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**Working Paper**

## STARS: Segment Targeting at Retail Stores

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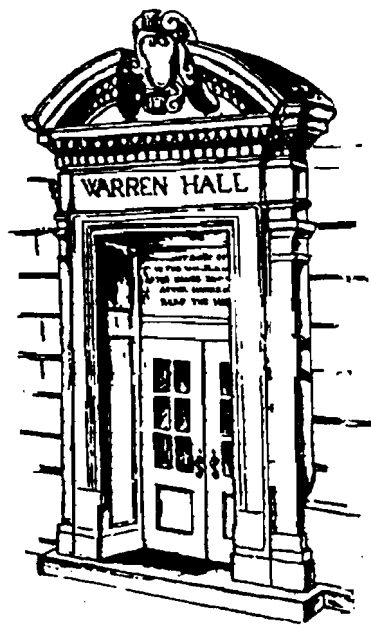
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# Staff Paper

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## **STARS: SEGMENT TARGETING AT RETAIL STORES**

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# **STARS: Segment Targeting At Retail Stores**

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San Antonio, Texas

**Lucky Stores - Northern California Division**  
San Leandro, California

**P&C Food Markets**  
Syracuse, New York

**Publix Super Markets**  
Lakeland, Florida

**The Vons Companies**  
Arcadia, California

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## **Executive Summary**

Ultimately, the greatest potential of category management lies in tailoring the offerings of individual supermarkets to their local consumers. Yet, for most companies, this level of sophistication is years away. An intermediary step toward individual store targeting is "store clustering" wherein stores with common local market characteristics are grouped together for specific merchandising and marketing programs.

One critical component of category management is in-depth understanding of the dynamics of individual product categories. This report details a study whose purpose was two fold: first, to examine the dynamics of the margarine category and, second, to test a general methodology for store clustering and merchandising that could prove generalizable to other product categories.

Generating nearly \$2 billion in retail sales, margarine is a large, important category in which sales have been declining in recent years due to a variety of factors including health concerns and lifestyle changes. The combination of large size and declining sales makes margarine a prime candidate for category management.

To better understand margarine category dynamics, Nabisco Foods Group conducted three earlier studies which formed the basis for the study detailed in this report. First, to understand the purchase decision process, IRI Household Panel data were used to identify margarine consumer segments. Second, two years of IRI data on over 440,000 margarine purchases by 37,000 households were analyzed to estimate substitution rates

between brands and items. Third, the margarine shelf planograms of 30 leading retailers were analyzed to determine the "best practices" of margarine merchandising.

This report details an in-store test designed to test the validity of the learning from the three earlier studies. In this study, supermarkets were clustered according to the sales potential for different consumer segments in each supermarket using geo-demographic techniques. Based on individual store sales potential indices, "premium" and "value" store clusters were designated and planograms were created to merchandise to the dominant margarine consumer segment of each store cluster.

The planograms varied on three dimensions: space allocation, shelf position, and product form location. Combinations of these dimensions were manipulated in an in-store experimental design created to measure impacts of the various dimensions on total category sales. Margarine sections were reset in 78 supermarkets at six supermarket chains in six markets across the United States. Scanning data were collected from each store for 13 weeks.

Results indicate that certain combinations of the three variables were effective in increasing total margarine category dollar sales. Specifically, in "premium" stores, allocating "greater than unit share" of shelf space for premium margarine, positioning the premium segment on the side of the margarine set, and placing the solid "stick" form of the product on the shelves of the case increased category sales the most. For "value" stores, when "value" margarines are given space equal to their unit share of category sales, value margarines are located on the side of the set and

"stick" forms are also placed on the shelves of the case, margarine sales increased the most.

Thus, geo-demographic clustering of stores can be used to isolate consumer segments with targeted merchandising programs to increase category sales, even in a declining category. Though this study is based on just one category, it is likely that this process is applicable to many key product categories.



## **Introduction**

One key reason category management has been rapidly accepted as a new way to manage supermarkets is that it eventually will allow retailers to efficiently tie each store to its local market area. Prior to implementing category management practices in any particular category, the dynamics of the entire category must be understood -- consumer profiles, consumption trends, product mix, costing, promotion effects, new product developments, etc. One large issue facing supermarket companies is where to begin when faced with perhaps 300 or more product categories in a typical supermarket.

Most supermarket operators understand the magnitude of this challenge and realize they do not have the resources required to become experts in the dynamics of every category. In the past, retail firms have relied on the expertise and resources of manufacturers, typically very knowledgeable in their selected categories. Such partnerships between supermarket and manufacturer are critical to the success of category management and to the improvement of overall food system efficiency.

Much has been written about the benefits of category management and many supermarket companies have experimented with category management principles in pilot tests. Partly as a consequence, there has been a tremendous increase in demand for unbiased information about individual category dynamics. The study detailed in this report is an attempt to understand the dynamics of a single category through a unique collaboration of university research, a major manufacturer, six prominent supermarket companies, and a leading industry consultant.

# **Study Design**

## **Objective**

The objective of the study was to see if category sales could be increased by clustering stores and manipulating the planograms in each store cluster.

## **Store Clustering**

The study involved six regional supermarket companies from six different market areas dispersed around the U.S. The following companies were asked to participate in the study based on geographic representation, commitment to category management, number of stores, and scanning capability:

- Dominick's Finer Foods, Chicago, IL
- H.E. Butt Grocery Co., San Antonio, TX
- Lucky Stores-Northern California Div. (a division of American Stores) San Leandro, CA
- P&C Food Markets (a division of the Penn Traffic Co.), Syracuse, NY
- Publix Super Markets, Lakeland, FL
- The Vons Companies, Arcadia, CA.

Each of the companies agreed to have the margarine sections of 13 stores reset during the thirteen week study and to provide weekly scanning data for all margarine category items.

Based on margarine consumer segments -- "premium" and "value" - identified in the consumer segmentation study mentioned above, two experiments were designed to test the effects of planogram variations on category sales and profits. The consumer segments were identified based on a price point: "premium" consumers purchase margarines priced above \$1.00 per pound and "value" consumers purchase margarines priced under \$1.00 per pound. Stores were clustered according to Spectra Marketing's Brand Opportunity Indices (BOIs) for each store. Brand Opportunity Indices equate individual store demographics with the demographics of heavy users of particular products. Opportunity indices for "premium" and "value" margarine consumption potential were calculated for every supermarket operated by each of the six companies. Only stores with the highest indices were selected for the experiment.

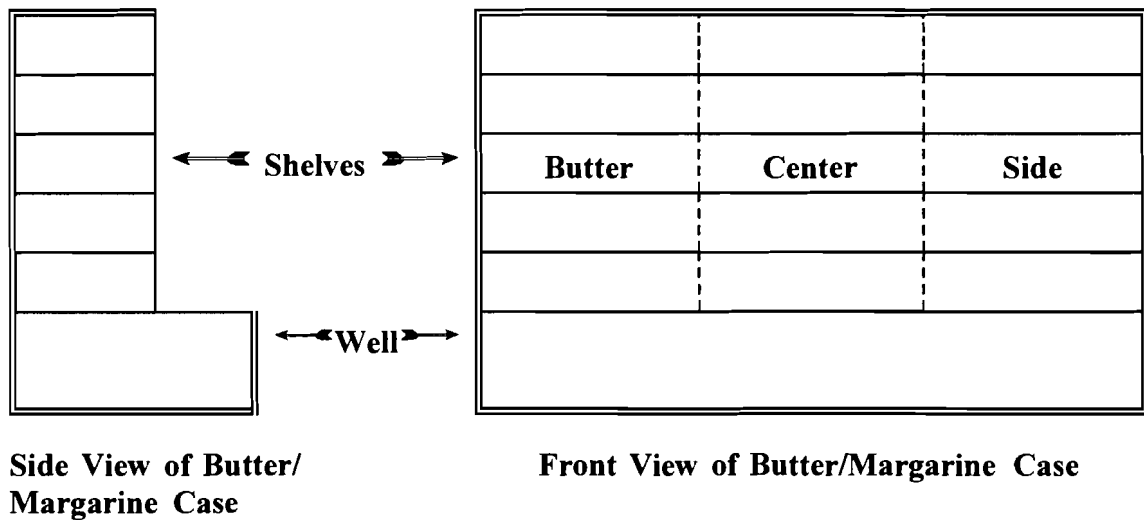
Three chains - Publix, Dominick's, and Vons - were included in the "premium" store experiment since the predominance of these chains' individual store demographics indicated greater potential for "premium" brands. On the other hand, P&C, HE Butt and Lucky participated in the "value" store experiment due to the predominance among their stores of market demographics which indicated greater sales potential for "value" brands. These groupings each maintained representation of eastern, central and western regions of the country. In all cases, test store results were measured against "control" stores for each company.

### **Test Planograms**

Test planograms were created to measure the effects of space allocation principles on total margarine category sales. Three key

propositions, based on the "best practices" study mentioned above, provided the basis for the planogram designs. First, shelf space can be allocated to individual brands according to unit sales of each brand, either proportionately or disproportionately. Second, premium brands should be grouped together in the margarine case and, likewise, value brands. Third, hard ("stick") forms of margarine should be placed either in bottom ("well") of the case or on the shelves of the case (but not mixed in with the soft ("bowl") forms of margarine) (Figure 1).

**FIGURE 1**  
**SHELF PLANOGRAM DIMENSIONS AND TERMINOLOGY**



Three dimensions were manipulated in the test planograms: location of the dominant brand group, premium or value, space allocation of the dominant brand group, and placement of the solid ("stick") form of margarine. Two locations of the dominant brand group were tested: center of the set and side of the set, where butter is located at the opposite side

of the case (Figure 1). Space allocation of the dominant brand group was tested at three levels: more than unit share, unit share, and less than unit share, (where unit share equates each brand's share of shelf space with the brand's share of unit sales) (Table 1). "Stick" placement was tested at two levels: sticks in the "well" or bottom and sticks on the shelves of the case.

**TABLE 1**  
**PLANOGRAM VARIABLE SETTINGS TESTED**

	Shelf Position		Space Allocation			Stick Location	
Store Type	Center	Side	Greater Than	Unit Share	Less Than	Shelf	Well
Premium							
Value							

Combining the various levels of each of the three test planogram dimensions (Table 1) resulted in twelve planogram models (Table 2). These twelve models were randomly assigned to twelve of the test stores selected at each of the three companies involved in the "premium" and "value" experiments. The margarine case in each store was then reset by local broker associates according to the unique planogram created specifically considering that store's case size, traffic flow and item list.

**TABLE 2**  
**TEST PLANOGRAM MODELS**  
**FOR PREMIUM & VALUE STORES**

<b>Model</b>	<b>Location of Dominant Brand Segment</b>	<b>Space Allocation of Dominant Brand Segment</b>	<b>Location of "Stick" Form of Product</b>
1	Center	Less than unit share	Shelf
2	Center	Less than unit share	Well
3	Side	Less than unit share	Shelf
4	Side	Less than unit share	Well
5	Center	Unit share	Shelf
6	Center	Unit share	Well
7	Side	Unit share	Shelf
8	Side	Unit share	Well
9	Center	More than unit share	Shelf
10	Center	More than unit share	Well
11	Side	More than unit share	Shelf
12	Side	More than unit share	Well

No attempts were made in the study to change the variety of products stocked in any store. Companies were free to add and/or delete products to the mix during the test period as such decisions normally occurred. The overall category space was not changed in the various "space allocation" manipulations. "Opportunity space" was created by reducing brands to their minimum merchandising requirements and allocating any extra space to dominant brand group.

The test period lasted thirteen weeks and each store's test planogram was maintained for the entire period, with weekly monitoring by the National Retail Tracking Index (NRTI), an independent shelf auditing company.

## **Test Results**

The overall results of the two experiments support the propositions that clustering stores according to consumer demographics and tailoring planograms to individual store market areas can increase sales in the margarine category. Of course, this finding is all the more significant considering the declining sales trend in the margarine category over the past few years.







**TABLE 3**  
**TEST RESULTS**  
**% Change in Total Margarine Category Sales**

<b>Store Type</b>	<b>Shelf Position Dominant Segment</b>	<b>Space Allocation of Dominant Segment</b>	<b>Stick Location</b>	<b>Change in Category Sales</b>
Premium	Side	More than unit share	Shelf	+5.7%
Value	Side	Unit share	Shelf	+2.2%

In "premium" stores, the greatest sales impact was found when "premium" margarine was placed on the side of the margarine case, given more than unit share of shelf space, and "stick" margarines were on the shelves of the case (Table 3). The average dollar sales increase for this combination was 5.7 percent over control store levels.

The optimum planogram combination for "value" stores varies only slightly from that of the "premium" stores. Best results occurred when "value" margarine was placed on the side of the case with "stick" forms of margarine on the shelf, and space allocation equal to the unit share of value margarine. This planogram combination resulted in an average increase of 2.2 percent in total margarine category dollar sales.

**TABLE 4**  
**SUMMARY OF TEST PLANOGRAM RECOMMENDATIONS**

Store Type	Shelf Position Dominant Segment		Space Allocation of Dominant Segment			Stick Location	
	Center	Side	Greater Than Unit Sales Share	Unit Sales Share	Less Than Unit Sales Share	Shelf	Well
Premium							
Value							

A visual comparison of the optimal planogram combinations for "premium" and "value" stores is presented in Table 4. Common principles for both "premium" and "value" include placing the dominant brand group on the side of the case and placing "stick" forms of margarine on the shelves of the case.



## **Implications**

While this study explored the dynamics of the margarine category, much of the learning from this work is directly applicable to a broad range of grocery product categories. Store clustering using geo-demographic data is a valuable method of targeting consumers through more efficient advertising, promotion and product assortments.

It is also probable that the results obtained in these two experiments would be further enhanced by the application of variety duplication analysis and accompanying reductions in number of items stocked. Further variety analysis would adjust the product mix in each store cluster to better fit the consumers each cluster represents.

The study did not change the overall space available to margarine. Space allocation was varied within the existing case dimensions. Greater sales productivity impact may be possible if overall margarine case space is manipulated.

Category management is a dimension in the Efficient Consumer Response (ECR) initiative that the food industry is exploring to maintain its long term competitiveness. This study suggests that combining store clustering with space allocation according to consumer profiles produces more efficient store merchandising. Extension of these findings to other categories has the potential to further enhance the competitiveness of food retailers.

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