

knowing your food store

Bruce F. Hall

Consumer dissatisfaction with local food stores is frequently an issue in many communities. The great majority of food purchases by consumers are made locally and consumers purchase food repetitively at the same stores. Because it isn't practical in most cases for people to travel very far to do their routine food shopping, sufficient competition may not exist between stores in different neighborhoods to ensure that the price, quality, and selection of foods will be equally good throughout an urban area, or in nearby towns in a rural area.

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Studies of price variation between neighborhoods in cities such as Chicago¹ and New York² have found significant variation in food prices, depending on the location of the store. A recent study by Marion³ also showed that stores located in poverty areas of cities experienced significantly higher operating expenses than stores located in nonpoverty areas. You would expect that these higher costs would be reflected not only in the prices charged, but also in the level of selection and services to be found in poverty area stores.

In a 1981 survey of food stores in several different areas of New York State, this expectation was verified statistically

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by surveying stores for price, quality, selection, and other characteristics that are important to consumers.⁴ This study found that certain kinds of communities, especially those with large numbers of black and elderly people, had food stores that were significantly worse, in terms of the characteristics evaluated, than stores found in other kinds of communities.

Developing Survey

When consumers in a community perceive a problem exists with local food stores, they may find it difficult to obtain convincing evidence to document that perception. Most community groups don't have the resources or expertise to initiate a research project that would tell them how their local food stores compare with stores elsewhere. To facilitate the gathering of this information, we developed a survey instrument and methodology, in a self-explanatory form, and tested its use with groups of volunteers.

General Areas

The survey was designed to collect information about the general atmosphere and cleanliness of the store itself, and about the prices, quality, and selection available for 30 kinds of items in each store. The survey was pretested and revised several times to develop measures that would be both relatively easy for untrained volunteers to use and provide reliable evaluations of store characteristics. Collecting the price information was straightforward, but selection, quality, and cleanliness were more difficult to measure.

Selection

Selection was a particularly difficult problem. We found it was necessary to minimize the use of counting procedures as much as possible, because it was hard for people to locate things in a strange store. For packaged goods like bread or canned peas, we did obtain a count of the number of brands available. For fresh produce, we counted the number of different prices available for selected items (like slicing tomatoes, U.S. No. 1 potatoes, etc.).

In addition, we used a checklist for produce and meats. The volunteer would check whether berries, cabbage, spinach, were available in any form, and we could then add up the number of checks to estimate the range of selection. For packaged goods, volunteers wrote down the smallest size they saw, for example, of canned peas, and the largest size they saw, to compare size range between stores and evaluate which store had the best selection of sizes.

Quality

We scored quality of specific fresh produce and meat items from "very poor" to "excellent" on a five-point scale,

and provided descriptive guidelines to help each volunteer judge the quality of the items, based on their appearance and feel. The cleanliness of each department in the store was scored from "poor" to "good" on a three-point scale, with descriptive guidelines provided for making these judgments.

Conducting Survey

After the survey procedures had been tested and revised several times, we organized experiments in two New York City neighborhoods to test the reliability of data collected by volunteers. In each case, five or six volunteer interviewers visited the same stores in each neighborhood during a specified period of time. The data were then coded and analyzed (using analysis of variance) to see whether statistically significant differences existed between the data recorded independently by different individuals in the same store.

The results were quite consistent, even on the more subjective questions such as quality and cleanliness. We concluded from these experiments that the procedures we'd developed did indeed provide a means for volunteers to collect statistically reliable information that could be used to compare food stores in different neighborhoods.

The only drawback we found in using this survey was that it was time-consuming, especially the first time an individual completed one. Because we were looking for several different kinds of information, many different questions were asked. Not much time was required for training, however, because most of the learning took place "on the job," during the process of completing the survey. The actual procedures were logical and easy to follow, if the individual was sufficiently motivated to follow through on the process. We asked the volunteers to request permission from the store manager when entering the store, but they didn't do any personal interviewing . . . all the information was taken from the shelves.

Survey Uses

Data of this kind can be analyzed statistically in many ways. In most cases, grouping together questions about certain kinds of characteristics is an important first step. The actual grouping we used to construct variables for statistical tests, using multiple regression analysis, is shown in Table 1. This grouping allowed us to pool the data on different products so we had eight variables that could be regressed on dummy variables identifying neighborhoods, stores, or interviewers, or on continuous variables describing neighborhood characteristics, depending on the problem to be addressed. The first two variables describe

Table 1. Grouping of data into variables.

Variable	Definition
Lowprice	Lowest unit price at which each of 30 specific items was offered for sale (in specified sizes).
Brandprice	Price of 15 specific brand name items (in specified sizes).
Fresh product selection	A count of the number of different kinds of products recorded on checklists in the produce, fruit, and meat departments.
Number of prices and brands	A count of the number of different prices for which 8 specific fresh products were offered, and the number of brands in which 18 specific packaged and processed products were offered.
Range of sizes	The size range of packages (largest size minus smallest size) in which 18 specified packaged and processed products were offered.
Cleanliness	An evaluation on a 3-point scale (1=good; 3=poor) of how clean 8 specified departments of the store appeared to be.
Quality	An evaluation on a 5-point scale (1=excellent; 5=very poor) of the apparent quality of 12 specified fresh products, based on a set of standard instructions for grading quality.

“prices,” the next three “selection,” and the last two “cleanliness” and “quality.”

If the process is to be useful and successful, keeping people involved is important. The techniques used to analyze the data shouldn't be too complicated or sophisticated for people to understand, because they'll lose their sense of involvement. In some cases, the group making the survey might sit down and simply make a page-by-page comparison of the completed survey forms, noting which store most frequently had the lowest price, the highest quality, and so forth. We found that undergraduates in consumer economics, when they were given these forms to use, were able to develop their own analysis plans and adapt the survey to address issues such as the correlation of price and quality, with which they were particularly concerned.

Extension Applications

The uses of food store surveys are varied—making the survey an excellent tool in Extension education programs. In consumer programs, either for adults or youth, it can be a teaching tool to help people develop an understanding of the wide variation in price, quality, and selection found in

different stores and neighborhoods. In community development programs, it can be used to develop awareness of community needs in food retailing, as a first step toward developing solutions to better serve the community. In neighborhoods where stores are being closed, data collected using this procedure can be used to buttress community pressure on local policymakers, both in the public and private sector. In many cases, communities may choose to develop consumer cooperatives or improve the availability of direct marketing alternatives, so agricultural program leaders may find this procedure useful as well.

Conclusion

The principal value of this technique is that, in most of these applications, the users don't have the time, expertise, and resources to begin developing a survey like this "from scratch." They don't know which items to include or what kinds of questions to ask about the nonprice characteristics of the store. Even if they're able to put together a survey, how can they be sure the results will be convincing to people who weren't involved in the process? Using these procedures that have already been developed and tested will both facilitate the process and provide support for the validity of the results.

Footnotes

1. Donald E. Sexton, *Groceries in the Ghetto* (Boston: D.C. Heath and Co., 1973).
2. Roger E. Alcaly and R. K. Klevorick, "Food Prices in Relation to Income Levels in New York City," *Journal of Business*, XLIV (October, 1971), 380-97.
3. Donald R. Marion, *Supermarkets in the City* (Amherst: University of Massachusetts, Cooperative Extension Service, College of Food and Natural Resources, 1977).
4. Bruce F. Hall, *Neighborhood Differences in Retail Food Stores* (Ithaca: Cornell University, Department of Consumer Economics and Housing, 1982).