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POLICY RESEARCH REPORT

PRICES OF PRIVATE LABEL AND NATIONAL BRAND FOOD PRODUCTS

AFPC Policy Research Report 93-2

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Preface

RETAIL FOOD PRICES

The necessity of food for everyone's well being and the special and large representation of food costs in the budget of poorer households makes food prices and pricing patterns important. Retail food prices are special in another way. Much of our food moves to consumers through supermarkets. These stores have come to be large business typically offering as many as 15,000 to 25,000 items for sale at one time. As these stores have become larger, changes have developed in pricing patterns and behavior. All items are not equal in importance to the image of the store. Prices of some items may have special roles in promoting the store at a point in time--different from their usual roles. Supermarkets are very sensitive to price levels and changes of other supermarkets. They frequently check each others prices and are constantly adjusting prices in order to maintain an image of "low prices" or "competitive prices." Since the price image is the motivation for this behavior, effort is usually expended to make these price changes visible. Most of the advertising of this industry is related to prices and price changes.

Price changes and the general pattern of price behavior that result from an interaction with other competing firms in the same industry may be called "horizontal price behavior." This is a contrast to the more traditional expectation for price behavior. Economists teach students about the role of price in adjusting the incentive for buying and selling which results from the interaction of the supply of and demand for products. Changes in price are an equilibrating device which brings harmony between buying and selling incentives in the market place. This process eventually relates the price to the cost of production of goods and rations consumption to situations in which goods have the most value. These price changes relate to the vertical channel between production and consumption and we call them "vertical price behavior."

Retail food prices reflect some combination of horizontal and vertical influences. They are unusual because there is more horizontal influence than we see in most prices. We are taught expectations for vertical price behavior, but horizontal price behavior is less well understood by experts and usually not taught to citizens at all.

Because retail food price behavior is unusual and especially important in our economy, it is the focus of a series of empirical and theoretical studies. The AGRICULTURAL AND FOOD POLICY CENTER will publish a series of studies which observe and analyze retail food prices. Titles and numbers are as follows:

PRR/93-1 RETAIL FOOD PRICING: HORIZONTAL AND VERTICAL DETERMINANTS D.I. Padberg, Ron Knutson and S.H.A. Jafri

PRR/93-2 PRICES OF PRIVATE LABEL AND NAT. BRAND FOOD PRODUCTS Hussain Ali Jafri, Trey Rogers and D.I. Padberg

PRR/93-3 RETAIL & WHOLESALE PRICES FOR PRODUCE Charles Hall, S.H.A. Jafri, R. Hanagriff and D.I. Padberg

PRR/93-4 RETAIL AND WHOLESALE PRICES FOR DAIRY PRODUCTS Ron Knutson, Roger Hanagriff and D.I. Padberg

PRR/93-5 AFFECT OF RETAIL PRICE VARIABILITY ON TOTAL REVENUE George Criner, S.H.A. Jafri, Ron Knutson and D.I. Padberg

As fundamental data are made available, more studies may be developed.

PRICES OF PRIVATE LABEL AND NATIONAL BRAND FOOD PRODUCTS

by

Hussain Ali Jafri, Trey Rogers and D.I. Padberg

According to the Private Label Manufacturers Association, private labels refer to "products that are sold to retail outlets where the store name appears on the packaging, instead of the manufacturer name or brand name" (Brickman). The use of private label or retailer brands is not at all unusual--being seen in many lines of goods from hardware to food. In most cases, the central motivation is to offer products at discounted prices. The market niche of private label products is almost always on the low price end of the spectrum. This observation suggests that there is some cost advantage available to these private label products. Such a cost advantage may result from a more efficient harmonizing of retail, wholesale and manufacturer handling of these products. It may also be because some of the production and marketing costs are reduced or eliminated. The observation that private label products tend to be less "up to date" in their developing features and less advertised may be consistent with cost advantages in production and marketing.

The extent of private label in a market is typically correlated with the development of large firm retailers. Size of firm is more germane to fostering private label than size of store. Some of the largest U.S. retail firms, such as Sears, have had a strong emphasis on private label. As the food industry has experienced a transition to large retail firms over the past several decades, private label has increased in importance. Private label is especially important in the food industry because of the presence of large retail firms and the tendency for retail competition among firms to focus on prices and the communication of price information. In addition, the strong leadership of advertised manufacturer brands (at premium prices) provides an invitation to the development of private label products. This report deals only with food and examines the difference in consumer price between manufacturer brands and private label products.

FUNDAMENTALS OF PRIVATE LABEL MERCHANDISING

The discussion which follows deals with generalities useful in getting a perspective of motivations with in the food distribution sector. The food industry is an exceptionally large and diverse economic sector. One will find exceptions to these generalities frequently. Even so, it is useful to have in mind the general tendencies concerning the competitive behavior of retailers, manufacturers and other agencies involved.

It is useful to divide the activities of food retailers into two classes--merchandising and logistics. In this classification, logistics refers to the more physical and administrative tasks of procurement, production, delivery, storage, accounting, ordering, stocking, etc. On the other hand, merchandising refers to the communication, advertising, display, stimulation, attention getting, human relations, etc. activities necessary to attract consumer participation and encourage sales. From the earliest development of the food industry, the largest firms have had a large commitment to logistics. The early food chains, exercised most of their competitive strategy in (mostly preretail) logistics and left the retail units looking and behaving much like their independent competitors. Because of superior logistics, food chain stores had lower cost goods than independents. This required independents and smaller chains to specialize in merchandising in order to be competitive.

As the food industry has become more

mature, many other competitive patterns have come and gone. Trading stamps became the single most important element of competitive positioning two or three decades ago, then dropped out of sight. We are cycling through changing emphasis on warehouse stores, merchandise clubs, convenience stores, superstores, etc. Throughout all of these adjustments, large firms tend to have a more developed and integrated logistics system. Within this system, they can exercise more cost and quality control on private label than their smaller, less well integrated competitors. This structure gives them a price advantage. The often large price discounts (in comparison to advertised brands) used in selling private label is a type of rivalry more easily managed in a large organization than an emphasis on other kinds of merchandising. Because of this situation, large firm retailers tend to have a greater emphasis on private label than smaller firms (Handy and Padberg).

A rather different pattern emerges at the manufacturing level. We can again divide the activities of food manufacturing into two major classes--physical processing (similar to logistics) and marketing (similar to merchandising). Physical processing involves taking raw agricultural commodities and other supplies and making packaged consumer products. Marketing activities by food manufacturers includes a lot of product development and a great emphasis on consumer advertising. With food purchases representing ten to fifteen percent of consumer expenditures, the industry must account for a similar share of the general economy. Yet, the food industry dominates the list of largest advertisers in the whole economy. Consumer advertising and new product development are more developed as marketing strategies in this industry than in any other major industry.

At the manufacturing level, small firms can deal effectively with processing and logistics. But only the largest firms are able to function successfully in the product development/consumer advertising activities. These activities seem to have immense scale economies. The large firms tend to specialize in marketing activities. They are able to earn higher margins there and are not interested in private label packing where margins are notoriously narrow. In addition, they have little reason to aid or assist private label, which is constantly underselling them. Conversely, private label is attractive to the smaller processor. The retailer wants to control product quality and marketing--those areas where the small manufacturer is least competitive. Farmer owned processing cooperatives are frequent packers of private label. Retailers own some processing facilities--frequently bakeries and dairy processors--but most of the volume of private label products comes from specialized, small firm, food processors.

ROLE OF PRIVATE LABEL IN FOOD INDUSTRY PERFORMANCE

Most efforts to describe industrial "performance" give much weight to efficiency. We tend to think an industry is performing well if it gets goods to consumers at low costs and prices. There are several reasons for this thinking. First, we associate excessive prices (and profits) with monopoly--perhaps the most famous reason for poor performance. Second, the classic economic models deal with homogeneous goods leaving little or no latitude for product development or differentiation. Additionally, price and cost advantages are objective and universally accepted while variations in product quality are more subjective. Some consumers or analysts may prefer one quality while others prefer something else. It is difficult to assess the value of having variety from which to choose. Admiring low prices for standard goods has been built into out culture for centuries, while differentiation has been important in the food industry for only a few decades. While we may respond to product differentiation in our behavior, many of us have not developed an articulate rationale for

explaining that behavior. All of these factors give our consumers as well as our economic analysts a predisposition to admire private label because it delivers standard quality goods at low prices.

The role of private label in food industry performance is more subtle and complex. New product competition and product differentiation is very important in food industry performance. These processes have enabled our lifestyle to change and have made the food industry responsive to our changing needs. These major marketing thrusts have been done and paid for by the large conglomerate food manufacturers. It is these companies which identify and establish new successful food products. Private label products are copies of these initiatives appearing after the development work has reached successful volume for scale economies. Therefore, the wider margins of advertised products enable, to some extent, the success of private label because they bear the development and market entry costs. Private labels only emerge where the national brand products are successful and generate high volume.

While the private label product is, in a sense, a parasite on the market for national brands, it has very important effects on food industry performance. Any serious and balanced assessment of industry performance would look for two characteristics--a vigorous capacity for innovation and mechanisms for presenting the innovative products at "competitive" prices when volume meets scale economy requirements. This latter characteristic is often thought to be inconsistent with the first. The type of firm structure in which innovative food products are offered to consumers tends to be the large Galbraithian conglomerates. Those firms have little interest in the narrow margins expected in "competitive" products. At the same time, they are unable to prevent smaller manufacturers from producing private label copy products which will be presented to the consumer vigorously by the largest food chains at substantial price discounts. The interaction of these several subsets of firms at both the manufacturing and distribution levels provides both the characteristics we seek. The overall result is achieved through specialization within these industry subsectors. Private label is an output of the subsector including large retailers and small manufacturers. It is the mechanism which makes the new and innovative products available to consumers at "competitive" prices when volume reaches scale economy requirements.

EXPECTATIONS FOR PRICE DIFFERENCES

In this scenario, the higher price received for advertised brands is an innovation premium. We should think of it as a differentiation premium because sometimes the advertised products are distinguished by "status" rather than or in addition to innovation. There may be products for which status is important and innovation may have limited scope. Beer may be an example. While private label beer has been presented to the market, there is not much evidence of consumer interest. In this case, consumers want status sufficiently to pay a premium price in preference to unadvertised product at a private label discount price. The mechanism is there for developing innovation--we see alternatives explored such as light beer and dry beer. But the mechanism for bringing the price down to competitive levels doesn't work because the value of the status from advertising is worth more to consumers than the extent of the price discount without it.

Is there an intrinsic way to determine how much the innovation or differentiation premium should be? Conceptually, the list of factors which make this premium above the cost of presenting private label would include: a) a risk premium (many "new products" will not be successful), b) manufacturing costs while products are in a volume too small for scale economy requirements, c) advertising and other marketing costs, d) introduction costs (slotting

allowance), c) special costs for distribution in small introductory volume, etc. As we look at this list, it is clear that the premium is likely to be higher is some products than in others. A product in a high rate of innovation and change should have higher premiums than a product where the level of change of status is much lower. As products become more mature in relation to the product life cycle, the level of premium should decrease. These concepts give some basis for expecting differences between products and changes through time. At the same time, it is difficult to translate the list to cost levels to the industry.

Another way to assess price differences is to measure what level of price differences are important in this industry. If one looked at the aggregate (across the many thousand products in the supermarket) price level between competitors, it is likely that differences would be small--two or three percent, certainly less than five percent. In a newspaper ad which contained 150 advertised prices, there might be a dozen or less items with discounts from shelf prices of 30-40 percent. At the same time, many would be in the 5-10 percent range. These examples are not extremes, but are meant to give a sense of the level of price discounts and premiums that are used in competitive rivalry within this industry and in interaction with consumers. These observations suggest that the food industry is mature and competitive. Cost advantages available to a firm are also typically available to rivals. Where the high priced store and the low priced store have prices on similar items within a few percentage points, 20 to 40 percent are very large price differences.

PRICE DIFFERENCES OBSERVED

Probably the most important factors in observing retail food price comparisons is assuring that the private label and advertised brand products are equivalent. In a product family, there will frequently be more than one level of quality in manufacturer's brands and only one quality level of private label. Sometimes there are two or three advertised manufacturer brands. While the quality of both advertised brands seems to be equivalent, they may be priced slightly differently. The one priced higher one week may be priced lower the next week. With these alternatives and choices in manufacturer brands it is not completely straightforward how to choose the manufacturer brand to be compared with the one private label. Unadvertised and usually lower priced manufacturer brands would not be the best choice and would be eliminated. The choice between Folgers and Maxwell House instant coffee to be compared with Kroger instant coffee is arbitrary. Either would be fine even though they may experience a different pattern of specials in the test period and their price levels may be slightly different. The brand that is arbitrarily chosen at first would be used throughout the test.

Since the "normal" food retail price pattern has variation week to week because of price specials and other reasons, prices must be observed for several weeks so that the average of the collected prices is not biased by temporary price variation. There is no clear rule establishing a sufficient number of weeks. Much of the variation will be averaged out in six or eight weeks. Several studies have used ten or twelve weeks.

Ten weeks of data were collected for ten product pairs in two college towns in Texas. The products chosen included: frozen orange juice, 12 oz.; fresh milk, one half gal.; canned tuna fish, 6.5 oz.; canned cut green beans, 16 oz.; canned whole kernel corn, 16 oz.; white bread, 24 oz.; instant coffee, 4 oz.; canned sliced cling peaches, 16 oz.; and catsup, 28 oz. The data were collected by students under the supervision of faculty members.

Town A had about 17,000 population and stores representing one large food chain and four independent retailers. Town B was about

100,000 population and had stores representing four large chains and several independent business. Data were taken from three independents and the one chain in the smaller town and from three chains and one independent in the larger town. These samples are probably too small to make comparisons between type of firms. Only the aggregated data are used for comparisons. Weekly prices were summed for both private label and manufacturers brands. Table 1 shows the differences as a percent of private label. The data collected in this project are shown in the two right hand columns in Table 1. In addition, similar data are shown from earlier studies. The first column is from the National Commission on Food Marketing (NCFM). The second column is from "Prices and Quality Comparisons of National Brand and Private Label Food Products," (Jafri and Lifferth). The next two columns are taken from a U.S. Department of Agriculture study in 1980 (Handy). These studies were attempts to measure the same price differences. In some cases, there was some differences in the product over the years. In 1966, the 6 oz. frozen orange juice was more popular. There is also difference in the size of catsup in some different periods. Of course, the private label and national brand items were the same size and seen to be equivalent when the comparison was made.

The simple average for each of the towns was about 30%. Since there is great variation from product to product, it is precarious to project what the storewide average might be. The ERS survey was taken in 16 stores in Washington, D.C, and included 41 items with an the average difference of 34.9%. A.C. Neilson data were also reported in the ERS study comparing 30 products with an average difference of 23%. These are substantial differences. Retailers are able to use a powerful price incentive to attract attention to their own brands. Conversely, the premium for innovation and status is substantial. Compared to price specials and especially to aggregate price differences between competing stores, these are large price differences.

There is no evidence that the size of differences is decreasing over time. Comparisons are difficult over extended time periods. Individual products that are quite innovative in one time may be mature commodities in another. Yet, the comparisons we are able to make suggest differences may be increasing. In 1966, when the first study was done, the typical supermarket had about 10,000 square feet of selling area and offered about 6,000 items. Now, these numbers have at least tripled. The advertised brands have stronger marketing programs. With more and stronger non-price messages, consumers may be less aware of or sensitive to price signals and wider differences may be required to get attention.

While the price difference averaged across the products studied is about 30%, there is great variation between products. It is not possible to account for that variation in a precise way. There are some general tendencies which seem useful in explaining some of this variation. We would expect products with high cost marketing to have the potential for highest differences between national brand and private label prices. The high cost marketing may be associated with innovative or extensively promoted products. Also, there are products, such as bread and milk, where their perishability makes physical distribution expensive and increases the cost advantage of integrating production, distribution and retailing. This would suggest putting bread, milk, catsup and instant coffee in a higher expectation group as compared with sliced cling peaches, canned beans or corn and tuna fish. While this seems generally consistent with the results, Town B seems to have tuna and canned green beans higher than expected and milk lower than expected.

These influences--innovation, promotion and economies of integration--may be classified as "vertical determinants" of retail prices. They

TABLE 1. Price Comparisons between Private Label and National Brands, Various Years, 1966 to 1992.

PRODUCT GROUP	NCFM, 1966	J & L, 1975	ERS,USDA 1980	A.C.NIEL., 1980	TOWN A, 1991	TOWN B, 1992
	%	%	%	%	%	%
Frozen Orange Juice Conc.	35	41.2	18.9	27.6	40.0	18.0
Milk, 1/2 gal.					41.3	14.9
Tuna Fish, 6.5 oz.	24	17.9	13.7	13.9	23.6	44.6
Canned Green Beans, Cut, 16 0z.	33				21.7	32.0
Whole Kernel Corn, Canned, 16 0z.					21.8	21.8
Tomato Soup, Canned 16 oz.					1.4	11.4
White bread, 24 oz.			55.0		55.2	55.7
Instant Coffee, 4 oz.			14.1	17.4	34.1	32.0
Sliced Cling Peaches, 16 oz.	4	6.4	20.1	7.9	12.8	21.7
Catsup, 28 oz.	14	12.0	27.6	33.8	43.6	48.7

NCFM is from National Commission of Food Marketing, 1966
J&L is from Jafri and Lifferth, 1977
ERS,USDA is from Handy, 1985
A.C.NIEL. is from Handy, 1985

come from the economics of the particular product (looking at the food marketing system as a vertical channel). In addition, there are "horizontal influences." Price rivalry between competing supermarkets may be classified a horizontal influence on price. There is a tendency for competing stores to check each other's prices and to be responsive to important price changes of competitors. This process leads to situations where retail prices are inconsistent with the expectations which would emerge from the economics of the particular product, but are made consistent with competitors in the market. When a store is offering many products (the typical superstore would have 15,000 to 20,000 items--some as many as 35,000) keeping track of the economics of each product may be less important than having important products priced consistently with competitors. This situation is the most likely explanation price differences deviate from what the horizontal influences would lead us to expect.

SUMMARY AND CONCLUSIONS

The price advantage of store brands as compared to nationally advertised brands is large. In tends to be largest where marketing costs are high such as ininnovative products, highly promoted or very perishable products. These price differences seem to be increasing over time. The magnitude of these price differences are large in comparison to price differences between stores or in price specials.

While we usually look for price competition within the interactions between competing stores, the presence and behavior of private label programs is a significant dimension of price competition. Rather than being between competing stores, it is between competing subsectors within the food system. With the leadership of the largest chain store firms, the competitive incentives of small food manufacturers are brought to bear on the large multinational manufacturing conglomerates.

This process brings the consumer not only the advantages of the large companies able to offer new products or products with brands appeal but also competition offering low cost copies of these successful products. The food industry has provided this subtle and complex combination of competitive rivalry successfully for several decades.

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