ADVERTISING-PRICING CONDUCT IN MEAT RETAILING*

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INTRODUCTION

For a decade or longer it has been recognized that pricing of food products in supermarkets is not a matter of competitive price discovery but of intricately interwoven pricing and merchandising strategy. In the search for patterns of that strategy, the more conventional approach has been to apply customary data on market structure. In a further search for conduct patterns, because of the prohibitive expense of a comprehensive multi-city study, the best research course is to build up a library of case studies. This case study of 14 supermarkets in Columbia, Mo., reports two contrasting patterns of advertising-pricing behavior. Prices are not varied as much as the ads imply.

DATA SOURCES

The data reported here are derived from a study of retail food prices and ads in Columbia, Mo., a city of 60,000. Located midway between St. Louis and Kansas City, its 14 supermarkets were serviced by – and to a varying extent, managed by – chain divisional headquarters and affiliate wholesalers located elsewhere. For a small city, it had an impressive array of competing food retailers with one unit each of five national chains; four independently owned affiliates, associated two each with two large wholesalers, and one unit each of five small regional chains. In addition, there were a very few small stores of the convenience and neighborhood types.

Pricing and advertising conduct in such a market obviously has strong external influences. Chains, in particular, are known to apply fairly uniform policies on a divisional or area basis. Affiliated wholesalers provide suggested price lists and suggest much of the format for the weekly ads. An important research advantage of such a market area is that it provides a sample of conduct from several large, overlapping market areas embracing much of Missouri, Illinois, and Kansas.

This study differs from most retail studies in its very intensive coverage of the meat counter. The study included virtually all beef, pork, and poultry items, excluding the variety meats, lunch meats, and sausages.

In-store prices were obtained for 13 consecutive weekends (June to September 1971) in six large supermarkets. Three supermarkets were units of three national chains; the other three are classified together as affiliates in this report, although one, A-3, was a member of a small regional corporate group. Advertised prices of meats were obtained from weekly newspaper ads for all 14 of the supermarkets in the area for the same 13-week period plus the three weeks preceding.

Employment patterns in Columbia generate a very high proportion of white-collar workers and a high proportion of upper-middle-income families. With the exception of supermarket A-3, which catered mainly to a lower-income market segment, the product mix of the other five supermarkets reflected the general income pattern described. Fresh beef was generally choice grade and the quality of other meats was quite uniform and high level.

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RELATION OF ADVERTISED AND NON-ADVERTISED PRICES

Are ad prices lower?

Are the prices in the weekly newspaper ads lower than: (a) usual non-advertised prices for those items in those stores, or (b) the prices of comparable items in other stores of that city? Previous evidence has appeared to be possibly, although not necessarily, contradictory. Studies in both California [12] and Philadelphia [15] in the early 1960's concluded that a majority of the food items in the ads had not been reduced in price. On the other hand, special studies for the National Commission on Food Marketing concluded that weekend specials of meats represented such significant reductions that USDA data on margins needed to be recomputed to reflect their impact [4, 8, 9]. Another study in 22 midwestern cities supported the impact of large weekend specials [11]. Fewer data are available on the second part of the question as to whether ad prices are lower than non-advertised prices in competing stores. A 1960 survey in Palo Alto of frequently advertised items found that food prices were lower in stores advertising the items that week than in stores not advertising them in 92 percent of the cases observed. The mean of advertised prices was only 78.6 percent of the mean of non-advertised prices [6].

As in the Philadelphia study, a small majority of the ad items in our study were not price reductions from the previous week. However, there were very large variations among supermarkets.

Advertised prices averaged lower in Columbia than non-advertised prices, but much closer than in the Palo Alto study. A comparison of ad and non-ad prices for 98 meat items, which were each advertised a minimum of eight weeks of the 16, indicated the ad prices averaged 91.2 percent of non-ad prices.[1]

It is possible to reconcile all of these results – excepting perhaps Palo Alto – with a single behavior pattern in which most advertised prices remain unchanged but a minority represent deep price cuts.[2] However, it is quite possible that two or more patterns of advertising-pricing behavior have been observed. Before we examine data supporting the two-or-more-patterns hypothesis, it may be useful to examine the concept of variable price merchandising (VPM).

VARIABLE PRICE MERCHANDISING

Nelson and Preston [10] suggested that we can better understand the weekly variations in the individual prices of food (given generally stable wholesale prices) in terms of overall merchandising strategies rather than in terms of specific competitive interactions.[3]

" . . . variable-price merchandising is the frequent upward and downward manipulation of prices on selected items within a multi-product firm for the purpose of drawing attention to its market offerings . . . " [10, p. 98]. VPM is more than weekend specialing – it is the systematic raising and lowering of various prices for various time periods. While they observed elsewhere in their study that some items in the ads were not price reductions, it appears obvious that an excellent method of "drawing attention" by price manipulation is to put the price reductions in the ads.

The affiliate and chain supermarkets in Columbia followed two different advertising-pricing patterns.[4] The affiliate stores – consistent with the general import of the Food Commission studies and of VPM – manipulated many prices and had price reductions in a majority of their weekly ad-items. They also generally underpriced the chains in their ads while overpricing them in their non-advertised meat prices. The conduct of the chain stores suggests a significantly different version of VPM. They also manipulated many prices, but advertised price reductions in only a small minority of their ad-items. As indicated in Table 1, their non-advertised prices were lower than the affiliates, while their advertised prices were less competitive. The exception is affiliate A-3 which catered to a lower income segment. Even it, however, was closer to the chains on non-advertised prices than on ad-prices.

While both groups advertised the prices of many meat items and while both groups manipulated many prices weekly, the pricing-advertising interaction was much different. The chains tended to advertise many items for several consecutive weeks at unchanging, albeit usually quite competitive prices. The affiliates

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[1] Unweighted means of non-ad prices in the six stores and ad prices in the 14 stores.

[2] While differences could be attributed to the coverage of all foods in some of the studies and to meats alone in the others, the former studies do not indicate any deviations in the advertising patterns of meats compared to other foods.

[3] This is not to deny the possible presence of oligopolistic and other competitive interactions as they affect general price levels of competing supermarkets. See [2, 3, 10, 12].

[4] Our focus is on the existence of the differing patterns rather than the possible happenstance that the patterns were associated with national chain and affiliate groupings. As already noted, A-3, as a small regional chain, could be classified with the chains rather than the affiliates.

Table 1. PRICE INDICES--ALL MEATS, COLUMBIA, MO., 1971[a]

	Ad Prices[b]	Non-advertised Prices[b]
C - 1[c]	98	94
C - 2	103	101
C - 3	105	101
A - 1	97	103
A - 2	100	104
A - 3	88	91

[a]A store index was computed for each item by computing the mean price of that item for all stores and converting that mean to a base of 100. The overall store index is a mean of the store indices for each item and thus each item has equal weight.

[b]The indices of ad prices are based on 26 items (14 beef, 8 pork and 4 poultry) which met the criteria of (1) being advertised by 2 or more stores and (2) having 16 or more total observations. The indices of non-advertised prices are based on 54 items (27 beef, 20 pork and 7 poultry) which met the criteria of having 26 or more observations (total possible = 78 if all stores carried all weeks). The separate computation of indices for the two sets of prices prevents any direct comparison of ad and non-ad indices.

[c]The C & A prefixes identify the chain and affiliate stores.

tended toward a periodic cycle of specials: for example, a beef roast sale every three or four weeks; likewise, a ham or pork steak group of specials; then broilers might be featured in a similar cycle (Table 2).

It is hypothesized that these divergent patterns of conduct were associated with differing strategies of merchandising. The affiliates with their "specials" version of VPM were relying upon a changing set of weekly "bargains" to attract customers. The chains had developed more of an everyday reasonable price image which permitted – even required – much less divergence of their advertised and non-advertised prices.

What market characteristics might permit and encourage the smaller divergence of ad and non-ad prices observed in these chain stores? The policy has several possible benefits for management. It reduces greatly the administrative problems of changing prices of "specials" for the ad period. It reduces the inventory and labor problems associated with large fluctuations in weekly sales – problems of considerable significance in such items as fresh meats with their high perishability and their requirement of much processing and handling at store level.

The crucial test, then, is that of the market. In any given market, is there a market segment of consumers who will patronize adequately the supermarkets pursuing such a merchandising strategy? One piece of supporting evidence is the fact that numerous studies have shown the persistence of sizeable inter-store price differences in specific items and in market baskets over large periods [3, 7, 10, 11, 12]. Table 3 illustrates such findings in Columbia. There is no need to repeat here the various hypotheses which have been suggested for explaining why consumer behavior has not eliminated such pricing differentials. The point is that the chain merchandising behavior observed in this study is not inconsistent with much of the pricing results reported elsewhere.

The next logical question is whether the two types of observed merchandising patterns can long coexist? We can only speculate. The marketing specialist probably would argue in terms of market segments. If a sizeable portion of customers is attracted by temporary price cuts, then that merchandising strategy may continue to be viable for some supermarkets. Or perhaps the other non-price attractions of most supermarkets, including the convenience of location, are such that the advertising-pricing strategy really doesn't matter much to a large market segment. Then whatever advertising-pricing strategies now exist may continue.

SUMMARY AND CONCLUSIONS

The weekend special – an advertised price cut on numerous items – has occupied a central place in the agricultural economist's view of retail food pricing. Nelson and Preston, [10], with their concept of variable price merchandising, emphasized the merchandising-promotional aspects of the weekly manipulation of prices. Prices are manipulated more to attract customer attention than in any discernible pattern of oligopolistic interaction.

Table 2. ADVERTISING PATTERNS OBSERVED IN SUPERMARKETS, 16 WEEKS, 1971, COLUMBIA, MO.

Supermarkets	Average mentions per item	% of items mentioned 9 or more times	Index of Duplication
Chains			
C - 1	5[a]	5	.44[b]
C - 2	5	5	.35
C - 3	6	6	.55
Affiliates			
A - 1	3	0	.07
A - 2	3	0	.02
A - 3	3	1	.19

[a]Indicates that each item that was advertised appeared in the ads an average of 5 weeks in the 16-week period. While all items in this analysis appeared at least 8 of the 16 weeks in the ad of one or more stores, the mean appearances in a given store were always less than 8.

[b]This index measures the extent to which each week's ad is duplicated the next week. The index is so constructed that it would equal 1.0 if the same set of items were advertised all 16 weeks and would equal zero if there were one or more intervening weeks between all ad-mentions of each item.

Table 3. MEAN[a] IN-STORE PRICES OF SEVEN COMMON ITEMS, COLUMBIA, MO., 1971

	Stores					
	C - 1	C - 2	C - 3	A - 1	A - 2	A - 3
Center chuck roast	.65	.83	.79	.76	.71	.90
Rib Steak	1.04	1.16	1.26	1.46	1.57	1.04
Ground beef (1 lb. size)	.63	.69	.59	.73	.72	.67
Whole broilers	.32	.36	.38	.34	.38	.27
Bacon (first line)	.79	.89	.69	.86	.90	.73
Pork loin (¼ loin)	.73	.74	.66	.77	.73	---
Pork steak	.53	.72	.67	.74	.69	.56
Simple means	.67	.77	.72	.80	.81	.69

[a]Mean of all weekend prices in the 13-week period.

Our research identifies two patterns of merchandising conduct and speculates on the rationale of the strategies behind them. On the one hand, the advertised price cut was very much in evidence in some affiliate supermarkets. On the other hand, the ads of some chain supermarkets in the same market area contained few price cuts. Instead, numerous items were advertised for many weeks at unchanged but competitive prices. Of the five supermarkets catering to the same income level of consumers, the three chains without the large specials had a lower level of non-advertised meat prices than the other two markets.

The implications for further research are several. Are there generally two such advertising-pricing patterns in most market areas? Can two such patterns be expected to coexist, or is the temporary price special on the way out? Are these results unique to meats or do they apply to the entire supermarket? Do national chains usually adopt the one pattern and affiliates the other? What are the implications for consumer satisfaction? It is clear, for example, that Columbia consumers would be misled if they infer the level of all meat prices in each supermarket by comparing meat prices in the weekly ads.

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