at estimating prices than the other shoppers. That is, all of them made many errors and no one person even came close to the accuracy of the group averages.

Profit By Price

This evidence suggests that consumers know very little about the prices they pay in the supermarket. If this is so, how can pricing play an important role in their purchase decisions? It seems likely that over a fairly wide range of possible prices, it doesn't.

Many statistics have been compiled over the years to show that food has become a better and better bargain. That is, food prices are depressed. We suggest that this deplorable condition is not due to the stern discipline of consumers making purchase decisions but more likely to sluggish thinking by at least some elements of the selling industry. In fact, there is ample room for price and profit increases. Profitability requires courage – pricing courage.