RESEARCH BULLETIN 1082 DECEMBER 1975

Some Conduct and Performance Aspects of Food Specials Retailing: A Columbus Market Case Study

THOMAS T. STOUT

ROBERT C. DOEHLER

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
Wooster, Ohio

CONTENTS

* * * * *

AGDEX 846

12-75-2M

Some Conduct and Performance Aspects of Food Specials Retailing: A Columbus Market Case Study

THOMAS T. STOUT and ROBERT C. DOEHLER[1]

SUMMARY

This bulletin summarizes the conceptual framework and analytical results of a 1972-73 study examining attitudes among retail grocery shoppers. It also examines the relationship between these attitudes and reported shopping patterns, and the relationship between perceived supermarket merchandising conduct and the actual conduct of the same sampled firms. The last measure cited was based on objective measurements taken by the researchers.

To limit the scope of such an undertaking, the study is confined to the Columbus, Ohio, market area. Eight grocery firms participated in this effort. From these eight firms, 21 supermarkets were selected for examination. Moreover, the study was confined to an examination of food specials, *i.e.,* those items selected weekly as featured items by each firm. Five food specials advertising variables and 11 merchandising variables associated with advertising specials were studied.

From 6,000 distributed questionnaires, 1,385 supermarket shoppers participated in the study. They specified their household demographic characteristics and recorded their reactions to statements which would indicate attitudes toward food specials advertising and preferred food specials merchandising methods.

A principal objective of this research was an attempt to develop a relative measure of firm and market *performance* which is regarded in economics as that "... strategic end result of the conduct of market sellers and buyers." The effort succeeded in providing a basis for such a measurement by comparing preferred and actual merchandising conduct.

INTRODUCTION

This bulletin concludes and consolidates a series of progress reports on one phase of a current OARDC research effort.[2]

The analysis presented here is divided into two parts. The first deals with consumer attitudes and ratings concerning specials advertising and merchandising. The second is focused on an attempt to measure retail grocery conduct and market performance in food specials merchandising.

The terms *conduct* and *performance* are employed in their Bainsian context:

> "Market conduct refers to the pattern of behavior that enterprises follow in adapting or adjusting to the markets in which they sell (or buy)." (2, p. 9)

> "Market performance encompasses the strategic end results of the conduct of sellers and buyers. For sellers it is measured by their adjustments to the effective demands for their outputs; for buyers by their adjustments to the supply conditions for the goods they purchase. It is the crucial indicator of how well market activity of firms has contributed to the enhancement of general material welfare." (2, p. 372)

The significance of this lies in the fact that one cannot measure *market performance* by limiting analytical efforts to an examination of the *conduct* of only one party to that market—the seller. If *performance* is the strategic end result of the conduct of sellers and buyers, then the conduct of buyers needs to be examined as well. In the case of retail food markets, this means that the task cannot be limited to an examination of store merchandising methods, but must also include some assessment of food shopper conduct as evidenced or indicated by shopper attitudes, evaluations, and actions concerning the food shopping experience.

While it may be possible to make a factual assessment of actual store conduct in some merchandising dimensions, as this study demonstrates, the disciplinary limits of economics are approached when equally factual assessments of shopper conduct are attempted. Hence, the reliability of any *market performance* measure which is a consequence of buyer and seller conduct may be limited as a policy tool in proportion to its reliability as a measure of shopper (buyer) conduct. Yet the justification for making the attempt is multifold and obvious.

A principal need for this kind of investigation lies in several shortcomings of present circumstances. First, there is a lack of operational performance measurement tools in the literature of structure, conduct, and performance.[3] Second, existing statutes provide inadequate rationale for judging firm performance as a concept. Their function lies more in the guidance they provide when specific cases of questionable performance have been observed. A third factor is recent interest in consumer protection which has focused attention on performance from a consumer viewpoint.

[1]Professor and former Research Assistant, respectively, Dept. of Agricultural Economics and Rural Sociology, The Ohio State University and Ohio Agricultural Research and Development Center.

[2]Hatch 423: Trade Practices in Meat and Grocery Retailing in Ohio.

[3]For a summary and critique of several performance measures, see Marion and Handy, especially chapter 4 (13).

The problem of developing such a measure lies in determining a relevant theoretical basis for performance judgment. Stated otherwise, who will judge these firms and what is their reasoning?

Growing Awareness of Need for Consumer Protection

Under conventional economic theory, pure competition is a socially desirable economic condition in which neither sellers nor buyers control the market and an interaction between these two powerless parties determines market performance. Pure monopoly or monopsony, on the other hand, is a socially suspect form of economic activity because a few buyers or sellers have sufficient power to control the market within the limits set by cost curves of firms with whom they deal.

Freedom of market entry or exit is also a basis for structural classification. Pure competition and monopoly define the extremes in this structural dimension as well.

There are strong indications that post-World War II developments in food retailing have brought about increasing barriers to entry for the food retailer. (8, pp. 272-273) Entry barriers customarily have been viewed from the seller's standpoint. It is also appropriate to examine the matter from the buyer's perspective. Within the food industry, the consumer has a flexibility of choice among food categories, and further still among brands. Her limitations or constraints begin with her budgetary constraints and extend into food category and brand preferences, store image and location, and the structural market conditions she is obliged to accept.

Market conditions created by firm activity represent the least directly controllable constraint to the consumer. An individual consumer may change her brand and category preferences, locations, and income, but is unable to affect the structure or conduct of the market, at least in the short run.

Current marketing literature reflects a rising awareness of a need to re-examine the status of protection afforded the consumer who necessarily is obliged to accept market organization and conduct, and the performance they induce.[4] Standard textbooks in economics explain that, historically, the marketing system has functioned on the basis of an understood obligation to serve the consumer. (3, pp. 70-79; 12, pp. 152-165; 6, pp. 27-28; 18; 21, pp. 39-41 and 446-447) Intrinsic to this understanding is the recognition of consumer sovereignty, and the assumption that the consumer is protected by having adequate information and is rational in the choice process. Further, it is assumed the market structure offers a sufficient number of alternative goods from which to choose and a competitive environment which encourages and is responsive to a rational choice. Thus, the structure of the market is itself an important contribution to the protection of consumer sovereignty. The theoretically desirable structural form affording such protection is pure competition, where the market is composed of multitudes of small, independent participants engaged in competitive pricing in which resultant prices of goods and services offered for sale closely approximate their cost of production. (21, pp. 39-41, 446-447) This exemplary condition is not a common occurrence in modern marketing, however, and this is a contributing factor in the concerns expressed below.

Continuing Structural Changes

The concern for the status of consumer protection appears to arise from several developments. One of these is an awareness of continuing structural changes which depart progressively further from competitive norms. For example, in 1939 unaffiliated grocery stores accounted for nearly two-thirds of all grocery establishments and more than one-third of all grocery sales. By 1961, however, such stores, although continuing to comprise more than half the number of establishments, accounted for approximately 8 percent of grocery sales.[5] The emergence of chain stores and groups of affiliated independent groceries has been motivated by considerations such as increased economies of large scale operations in sales, management, store operations, and sources of supply; attendant financing advantages in money markets; advertising economies associated with mass merchandising in a national market, etc. Such advantages do not readily accrue to small independent operators. These developments, moreover, are associated with corollary developments in product differentiation, brand name proliferation, and competition on a non-price basis, all of which, it is argued, increase the decision-making burden of making rational choices among alternative goods and services. (15)

Changing Consumer Roles

A second consideration is the proposition suggested by some that, in an affluent society, food purchases are a less critical element of concern to the modern housewife. (18) Even when food prices rise sharply, the rise is usually accompanied by parallel price rises in other consumer expenditures. Taken together, these two observations suggest that an increasingly vulnerable shopper confronts a market

[4]For example, see Federal Trade Commission, National Consumer Protection Hearings, Nov. 1968, pp. 15-16; Kennedy, John F., message from the President of the United States, Congressional Record, 87th Congress, Second Session, House of Representatives, March 15, 1962; Ohio Legislative Service Commission, Consumer Problems and Protection, Staff Research Report No. 101, Jan. 1971; and Prior, Faith (20).

[5]Progressive Grocer, 37th Annual Report, April 1970, Vol. 49, No. 4, p. 54.

structure increasingly capable of competitive practices which could be regarded as deceptive or otherwise insensitive to consumer wishes.[6]

Problems Relating to Poverty

A third development, and one which brings these concerns into focus, is the increased attention being devoted to the needs and problems of the poor. Some studies have indicated that the poor are particularly susceptible to exploitation by irresponsible elements of the marketing system. (4) Collectively, developments such as these have given rise to the movement which has been labeled consumerism, to the concern for consumer protection, to an interest in re-assessing trade practices, and to a readiness to suggest legislative remedies which may be premature.

THE CONCEPTUAL FRAMEWORK IN THE LITERATURE[7]

Summary

Economic competitive structure theory does not always provide adequate guidelines to test performance. Those authors who follow the concept of "workable competition" feel that competitive structure is not necessarily related to performance and that more emphasis should be put on the desirability of market conduct.

Endogenous to performance measurement is the consideration of changing social values. Pricing and technical efficiencies may be important to an industrial society, but the affluence of a post industrial society suggests increasing desire for variety of products and services. Given this assumption, it seems more relevant and timely to measure performance of firms by their conduct in these areas.

The function of advertising is both persuasive and informative in nature. Since this is the case, consumers must sort out fact from fiction if they want to use advertising as a source of market information. If they are successful, specials advertising may provide relevant market offerings and potential savings in the family budget.

Consumer research has found that most decisions to buy are made in the home. Although this may be true, consumers must still find the items in the store and make yet another decision on whether or not quality is acceptable. Therefore, several in-store merchandising factors are suggested as performance variables. These are in-store advertising, specials displays, and the quality of meat specials. The first two factors serve as aids to the consumer as she shops for specials, and the last is a variable which affects her decision to purchase.

The selected literature in this chapter serves four purposes: 1) to examine some of the existing performance viewpoints and their applicability to the purposes which follow, 2) to identify the significance of advertising as an aspect of market conduct, 3) to relate advertising of food specials to the consumer buying process, and 4) to identify merchandising variables which might prove endogenous to the decision process as the consumer shops for and purchases advertised specials.

Existing Performance Criteria

Evaluation of performance in a dynamic environment becomes a difficult task. Two of the several approaches have been to emphasize market structure and, alternatively, to view the market in terms of workable competition.

Economic theory maintains that market structure influences performance. Yet some authors argue persuasively that performance should be related to the workability of competition, regardless of its structure. In the first case, theory suggests that deviation from "perfect" competition (toward monopolistic structure) results in less perfect competitive performance in markets. In the second case, authors hold that although the extremes of competitive structure (pure competition and monopoly) have been vigorously explained performance wise, the structures between the extremes (monopolistic competition and oligopoly) cannot be sufficiently explained or accurately identified in terms of their location and/or limits in the performance continuum. Since most industries fall into these latter categories, theory falters in providing an adequate basis for the evaluation of real markets.

Critics of conventional theory, therefore, have placed emphasis on conduct and rivalry in imperfect markets. This emphasis avoids the notion that structure is a major determining factor of performance, and holds instead that *desirable* performance may be realized from a variety of structural forms. Marion and Handy summarize:

> "Devotees of workable competition have generally emphasized the importance of personal rivalry in imperfect markets as a motivating force that is comparable or superior to the compelling discipline of the impersonal market in atomistically *structured* markets . . . (They) tend to place less emphasis on the structure of markets as the dominant influence on performance, contending instead that desirable performance may be realized with many different market structures.

[6]See 9, pp. 211-218; Nader, Ralph, Testimony on Establishing a Department of Consumer Affairs, Hearings before the Subcommittee on Executive Reorganization, Committee on Government Operations, U. S. Senate, 91st Congress, 1st Session, March 20, 1969; Ohio Legislative Service Commission, Deception and Other Abuses in Consumer Sales and Services, Staff Research Report No. 102, Jan. 1971; and 23, pp. 28-30.

[7]This review has been aided substantially by the organized presentation found in Marion and Handy (13).

> Thus, not too surprisingly, conditions defined as necessary for competition to be "effective" frequently include structure, conduct, *and* performance elements." (13, p. 35)

Sosnick has listed 25 market characteristics, some of which are undesirable *per se* and others are undesirable only because of their effects. (24) In this list, for example, "suppression of new products" is listed as undesirable *per se* and "inadequate research" as undesirable because of its effects. These two may be related to each other as it is conceivable that inadequate *market* research could be an indirect suppression of some new product or service innovation.

From a performance standpoint, the problems of competitive theory may be related to an inability to adjust to the dynamics of social welfare. Pricing and technical efficiencies, important considerations in conventional theory, may be desirable to an industrial society, but the welfare of a post-industrial society may not be the same in nature, and it is becoming increasingly common to find modern American society as post-industrial. Performance dimensions such as product or service innovation may play stronger roles in this type environment than, for example, pricing efficiency. The National Commission on Food Marketing suggested:

> "The shift of emphasis from production to selling is accentuated by the changing nature of the consumer market. As family incomes rise, consumers are less influenced by price and are better able to indulge in their individual tastes, liking for variety, and desire for services." (15, p. 91)

Consumers in this society do seem to sacrifice competitive structure, and its price implications, for the variety offered through new product innovation. Scherer comments:

> "Consumers *are* willing to sacrifice some allocative nicety for variety, and so the social ideal must be not pure competition but some alloy of pure and monopolistic competition. The question of market organization then becomes a quantitative one: How much purity to sacrifice in order to maximize social welfare? And on this question, economic theory has no operational answers." (22, p. 22)

If, in fact, consumers are also willing to sacrifice some "economic" efficiencies for *service* progressiveness, then the trade-off between efficiency and innovation or variety must also exist in the service dimension. One cannot ignore the *trend* of social welfare, *i.e.*, less concern for *efficiency* and more for service or product *variety*. It would seem, therefore, that any relationships sought between conduct and performance of a firm, in the context of workable competition, must consider the service dimensions of the firm as well as its product offerings.

Role of Advertising

Who will bear the responsibility for consumer intelligence? Some observers respond that the consumer should at least be motivated to responsible action. For example, Carlton Wright has written:

> "It is the responsibility of the consumer-buyer to be as completely informed as he can in order to make the wisest choices possible within the limits of the food budget." (25, p. 7)

Consumer protection advocates, however, hold a stronger view and argue that consumers are at the mercy of the seller's methods since consumers are relatively unorganized and unsophisticated compared to many of the large consumer product firms. They suggest that industry or business should bear the brunt of the responsibility since they control the production, physical distribution, and the information content within their systems.

President John F. Kennedy, in his consumer message to Congress, emphasized four "rights" of the consumer: the right to safety, the right to be informed, the right to choose, and the right to be heard. To the extent that advertising provides accurate and relevant information, it contributes to the second of these rights. From a consumer welfare standpoint, this is one of the important roles of advertising. Wright discusses the extent to which the food dollar can be stretched by following logical decision making based on good information:

> "There may be little that a family can do to cut down on fixed overhead, such as mortgage, insurance, medical bills, utilities, but there is much they can do to eat well for less . . . Using food dollars wisely requires basic information about foods, careful planning, and continuous alertness and effort." (25, p. 322)

Not all advertising is informative in nature, however. A large degree of persuasion often is involved which is not always consistent with accurate and complete information. The persuasive role of advertising has been subject to considerable debate in terms of its social benefits.

Function of Advertising

In the context of marketing functions, advertising is an important part of the selling function which "creates possession utility by affecting the exchange process." (3) In the law, advertising is an "invitation to offer" rather than an actual offer.[8] The basis

[8]This interpretation has been upheld in numerous cases, **e.g.,** Georgian Company v. Bloom, 27 Ga. Apt. 468, 108 S.E. 813 (Ct. App. 1921) ("general newspaper advertisement is invitation to enter into bargain and not an offer").

for this interpretation lies in the practical consideration that, since a seller does not have an unlimited supply of any good, he cannot possibly intend to make a binding contract with everyone who sees the advertisement. (1, pp. 50-51)

In an economic context, the purposes of advertising are to shift the demand curve to the right and to decrease the elasticity of the demand curve. (5, pp. 89, 90, 92) Hence, the economic impact of advertising is to: 1) expand sales of a particular good, service, or firm; and 2) make consumer patronage less responsive to changes in price. In the second case, sellers hope to increase revenue by raising prices without suffering a more than proportionate loss in volume.

Retail grocers engage, for the most part, in the first type of advertising, hoping to expand their share of the given food market. They are not so much concerned with the brands or products the consumers buy as long as they stock those brands and products. They are concerned with the overall volume of the store and how it can be profitably increased. (12)

> "Whereas the manufacturer usually seeks to build acceptance of or preference for his brand of product, the retailer is concerned primarily with building goodwill or patronage for his particular store. Stress is placed upon patronage motives such as price, selection, location of stores, or services. In retail advertising, there is also more of an attempt to provoke immediate buying reaction than is the case with manufacturer's advertising where a long program may be planned to build or sustain consumer acceptance or preference." (3, p. 425)

Nature of Food Advertising

Food retailers have engaged in two types of advertising: 1) listing the prices of their products to encourage the reader to shop at their store(s) through lower price appeal; and 2) conveying their image through other more subjective messages, *e.g.,* services, cleanliness, product freshness, parking, etc. Hence, both price and non-price information are common ingredients in the food advertising messages retailers strive to convey.

The timing of store advertisements is arranged to anticipate the expected weekly shopping pattern which shoppers have evolved as a consequence of preference, habit, or paydays. It is well known that most grocery shopping occurs on Thursdays, Fridays, and Saturdays. Hence, retail food ads in newspapers or on TV are most commonly offered on Wednesday and Thursday. Total expenditures for Wednesday and Thursday food ads easily exceed food ad expenditures for all other days of the week combined.[9]

The purpose of advertising food specials is to expand store patronage and hence general sales volume by employing differential weekend pricing. The amount of reductions from regular prices on weekend specials will vary depending on intramarket competitive intensity. This variation may be affected by increasing or decreasing: 1) the number of specialed items; 2) the proportion of items with deep, moderate, or slight price cuts; and 3) the depth of the reductions in each of the categories. (5, pp. 135-138) Generally speaking, in any one week some items might be featured at a narrower-than-normal margin (*e.g.,* 10 percent below shelf price); a few others might be offered at or near invoice cost (10 to 20 percent below regular price); and one (or at the most a very few) high-demand item(s) will be sold considerably below invoice price (as much as 50 percent below the regular price). (5) This varies widely, however, from firm to firm and from one time period to another. (19, pp. 49-50)

Specials Merchandising and the Food Buying Decision Process

Food is a consumer good, a classification applied to the entire range of commodities used by final consumers. Beckman and Davidson divide consumer goods into three classes: 1) convenience goods, 2) shopping goods, and 3) specialty goods. (3, p. 34) Most food is classified as convenience goods, *i.e.,* "Articles which consumers purchase with a minimum of searching, measured either in terms of time or money spent in shopping, because the probable gain or satisfaction from making comparisons of alternatives is ordinarily slight." (3, p. 35)

Food shopping, for the most part, is a repetitive chore utilizing easily accessible facilities to make many quick decisions. In family buying, these decisions are generally the wife's responsibility, but reflect the needs and desires of the family.

> "Within the family there are various types of decision processes . . . One such decision is decision making for the family by the wife alone with the family in mind. A form of subtle interaction . . . The wife does the actual buying of food; however, her purchases will reflect the tastes and preferences of her family and the health and economic situation of the family." (10, p. 14)

The observations of Beckman and Davidson about shopper behavior in the purchase of convenience goods is confirmed by work done by George Ka-

[9] Progressive Grocer. April 1965. Food Advertising Billions to Motivate Customers, p. 123.

tona in examining the question, "What circumstances surround different types of behavior?" (11) His conclusions:

1. In general, consumers follow habitual expenditure patterns. Purchases over $1,000 *frequently* involve systematic decision making; purchases of several hundred dollars involve objective decision making *less frequently;* and purchases of less than $100 involve systematic decision making *infrequently.* (Note that Katona was referring to 1950-1951 dollars. Comparable figures for 1974 probably would be twice as high.)
2. Habitual patterns of expenditures are related to the size and frequency of expediture. The smaller and more frequent the expenditure, the more likely it will be habitual. Most food and clothing outlays are determined by habitual patterns.

Katona felt that since food and clothing purchases represented a frequent outlay for relatively low priced products, consumers developed a learned response so that decisions were habitual and somewhat subconscious.

If this is true, then it becomes important to understand those factors which mold consumers' learned responses and subconscious decisions. Do these factors lead to buying behavior which maximizes consumer satisfaction? Or do they mislead and confuse consumers to the benefit of enterprising merchandisers?

For the purposes of this study, the role of advertising and merchandising of weekly specials as influences on consumer decision making is a focal point of particular interest.

Merchandising Efforts to Influence Consumer Decisions

Newspaper Food Ads: The potential for weekly food ads to influence consumer decisions depends obviously on the extent to which consumers are stimulated to read such ads. This in turn would be a consequence of the characteristics of the ads and the orientation and motivation of different consumers. The extent to which consumers are interested in food specials varies considerably. One Pennsylvania study divided consumers into four categories according to the extent to which they shopped for meat specials (Table 1). The study identified an expectable positive correlation between the extent of shopping for specials and the amount of specials actually bought. Moreover, the purchases of those who shopped most for specials made up a higher proportion of total specials sales.

In-Store Advertising: From the retailer's viewpoint, in-store advertising can be a very persuasive merchandising tool in influencing shopper decisions. In a study to measure the effectiveness of in-store advertising of brand name products, in-store signs were found to have a very positive influence on market share (Table 2).

In-store advertising can also be advantageous to consumers:

> "When shopping for food in the store, the wise shopper will keep an eye out for specials. Often the equivalent of wholesale prices can be realized on such offerings." (25, p. 329)

Edwards and Brown concur. They feel signs can be an informative merchandising technique for advertised specials and in-store promotions:

> "Informative signs are useful in identifying advertised items and in recalling and confirming the important facts about the merchandise. They also capitalize on store traffic by drawing attention to unadvertised articles and thus lead to the sale of many items which shoppers had not previously thought of buying." (7, p. 367)

Displays: Displays are the extended exposure given to a product to stimulate or facilitate increased sales volume. Edwards and Brown rate displays as an important merchandising practice, especially as a complement to advertising.

> "Interior displays make it easy for the customer to find the advertised merchandise. Customers who come to the store in response to advertising

TABLE 1.—Relationship of Intensity of Shopping for Specials to Purchase of Specials.*

Extent Respondents Shop for Specials	Number of Households	Specials Purchases as Percent of Regular Meat Purchases
Great Deal	151	21.6
Some	215	12.9
Hardly Ever	102	14.9
None	200	10.1
Total or Average	668	15.9

*Analysis of variance: F=7.648, significant at the .01 level.
Source: (16, p. 12).

TABLE 2.—Impact of In-Store Advertising on Market Share of Brand Name Products.

Item	Change in Percent of Market Share: Experimental Group (Used Advertising)	Change in Percent of Market Share: Control Group (No Advertising)
Hills Brothers Coffee	+125	+10
Royal Gelatin	+177	+14
Zee Bath Tissue	+ 8	+ 3
Hamm's Beer	— 7	—16
Net Change	+303	+11

Source: (17, pp. 114-115).

usually want to find the merchandise as quickly as possible. Nothing aggravates the customer so greatly as to be forced to search for the advertised merchandise. Most stores realize this fact and make it a particular point to have easily visible displays of advertised merchandise, with prominent signs to guide the customer . . . Interior displays make it easy for the customer to buy the advertised merchandise." (7, pp. 547-548)

The Progressive Grocer conducted a test of the effects of 734 displays over an 8-week period, based on actual sales of 360 grocery items in five supermarkets. The report found that, for products on which there was no variable (including no price change) except a special display, dollar sales increased by 425 percent during the period studied.[10]

In this case, consumers demonstrated a learned response and assumed that the items on special display were reduced in price. This involves what might be termed "implicit deception" of consumers; while there may be no explicit claim that the items on such displays are reduced in price, this tends to be inferred because of the widespread use of special displays for advertised items on which price has been reduced. Displays can provide benefits to retailers and, when used to exhibit advertised items, can also be beneficial to consumers. When used in non-deceptive ways, both in-store advertisements and displays provide assistance to consumers in identifying featured products.

Product Quality: Consumers may locate advertised items and decide not to buy because quality does not appear to meet expected standards. For meat and produce specials, product quality is often a deciding factor.

Although the federal beef grading system is widely used and provides one indication of beef quality, consumers usually look for additional quality indicators when choosing beef as well as pork. Marbling, color of lean and fat, and amount of trim are characteristics prominent in consumer meat buying decisions.[11] Some of these are reflected in beef grades; others are more dependent on retailer practices.

Quality evaluation of produce items poses a more difficult problem to the consumer. The difficulty is the heterogeneity of products in the produce department. Among the common *apparent* indicators of produce quality are size and degree of spoilage.

[10]Progressive Grocer, Jan. 1960, pp. 4-7.

[11]See, for example: Consumer Preferences for Beef, Bull. 267, Arizona Agri. Exp. Sta., Phoenix, Oct. 1955; The Consumer Market for Beef, Texas Agri. Exp. Sta., Houston, Bull. 856, April 1957; Visual Preferences for Grades of Retail Beef Cuts, Missouri Agri. Exp. Sta., St. Louis, June 1955.

METHODOLOGY

Conceptual Model

Marketing literature maintains that the function of retailing in the marketing channel is to accomplish the exchange of economic goods and services, for purpose of family or household use, where it is accepted that the consumer is the focus of all marketing effort. Moreover, it is recognized that the competitive firm, in order to survive and grow, must be responsive to the desires of a group of consumers who together constitute a defined market. (6, pp. 6, 27)

A model measuring market performance in manageable proportions can be developed if some limiting assumptions are acknowledged. 1) Performance is a relative measure, *i.e.,* the performance of one firm or establishment or market can be judged relative to others, and the relevant firms to be compared are those leading the market in sales. 2) The marketing performance of a firm can be measured on the basis of the expressed desires of the consumers it defines as its market target.

The Market: Before relevant firms may be chosen, a market must be defined. When discussing advertising, newspaper distribution may be a relevant market measure. In most cases, newspaper distribution is concentrated in the metropolitan area of a city, which includes a convenient commuting distance for shoppers in outlying areas. The Columbus, Ohio, metropolitan area is treated as the market area investigated in this study.

Experimental Design

Two types of observations were made in testing hypotheses specified below. 1) Consumer attitudes were examined concerning specials advertising in newspapers and specials merchandising in sample stores. 2) Actual in-store techniques used by retailers in merchandising specials were observed and recorded (*i.e.,* measured, counted, etc.) to determine each firm's *actual* conduct.

The first hypothesis was tested by analysis of consumer attitudes among groups reflecting different income, education, and age attributes. The remaining hypotheses were tested by regrouping consumers by the firms in which they were shopping during the study period, and comparing their responses concerning merchandising variables to the research team observations of actual store conduct.

Therefore, the analysis which follows is characterized by two procedural thrusts: 1) the identification of significant attitudinal differences between consumer groups concerning specials advertising and specials merchandising; and 2) the use of sample data to test the validity of a performance model based on a few specials merchandising variables which were selected because a) shoppers said they were important, and b) they were quantitatively verifiable—they could be measured.

Whenever age emerged as an important demographic consideration, the sample was split into age categories: a) under 30 years of age, and b) 30 years and older. This represented an attempt to isolate any youthful discontent which might have prevailed and was fashionable at the time. It also served as a proxy for shopper experience, the rationale being that most of the inexperienced, young, single shoppers, students living alone without cooking facilities, etc., would be captured in that age class.

As a test against store location bias, one store (analytically identified as Store 10) was selected for its broad representation of shoppers in all demographic classes examined. Store 10 responses were tested for significant differences from total-sample responses in the analysis of consumer attitudes.

The Sample

The analysis is based on a sample of food shoppers and supermarkets in the Columbus market area in the spring of 1972. Twenty-one supermarkets[12] and 1,385 food shoppers participated in the study. The stores were drawn from the top eight firms in the area (four corporate chains and four affiliated chains). These eight firms accounted for more than 75 percent of total retail grocery sales in the Columbus metropolitan area in 1971.[13]

The 21 stores selected for study were located in Columbus areas which would provide a broad cross-section of shoppers in varied income and educational strata. Table 3 confirms that the shopper sample was slightly biased toward higher income and higher education than the adult metropolitan population of the Columbus area.

The Model

The following model summarizes a hypothesized relationship between expressed consumer demand (shopper conduct), market share, and firm (seller) conduct.

Relative Performance Model

K = total number of variables under consideration
C = rating given by consumers (buyer conduct)
O = rating given by research observations (seller conduct)
S = market share
F = a firm
M = a market
R = rank of conduct
P = performance, the dependent variable
V = an independent variable
N = total number of firms under consideration
A = sales per square foot of selling area per year

[12]Only supermarkets were included in the analysis. Supermarkets are defined by Progressive Grover, a trade publication, as retail grocery stores generating sales in excess of $500,000 per year.

[13]Grocers Spotlight, August 1972, p. 53.

TABLE 3.—Income and Education Distribution of Columbus, Ohio, and April 1972 Columbus Survey Sample and Subsamples.

Group Category	Household Annual Cash Income			Years of Schooling Completed*			
	0-$8,000	$8,000-$20,000	Above $20,000	Less than 9	High School 9-12	College 13-16	Post Grad 16
	Percent						
COLUMBUS							
Metropolitan Area	32.1	54.0	13.9	21.8	17.5	46.7	14.0
Urban Only	37.1	52.2	10.7	25.7	18.7	44.2	11.4
COLUMBUS SAMPLE							
Total	27.6	53.9	18.5	3.4	42.1	39.1	15.4
Medium Income Medium Education	13.9	86.1	0.0	0.0	0.0	100.0	0.0
Low Income Low Education	100.0	0.0	0.0	11.9	88.1	0.0	0.0
Low Income High Education	100.0	0.0	0.0	0.0	0.0	0.0	100.0
High Income Low Education	0.0	0.0	100.0	1.9	98.1	0.0	0.0
High Income High Education	0.0	0.0	100.0	0.0	0.0	0.0	100.0

*City education is based on persons 25 years old and over.
Source: Columbus—General Social and Economic Characteristics—Ohio, U. S. Dept. of Commerce, Bureau of the Census, April 1972, pp. 398-470; Sample—Survey data.

EQUATION NO. 1

Firm Performance — One Variable

$$P\,(V_1)_{FR} = \Big[(V_1)_{CRF} - (V_1)_{ORF}\Big]\,FR$$

EQUATION NO. 2

Firm Performance — K Variables

$$P_{FR} = \sum_{1}^{K} \Big[V_{CRF} - V_{ORF}\Big]\,FR$$

EQUATION NO. 3

Market Performance

$$P_{m_{1-}} = \frac{\sum_{1}^{N}\sum_{1}^{K}\Big[V_{CRF} - V_{ORF}\Big]}{K\,\frac{(N^2 - 1)}{2} \text{ when N is odd, } \frac{(N^2)}{2} \text{ when N is even}}$$

EQUATION NO. 4

Firm Performance: Sales per Square Foot

$$P_{m_{1-}} = \frac{\sum_{1}^{N}\Big[A_{FR} - P_{FR}\Big]}{\frac{(N^2 - 1)}{2} \text{ when N is odd, } \frac{(N^2)}{2} \text{ when N is even}}$$

Conceptually the model judges performance as the ability of the firm to meet the desires of its particular consumers better than the efforts of other firms in the market. Performance is ranked, therefore, in terms of consistencies or inconsistencies (deviations) between *ranked* shopper preferences (buyer conduct) and *ranked* seller merchandising activities (seller conduct). The former measure is obtained from attitudinal responses solicited from shoppers encountered by the research team in the stores. The latter measure is obtained from actual measurement of specific merchandising variables measured by the research team. The validity of the measure is limited by its validity in soliciting accurate responses and by the limited number of merchandising variables selected for their precise measurability. The validity of the measure is enhanced by the fact that, due to measurement precision on a limited set of merchandising variables, seller conduct is *known* to be accurate within the range of variables examined.

Given this approach to performance evaluation, much hinges on the manner in which inconsistencies between seller and buyer conduct are interpreted. If firms (and markets) are to be ranked in terms of their ability to provide merchandising service consistent with (perceived or specified) shopper preferences, two alternatives are possible:

1. Any inconsistency—any deviation, plus or minus—from the level of service desired by consumers represents less than optimum performance. The approach would apply absolute differences in rank, as follows:

Absolute Differences in Ranks	0	+ or —
Performance	Best	Poorest

This method assumes implicitly that if a firm surpasses the level of performance specified by its shoppers, then other aspects of its competitive mix (such as price) would be adversely affected. It also implies that if shoppers regard a favored store as good in some conduct dimension (such as displays) and another store as relatively poor, then the latter store optimizes market conduct by relaxing its attempts to provide adequate or attractive displays.

2. A second alternative for measuring performance is to create a continuum of performance ranging from negative to positive differences, and to judge those firms which do not meet consumer expectations (negative difference) as poorer performers than those exceeding consumer expectations (positive difference).

Difference in Ranks	—	0	+
Performance	Poorest		Best

This second alternative was chosen as the basis for evaluating performance. At least two characteristics of the market appeared to support this choice. a) It was readily conceded that the market recognizes that exceeding consumer expectations is a much wiser and safer policy than falling short of consumer expectations. b) It is quite possible, perhaps likely, that among retailers there are those with greater entrepreneurial ability, economies of scale, or other resources than others in the market, and that these favorable conditions make it possible for them to exceed shopper expectations without detriment to other aspects of their product-service-price mix.

Hypotheses

The following hypotheses were tested in the analyses:

1. *Age* (a measure of shopping experience), *income* (a measure of buyer constraints and the comparative importance of food values), and *education* (a measure of analytical or perceptive tendencies) are factors affecting

consumer attitudes toward specials and specials merchandising and may serve as surrogates for shopper (buyer) conduct.

2. Firm performance with regard to specials merchandising of specifically quantifiable merchandising variables may be used as surrogates for seller conduct.
3. Firm performance "encompasses the strategic end results of the market conduct of sellers and buyers" for quantifiable variables entered in Equation No. 2.
4. Market performance, as a consequence of "strategic end results" of seller and buyer conduct, may be measured in a relative context by ranking the performance of individual firms (Equation No. 3).
5. Firm results can be compared to some standard industry performance criteria, such as sales per square foot (Equation No. 4).

Limitations of the Study

1. Performance is evaluated in a relative context, and its usefulness in that context is demonstrated in comparisons among stores in the Columbus market area. But the analysis was confined to the Columbus market. In its relative context, measures of *market* performance, in an aggregate sense, require comparisons with other market areas. But other market areas were not studied.

2. Consumer responses were based on attitudinal response scales. Such scales are necessarily subjective. While responses at scalar extremes may be fairly straightforward in their interpretation, most shoppers were more equivocal and responses clustered in the middle range of the scale. There is room to wonder about instrumental accuracy and respondent interpretation. While numerical ratings tested for significant difference will identify differences in attitudinal emphasis, they do not guarantee that the emphasis is real rather than a consequence of instrumental inaccuracy or misinterpretation.

3. Where merchandising conduct is examined, comparisons are confined to those merchandising factors most amenable to precise measurement. They are not always the factors which shoppers regarded as having the greatest impact on their shopping patterns. Department cleanliness, for example, was regarded by shoppers as one of the most important considerations. But this merchandising factor was not included in evaluations of store conduct by the research team because it could not be measured precisely.

4. It could be argued that shopper attitudes (buyer conduct) and team-observed merchandising methods (seller conduct) as measured here are not directly comparable because shopper attitudes were addressed to the food shopping experience generally and not focused on the particular store in which they were shopping when they were encountered by the research team. Based on the method which was used, however, it is possible to conclude something like this: "If the samples (of supermarkets and shoppers) were representative of supermarkets and supermarket shoppers in the Columbus metropolitan area, then Firm X patrons registered some of the highest expectations in town, but Firm X did not register the best seller conduct in town on the seven factors measured during three visits in 1972."

ANALYTICAL RESULTS

Five advertising variables and 11 merchandising variables were used in the analysis. Advertising variables were: 1) ad readership, 2) ad influence on shopping, 3) extent of specials shopping, 4) expected savings on specials, and 5) extent of specials buying.

The 11 merchandising variables associated with advertising specials were: 1) shelf space, 2) specials displays, 3) specials location, 4) specials signs, 5) employee helpfulness, 6) department cleanliness, 7) product quality, 8) fat trim, 9) product selection, 10) display attractiveness, and 11) package attractiveness.

Procedure

Each participating store was visited three times by a research team—once on Thursday, once on Friday, and once on Saturday during 3 weeks in April 1972. The team recorded conduct on several merchandising variables in the meat, grocery, and produce departments. These were: the presence of signs identifying specialed items in the meat, grocery, and produce departments; the presence or absence of specials displays in grocery and produce departments; fat trim on meat specials; and quality of meat specials. The last two measures were taken by undergraduate members of the Meats Judging Team at The Ohio State University.

While these measures of actual merchandising conduct were being recorded, other team members were distributing take-home questionnaires to shoppers in the stores. One-hundred questionnaires were distributed per store per visit, totaling 6,300. Of these, 1,385 were mailed back by shoppers.

The usable questionnaires recorded: demographic characteristics of shoppers and their responses concerning the impact of five advertising variables, the "helpfulness" to shoppers of merchandising variables 1 through 5, and the "importance" to shoppers of merchandising variables 6 through 11.

The following discussion is confined to an analysis of these consumer questionnaires. Then the comparison is summarized between stated consumer preferences and actual conduct on the seven merchandising variables recorded in stores by the research team. That comparison is the basis for the performance evaluation measures developed from this research.

Consumer Attitudes About Food Specials

In addition to average responses from 1,385 shoppers, 1,329 questionnaires recording demographic characteristics were sorted to identify five mutually exclusive income-education groups which could be treated separately. Three class intervals were selected which would yield the largest income-education variation the sample would conveniently allow (Table 4). The object of this procedure was to search for any significant differences which might be related to these demographic characteristics.

The tables generalize results obtained from the analysis of consumer attitudes about specials advertising (Table 5) and specials merchandising (Table 6). Guidelines for interpreting responses are found in the table footnotes. Mean (Av.) responses indicate the *level* of consumer response. Variation (Dev.) around this level indicates whether attitudes centered closely or ranged widely about the mean. A high mean response and a narrow deviation would indicate a rather widely held, firm conviction.

It is important to understand that responses may not measure facts about an issue, nor measure what consumers actually think or do. They may measure only what consumers say in expressing attitudes based on their perception of facts, aside from what the true facts of the matter may be. There is validity in the measure, however, in the sense that consumers do not function on the basis of facts, but on their perception of facts.

A distinctive characteristic of consumer responses throughout the analysis was the negativism expressed by low-income, high-education (LiHe) shoppers. When all low-income shoppers were sorted by age, most of this negativism was found to center among shoppers under 30 years of age, to be expressed mostly by young high-education shoppers, and to be shared by young low-education shoppers. It was not shared by low-income, low-education (LiLe) shoppers over 30 (see Table 5).

Youthfulness may be a proxy for shopping inexperience, for low newspaper readership, for a high percentage of meals consumed away from home, or for a disposition to share negative attitudes fashionable among the young at that time (1972).

The responses could also be indicative of distinctive policies followed by university-area stores, where young, low-income shoppers of all educational strata abound. A brief examination of this latter possibility was confined to the presence or absence of discount signs identifying advertised specials offered by one chain. The research team found discount signs to be notably absent in one university-area store, although the three-store average for that chain showed that, during the period studied, discount signs had been used to identify 75 percent of the advertised meat specials and 64 percent of the produce specials.

TABLE 4.—Distribution of 1,329 Participating Consumers by Income and Education, Food Retailing Study, Columbus, Ohio, April 1972.

Low, Medium, and High Education Levels	Low, Medium, and High Income Levels: Less than $6,000	$6,000 to $20,000	More than $20,000	Total
12 years or less	**124***	447	**53**	624
13 to 16 years	69	**309**	145	523
Any postgraduate education	**31**	103	**48**	182
Total	224	859	246	1,329

*Bold face observations are those used in comparative analysis of income and education categories.

Source: Survey data.

Specials Advertising

Most food shoppers testified that they always read newspaper food ads. However, more than half the LiHe shoppers seldom did. On the average, 65 to 70 percent of the shoppers agreed that ads exerted a moderate to strong influence on their shopping, but nearly 70 percent of the LiHe shoppers felt that ads had little or no influence on their shopping habits (Table 5).

Despite the influential nature of ads for most people, and although shoppers expected to realize some savings from buying specials, shoppers did not definitely plan shopping excursions simply to take advantage of advertised specials. Once in the store, however, about two-thirds of the shoppers actually purchased one or more of the advertised items (Table 5). A higher percentage of LiLe shoppers purchased specials than other groups, and LiHe shoppers purchased the least specials. Low-education shoppers in both low and high income categories purchased specials more frequently than high-education shoppers.

Specials Merchandising

Shoppers attached nominal importance to merchandising methods offered as helpful aids to their shopping (merchandising items 1-5, Table 6). High education shoppers accounted for most of the attitudes which departed from norms expressed by the middle-income, middle-education (MiMe) group. LiHe shoppers inclined toward negativism and were particularly critical of produce and grocery department employees. Conversely, HiHe shoppers tended to rank these merchandising methods as more helpful than other income-education groups. They particularly identified discount signs as helpful shopping aids.

TABLE 5.—Specials Advertising: Shopper Ratings of Advertising Variables and Percent of Shoppers Buying Specials, Food Retailing Study, Columbus, Ohio, April 1972.

	Income-Education Groups†											
	Total Sample		MiMe		LiLe		LiHe		HiLe		HiHe	
Advertising Variables	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.
1) News Ad Readership‡	2.3	0.9	2.5	0.8	2.3*	0.9	1.4*	1.0	2.3*	0.9	2.2*	1.0
2) Ad Influence**	1.9*	1.1	2.0	1.1	2.0	1.0	1.2*	1.0	1.9	1.1	1.8	1.1
3) Specials Shopping‡	1.4	1.3	1.5	1.3	1.5	1.3	0.8*	1.2	1.4	1.3	1.2*	1.3
4) Expected Savings††												
Meat	1.5	0.9	1.5	0.9	1.5	0.9	1.3	1.0	1.6	0.8	1.5	0.9
Grocery	1.7	0.9	1.6	0.9	1.8*	0.9	1.8	0.7	1.8	0.8	1.6	0.8
Produce	1.3*	0.9	1.2	0.9	1.6*	0.9	1.1	0.9	1.4*	0.8	1.4*	0.8
5) Percent of Shoppers Buying Specials	69.0		67.1		75.0		50.0		69.4		62.8	

†M = medium; L = low; H = high; i = income; e = education; Av. = average shopper rating; Dev. = standard deviation on average shopper rating; asterisk (*) indicates significant difference from MiMe group (90 percent level).
‡0-3 scale = never (0); sometimes (1); usually (2); always (3).
**0-3 scale = none (0); little (1); moderate (2); strong (3).
††0-3 scale = none (0); little (1); some (2); much (3).
Source: Survey data. (Means and standard deviations based on 0-3 scale.)

TABLE 6.—Specials Merchandising: Shopper Ratings of Specials Merchandising Variables in Supermarket Meat, Produce, and Grocery Departments, Food Retailing Study, Columbus, Ohio, April 1972.†

	Income-Education Group‡											
	Total Sample		MiMe		LiLe		LiHe		HiLe		HiHe	
Merchandising Variable	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.	Av.	Dev.
1) Shelf Space												
Meat	5.1	1.9	5.0	1.9	5.2	2.0	5.0	1.8	5.2	2.0	5.1	1.7
Produce	5.2	1.9	5.2	1.9	5.4	1.9	4.6*	1.8	4.9	1.8	5.3	2.1
Grocery	5.1	2.0	5.1	1.9	5.1	2.1	4.8	1.8	4.5*	2.2	5.3	1.9
2) Specials Displays												
Meat	4.6	2.1	4.5	2.0	4.5	2.3	4.2	1.8	4.9	2.1	5.0*	1.5
Produce	4.8	2.0	4.7	2.0	5.1	2.0	4.2	1.8	4.7	2.3	4.8	2.1
Grocery	4.9	2.0	4.9	1.9	4.9	2.2	4.7	1.8	4.3*	2.3	5.0	2.0
3) Specials Location												
Meat	5.0	2.1	4.9	2.0	5.0	2.3	4.3*	1.9	5.1	2.3	5.2	1.8
Produce	5.2	2.1	5.1	2.1	5.4	2.0	4.0*	2.4	5.1	2.2	5.2	2.1
Grocery	5.2	2.0	5.2	2.0	5.1	2.2	4.2*	2.3	4.5*	2.4	5.5	1.6
4) Specials Signs												
Meat	5.1	2.0	5.1	2.0	5.2	2.2	4.5*	1.8	5.4	2.0	5.6*	1.7
Produce	5.1	2.0	5.0	2.1	5.3	2.1	4.9	2.0	5.3	2.0	5.8*	1.4
Grocery	5.1	2.0	5.1	2.0	5.1	2.2	4.5*	1.9	4.6*	2.3	5.8*	1.4
5) Employees												
Meat	4.8	2.3	4.7	2.4	5.1	2.2	4.4	2.3	4.9	2.2	5.6*	1.5
Produce	4.7	2.4	4.7	2.5	5.3*	2.2	2.7*	2.1	4.6	2.6	4.7	2.4
Grocery	4.8	2.4	4.9	2.3	5.3	2.2	3.1*	2.0	4.8	2.5	5.3	1.9
6) Department Cleanliness												
Meat	6.1	1.5	6.1	1.4	6.0	1.8	5.8	1.2	5.7	1.6	6.3	1.3
Produce	5.9	1.6	5.9	1.6	6.2	1.5	5.6	1.3	5.5	2.1	6.0	1.7
Grocery	5.8	1.5	5.8	1.5	6.2*	1.3	5.1*	1.4	5.8	1.8	5.7	1.6
7) Product Quality												
Meat	5.7	1.8	5.9	1.6	5.2*	2.2	6.0	1.1	6.0	1.4	6.1	1.6
Produce	5.7	1.8	5.8	1.7	5.6	1.9	5.6	1.7	5.8	1.7	5.3	2.1
8) Fat Trim	5.2*	2.1	5.5	1.8	4.8*	2.3	4.9*	1.9	5.1	2.2	5.1	1.8
9) Product Selection												
Meat	5.3	1.9	5.4	1.8	5.3	2.0	5.2	1.4	5.6	1.8	5.0	1.9
Produce	5.4	1.8	5.4	1.7	5.3	2.1	5.4	1.2	5.3	1.7	5.5	1.7
Grocery	5.5	1.7	5.6	1.6	5.3	2.0	5.0*	1.5	5.1	2.2	5.2	1.8
10) Display Attractiveness												
Produce	5.1	1.9	5.0	1.9	5.4	1.9	4.3*	1.7	5.1	2.0	4.8	2.0
Grocery	4.9	1.9	4.7	1.9	5.0	2.1	3.8*	1.4	5.0	1.9	4.9	1.8
11) Package Attractiveness												
Grocery	4.9	2.0	4.7	2.0	5.1	2.1	4.0*	1.4	4.8	1.9	4.2	1.9

†Means and standard deviations based on 1-7 scale which permitted subjective ratings by shoppers from least (1) to most (7) helpful on merchandising variables 1-5 and least to most important on merchandising variables 6-11.
‡M = medium; L = low; H = high; i = income; e = education; Av. = average shopper rating; Dev. = standard deviation on average shopper rating; asterisk (*) indicates significant difference from MiMe group (90 percent level).
Source: Survey data.

Shoppers were particularly emphatic about the importance of cleanliness in meat, produce, and grocery departments and rather uniformly shared this view across all income and educational strata (Table 6). Both high-income and high-education shoppers attached much importance to the quality of meat specials. Selection was most important among MiMe grocery buyers and high-education purchasers of meat and produce, but all buyers were fairly uniform in their expectations in this regard.

Shopper Preferences and Store Conduct in Specials Merchandising

This section reports analytical efforts to compare shopper preferences with actual store conduct on selected measurable variables. The object of the comparative effort was to attempt to arrive at a relative basis for evaluating retail grocery market performance.

Shopper attitudes about food specials merchandising are summarized in Table 7. They are based on a 1-to-7 increasing preference response scale. Note that responses are classed by the firms which shoppers were patronizing at the time shopper responses were recorded. These responses are not, however, evaluations of individual store or firm conduct. They are merely the opinions of shoppers encountered in stores of each firm relating to the seven merchandising variables specified in Table 7.

Table 8 summarizes actual merchandising conduct of firms for these same merchandising variables, based on observations and measurements made by a research team visiting each store. The team recorded the percent of items featured in newspaper food ads that week which were identified by the presence of: in-store signs in three departments, special displays in two departments, the amount of fat on meat specials, and the quality of meat advertised for specials. These measures are intended as proxies for actual seller conduct aside from beliefs or preferences expressed by buyers.

TABLE 7.—Buyer Conduct: Shopper Preference Responses and Levels for Seven Food Specials Merchandising Variables Used in Eight Retail Grocery Firms, Columbus, Ohio, April 1972.*

Seven Merchandising Variables	Retail Grocery Firm							
	A	B	C	D	E	F	G	H
Meat Specials Signs								
Number Responding	108	121	83	74	98	160	140	81
Preference Response	4.69	5.53	4.66	4.78	4.76	5.56	5.39	5.20
Preference Level	3	1	3	3	3	1	2	2
Produce Specials Signs								
Number Responding	114	121	91	76	107	156	150	77
Preference Response	5.10	4.88	4.66	5.09	5.11	5.60	5.39	4.87
Preference Level	2	2	2	2	2	1	1	2
Grocery Specials Signs								
Number Responding	126	112	90	86	105	166	167	87
Preference Response	5.09	4.97	4.46	5.16	5.01	5.78	5.33	4.69
Preference Level	2	2	3	2	2	1	2	3
Produce Specials Displays								
Number Responding	98	108	81	62	85	140	121	66
Preference Response	4.74	4.58	4.58	4.60	4.66	5.44	5.93	4.52
Preference Level	3	3	3	3	3	1	2	3
Grocery Specials Displays								
Number Responding	122	99	90	79	97	154	162	89
Preference Response	4.85	4.57	4.28	4.84	4.61	5.65	5.17	4.84
Preference Level	3	4	5	3	4	1	2	3
Amount of Fat								
Number Responding	116	123	78	69	100	155	134	82
Preference Response	4.67	5.74	5.64	5.12	5.16	5.39	5.43	4.56
Preference Level	3	1	1	2	2	1	1	3
Meat Specials Quality								
Number Responding	119	126	83	77	109	165	142	85
Preference Response	5.53	5.98	6.03	5.81	5.16	5.90	5.92	5.24
Preference Level	2	1	1	1	3	1	1	3

*Shopper preference responses based on a 1 to 7 response scale, with 7 highest. Tests for significant difference (.05 level) of performance level resulted in performance levels as shown instead of from 1 to 8 as the number of firms would indicate. That is, just because eight firms were observed does not assure that eight significantly different preference levels will be found among shoppers.

Source: Survey data.

Table 9 presents a comparison of shopper opinions recorded in Table 7 and firm merchandising conduct recorded in Table 8. Firm ranks which emerge from this comparison are based, therefore, not only on actual firm conduct but also on the degree to which shopper expectations were matched by merchandising conduct. Firms with conduct exceeding preferences ranked high in performance(Table 9), and those with conduct lower than expressed preferences ranked low.

Table 10 provides, in part, a summary of Tables 7 through 9. But an added feature in the table is the authors' attempts to alter the rankings achieved in Tables 7-9 by employing added information (such as indices of *relative* rankings) while continuing to employ the basic conceptual approach. The authors are demonstrating by this approach that the rankings enjoy a certain inherent validity and are not simply the coincidental consequence of the manipulative device which happens to be chosen. Finally, in Table 10, a comparison is made, where data were available, with sales per square foot, the customary performance criteria widely employed in the trade.

Both an intensity and a consistency of shopper preferences can be detected. The *intensity* is indicated by preference *response* on the 1-7 scale, and the *consistency* of this feeling is indicated by the spread or lack of spread in preference *level* (standard deviations) (Table 7). Differences in preference level which are recorded in Table 7 are recorded only where a t-test (.05 level) has shown a significant difference in preference *response* to actually exist. Hence, although there are eight firms and eight possible levels of response, not more than five significantly different levels actually appear in Table 7.

Variation in consumer preference is apparent both among firms and among merchandising variables. For example, Firm H shoppers expressed consistently lower response levels than Firm F or Firm G shoppers. There was a relatively wide variation of opinion among

TABLE 8.—Seller Conduct: Firm Merchandising Conduct and Levels for Seven Food Specials Merchandising Variables Used in Eight Retail Grocery Firms, Columbus, Ohio, April 1972.

Seven Merchandising Variables	Retail Grocery Firm							
	A	B	C	D	E	F	G	H
Meat Specials Signs								
Total Possible	462	134	74	116	141	101	134	131
Percent Actual	17.3	78.4	44.6	37.1	80.1	42.6	41.8	47.3
Merchandising Level	3	1	2	2	1	2	2	2
Produce Specials Signs								
Total Possible	143	67	34	59	81	57	32	24
Percent Actual	60.1	85.1	64.7	35.6	96.3	74.5	90.6	100.0
Merchandising Level	2	1	2	3	1	2	1	1
Grocery Specials Signs								
Total Possible	781	509	187	552	637	307	240	185
Percent Actual	24.6	38.5	13.9	24.3	33.4	39.4	62.9	54.6
Merchandising Level	5	3	6	5	4	3	1	2
Produce Specials Displays								
Total Possible	143	67	34	59	81	51	32	24
Percent Actual	13.3	17.9	5.9	3.4	1.2	23.5	3.1	8.3
Merchandising Level	1	1	2	2	2	1	2	2
Grocery Specials Displays								
Total Possible	781	509	187	552	637	307	240	185
Percent Actual	22.0	27.3	25.1	16.7	17.3	11.7	51.3	50.8
Merchandising Level	2	2	2	3	3	4	1	1
Amount of Fat								
No. of Observations	182	80	37	45	76	71	84	86
Fat Rank*	3.84	4.04	3.89	3.73	3.87	3.93	4.21	3.69
Merchandising Level	2	2	2	2	2	2	1	2
Meat Specials Quality								
No. of Observations	271	114	60	68	126	86	130	107
Quality Rank*	4.12	4.21	4.12	3.99	4.10	4.09	4.05	3.84
Merchandising Level	1	1	1	1	1	1	1	2

*1 to 5 desirability scale, with 5 most desirable. Tests for significant differences (.05 level) of actual performance yielded merchandising levels as shown instead of from 1 to 5 as observed differences would indicate.
Source: Survey data.

shoppers about the value of grocery specials displays, but a more uniform and higher level of importance was attached to meat quality.

In terms of actual merchandising procedures observed by the research team, the most consistently high conduct over the entire range of seven merchandising variables was found in firms B, G, and H (Table 8). Within given variables, the most consistent conduct was related to fat levels and meat quality. Conduct varied most widely in grocery departments, with regard to both specials signs and specials displays.

It is apparent in Tables 7 and 8 that variation or consistency in consumer preferences about merchandising variables tends to be associated with variation or consistency in actual merchandising conduct among grocery firms.

The impact of these relationships on overall performance ranks among grocery firms is examined in Table 9, which ranks the eight sampled firms according to how their conduct matched relative consumer expectations. Firms ranked high in performance if conduct exceeded shopper expectations, or low if conduct failed to match expectations. Hence, two stores of equal actual merchandising procedures could rank differently in performance depending on the attitudes of the consumers they served. Indeed, inferior merchandising by a firm serving indifferent shoppers could result in a higher performance ranking than moderately alert merchandising by a firm serving highly expectant shoppers.

This seems to have occurred in some cases. For example, in terms of actual merchandising conduct, Firms F and H ranked fifth and third respectively (sum of ranks, Table 8). But Firm F shoppers had the highest expectations of the entire shopper sample, and Firm H shoppers were among the least critical. Hence, Firm H emerged with the top performance rank in Table 9, as much because of the low level of shopper expectations as because of the merit of its actual conduct, and Firm F fell to the bottom rank largely because its shoppers were uniquely hard to please.

The highest actual conduct on the seven measured variables was found in Firm G, and the lowest in Firm D (Table 8). But high expectations among Firm G shoppers lowered the overall rank of Firm G to a share of fourth place, and relatively lower shopper expectations permitted Firm D to avoid the lowest rank (Table 9).

TABLE 9.—Performance: Firm Performance Scores and Levels on Seven Specials Merchandising Variables in Eight Retail Grocery Firms, Columbus, Ohio, April 1972.

Seven Merchandising Variables	Retail Grocery Firm A	B	C	D	E	F	G	H
Meat Specials Signs								
Table 7 minus Table 8*	0	0	+1	+1	+2	—1	0	0
Performance Level	3	3	2	2	1	4	3	3
Produce Specials Signs								
Table 7 minus Table 8	0	+1	0	—1	+1	—1	0	+1
Performance Level	2	1	2	3	1	3	2	1
Grocery Specials Signs								
Table 7 minus Table 8	—3	—1	—3	—3	—2	—2	+1	+1
Performance Level	4	2	4	4	3	3	1	1
Produce Specials Displays								
Table 7 minus Table 8	+2	+2	+1	+1	+1	0	0	+1
Performance Level	1	1	2	2	2	3	3	2
Grocery Specials Displays								
Table 7 minus Table 8	+1	+2	+3	0	+1	—3	+1	+3
Performance Level	3	2	1	4	3	5	3	1
Amount of Fat								
Table 7 minus Table 8	+1	—1	—1	0	0	—1	0	+1
Performance Level	1	3	3	2	2	3	2	1
Meat Specials Quality								
Table 7 minus Table 8	+1	0	0	0	+2	0	0	+1
Performance Level	2	3	3	3	1	3	3	2
All Variables								
Sum of Scores	+2	+3	+1	—2	+5	—8	+2	+8
Performance Rank	4	3	5	6	2	7	4	1

*Row 3, Table 8 (merchandising level) is subtracted from row 3, Table 7 (shopper preference level).
Source: Preference and merchandising levels, Tables 7 and 8.

TABLE 10.—Alternatives—Variation in Rank Associated with Variation in Measurement Method.

Measurement	Row	Retail Grocery Firm A	B	C	D	E	F	G	H
Table 7: Preference									
Sum of Levels	1	18	14	18	16	19	7	11	19
Preference Rank	2	5	3	5	4	6	1	2	6
Index of Levels†	3	39	50	39	44	37	100	64	37
Preference Rank	4	5	3	5	4	6	1	2	6
Table 8: Conduct									
Sum of Levels	5	16	11	17	18	14	15	9	12
Conduct Rank	6	6	2	7	8	4	5	1	3
Index of Levels†	7	56	82	53	50	64	60	100	75
	8	6	2	7	8	4	5	1	3
Table 9: Performance									
Sum of Scores‡	9	+ 2	+ 3	+ 1	— 2	+ 5	— 8	+ 2	+ 8
Performance Rank‡	10	4	3	5	6	2	7	4	1
Row 2—6+4—8**	11	— 1	+ 1	— 2	— 4	+ 2	— 4	+ 1	+ 3
Performance Rank	12	4	3*	5	6*	2	6*	3*	1
Row 7—3††	13	+17	+32	+14	+ 6	+27	—40	+36	+38
Performance Rank	14	5*	3	6	7	4*	8	2*	1
Sales/Sq. Foot‡‡	15	3	1	2	4				

†Rather than a simple ranking, an index of the extent to which (in row 2, for example) all preferences stood in relation to those expressed by shoppers in Firm F, or (as in row 7) the relationship of store conduct by each firm relative to Firm G. Hence, rows 3 or 7 do nothing to alter the ranks expressed in rows 2 and 6. They simply provide additional information like (to choose an illustration) elasticities add information to the notion of demand functions. The indices are calculated by dividing the first-ranking sum of levels (7 in row 1, for example) by the sums of each of the other levels in the row.

‡These are the bottom two rows from Table 9.

**The object here is to allow the new information generated by rows 3 and 7 to exert any impact they may have in altering performance ranks. Any resultant impacts are identified by an asterisk (*) in row 12.

††Here a direct comparison between indices is made, in a manner paralleling the comparison of simple ranks which generated Table 9. Again, the attempt is to alter the performance rank by employing the alternate approach. Variations are recorded by an asterisk (*) in row 14.

‡‡Here the conventional performance measure of sales per square foot is recorded for comparison. The measure was available for only four firms and whether or not these firms were area sales leaders is not disclosed. What is important is that, while there is a certain similarity of rankings in each of the four methods presented here, it is not clear tnat sales per square foot is necessarily a superior or even satisfactory measure, either in terms of its simplicity or its accuracy. Moreover, while sales per square foot are not readily shared among competitors, the suggested performance criteria provide a device by which competitors may readily assess their relative competitive merits or shortcomings, regardless of the unavailability of more conventional measurement norms.

Source: Tables 7-9.

CONCLUSIONS

The value of the information in this bulletin lies in its usefulness in helping firms increase their sensitivity to shopper expectations. The notion of "value" rests, further, on the premise that "good" performance results when firm conduct is closely matched to shopper expectations. This may not be true. But the information may be helpful in identifying two types of difficulty: 1) specific areas where merchandising is poor, and 2) instances where good merchandising conduct is unappreciated by shoppers. Merchandising improvements would appear to be warranted in the first case, and improved public relations in the second.

Firm G in this sample, for example, might benefit from an ad program emphasizing its grocery signs and displays and the close trim on its meats. Firm F might consider increasing its use of signs and displays, particularly in the grocery department. Within the limits prescribed by firm policy, it might be wise to allow some latitude to individual store managers to vary merchandising emphasis in accord with the expectations of shoppers in specific stores.

In all cases, performance evaluated should not be confined to measured variables mentioned here, but should include others known to management or identified in this or other studies as important considerations.

Because one of the objects of this study was to suggest a means by which performance comparisons may be derived, certain exclusions were made and some of them were important. For example, comparisons recorded in Table 7 are confined to those merchandising factors most amenable to precise measurement. However, some of these factors are not necessarily the factors which shoppers had regarded as having the greatest impact on their shopping patterns (see Table 6). Department cleanliness, for example, was reported by shoppers as an important consideration. Yet that merchandising factor was not included in the performance analysis because there was no precise means by which comparative cleanliness between stores could be readily and objectively appraised. So the results convey an implication of precision which they do not deserve. This occurs partly because precision in measuring significant merchandising factors is difficult to obtain, and partly because the whole notion of precision in this case may be more illusory than real.

LITERATURE CITED

1. Anderson and Kumpf. Business Law.
2. Bain, Joe S. 1968. Industrial Organization. John Wiley and Sons, New York, 2nd edition.
3. Beckman, T. N. and W. R. Davidson. 1962. Marketing. Ronald Press, New York, 8th edition.
4. Caplovitz, David. 1967. The Poor Pay More. The Free Press, New York.
5. Cassady, R. 1962. Competition and Price Making in Food Retailing. Ronald Press, New York.
6. Davidson, W. R. and A. F. Doody. 1966. Retailing Management. Ronald Press, New York, 3rd edition.
7. Edwards, Charles M. and Russell A. Brown. 1959. Retail Advertising and Sales Promotion. Prentice-Hall, Inc., Englewood Cliffs, N. J.
8. Federal Trade Commission. Jan. 1966. Economic Report on the Structure and Competitive Behavior of Food Retailing. Staff Report.
9. Galbraith, John Kenneth. 1967. The New Industrial State. Houghton Mifflin Co., Boston.
10. Gartner, Joseph and Lee Kolmer. Nov. 1960. Consumer Decision Making. Consumer Marketing Bull., Iowa State Univ., Ames.
11. Katona, George. 1951. Psychological Analysis of Economic Behavior. McGraw-Hill Book Co., Inc., New York.
12. Kohls, Richard L. 1967. Marketing of Agricultural Products. MacMillan Co., New York, 3rd edition.
13. Marion, B. W. and C. R. Handy. Sept. 1973. Market Performance: Concepts and Measures. AE Report 244, Econ. Res. Serv., U. S. Dept. of Agriculture.
14. Mather, Loys L. (Ed.) 1971. Economics of Consumer Protection. Interstate Printers and Publishers, Danville, Ill.
15. National Commission on Food Marketing. June 1966. Food from Farmer to Consumer. U. S. Govt. Printing Office, Washington, D.C.
16. Neigh, Harold E. and Clarence E. Trotter. March 1970. Consumer Responses to Meat Price Specials. Penn. State Univ., Bull. 762.
17. Newman, Joseph W. 1967. On Knowing the Consumer. John Wiley and Sons, New York.
18. Padberg, D. I. 1971. Today's Consumer. **In** Economics of Consumer Protection, Loys L. Mather (Ed.). Interstate Printers and Publishers, Danville, Ill.
19. Preston, Lee. 1963. Profits, Competition and Rules of Thumb in Retail Food Pricing. Spec. Pub., Institute of Business and Economics Research, Univ. of Calif., Berkeley.
20. Prior, Faith. 1971. Today's Consumer Movement. **In** Economics of Consumer Protection, Loys L. Mather (Ed.). Interstate Printers and Publishers, Danville, Ill.
21. Samuelson, Paul A. 1970. Economics. McGraw-Hill Book Co., New York, 8th edition.
22. Scherer, F. M. 1970. Industrial Market Structure and Economic Performance. Rand McNally and Co., Chicago.
23. Shaffer, James Duncan. 1971. On Reasonable Rules for Consumer Protection. **In** Economics of Consumer Protection, Loys L. Mather (Ed.). Interstate Printers and Publishers, Danville, Ill.
24. Sosnick, Stephen. Nov. 1968. Toward a Concrete Concept of Effective Competition. Amer. J. Agri. Econ.
25. Wright, Carlton E. 1962. Food Buying. MacMillan Co., New York.

The State Is the Campus for Agricultural Research and Development

Ohio's major soil types and climatic conditions are represented at the Research Center's 13 locations.

Research is conducted by 15 departments on more than 7200 acres at Center headquarters in Wooster, eight branches, Green Springs Crops Research Unit, Pomerene Forest Laboratory, North Appalachian Experimental Watershed, and The Ohio State University.

Center Headquarters, Wooster, Wayne County: 1953 acres

Eastern Ohio Resource Development Center, Caldwell, Noble County: 2053 acres

Green Springs Crops Research Unit, Green Springs, Sandusky County: 26 acres

Jackson Branch, Jackson, Jackson County: 344 acres

Mahoning County Farm, Canfield: 275 acres

Muck Crops Branch, Willard, Huron County: 15 acres

North Appalachian Experimental Watershed, Coshocton, Coshocton County: 1047 acres (Cooperative with Agricultural Research Service, U. S. Dept. of Agriculture)

North Central Branch, Vickery, Erie County: 335 acres

Northwestern Branch, Hoytville, Wood County: 247 acres

Pomerene Forest Laboratory, Coshocton County: 227 acres

Southern Branch, Ripley, Brown County: 275 acres

Western Branch, South Charleston, Clark County: 428 acres