The Effect on Sales of Changes in a "Push" Marketing Strategy in a Marketing Channel Context

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Manufacturers allocate resources to various promotion activities in an attempt to "pull" their products through the marketing channel. Other resources are spent attempting to satisfy the needs and wants of wholesalers and retailers in an attempt to "push" their products through the channel. It is important to maintain good channel relations so that the wholesalers and retailers will allow adequate shelf space and be responsive to manufacturer sponsored point of purchase displays, cooperative advertising and special promotions. To develop a "push" marketing strategy, manufacturers must determine what level of activity should be allocated to the various functions performed in the channel. The purpose of this paper is to demonstrate a method of assessing the effect on sales of changes in salient marketing mix variables which will give marketing managers actionable information for developing marketing channel strategies. The strengths and limitations of this method are assessed in relation to previous research.

 Journal of the Academy of Marketing Science
Winter, 1984, Vol. 12, No. 1, 85-105
0092-0703/84/1201-0085 $2.00

PREVIOUS RESEARCH

Numerous approaches have been taken for determining marketing channel strategy. One of the more common methods is to assess the buyers' perceptions of the importance of various marketing mix variables, then direct marketing efforts to those variables (Simon 1965, Cunningham and Roberts 1974, Lehmann and O'Shaughnessy 1974, LaLonde and Zinszer 1976, Perreault and Russ 1976, Gilmour 1977, Evans 1980). Even though managers can pinpoint the most important attributes or activities, they have no specific information about the level of activity to provide. In addition, these perceptual data provide no information about any economic impact of alternative strategies. This deficiency is specifically addressed in the following studies.

Recent research by Gilmour (1979) explicitly considers the level of marketing and distribution activities. He defined the functional relationship between company growth rate and a number of marketing mix variables. An interactive computer program was utilized in which 40 suppliers input their perceptions of how they believed their market share would change, given changes in their marketing mix and that of their competition. This interesting approach provides management with information not available with the research described above.

A very different approach was taken in an early study outside the marketing channel context. Pessimier, Burger, Teach and Tigert (1971) utilized dollars in determining preferences. Using their approach, a respondent compares two stimuli, x and y. If the respondent prefers x to y, then he or she is asked how much the price of y must increase until an indifference point is reached. These paired comparisons are then aggregated to obtain the intervally-scaled, dollar-based preference judgments. In another study outside the marketing channel context Darmon (1979) used conjoint analysis to derive a profit function based on salespeoples' trade-offs for different levels of salary versus bonus.

Conjoint analysis has also been used in a marketing channels context to determine utilities for various combinations of manufacturer activities. Perreault and Russ (1977) and Levy (1981) attempted to define the "perceived dollar benefit" for each salient marketing mix variable, i.e., how much money wholesalers or retailers would be willing to "trade-off" for a better or higher activity level. However, the monetary estimates derived in both of these studies assume the relationship between the utility of the customer and the sales revenue of the manufacturer are linear — a potentially unwarranted assumption.

The method presented here also uses a variation of the conjoint

analysis approach by deriving explicit dollar values for different levels of salient marketing mix activities. That is, the method derives an estimate of how much an average customer's sales would change given different marketing mix activity levels. This "sales dollar" conjoint analysis is different from the traditional conjoint analysis in which respondents' rank-order preferences for different combinations of marketing mix variables are converted to utilities which can be used to determine the relative importance of different levels of the marketing mix activities (Green and Srinivasan 1978).

The "sales dollar" conjoint analysis has the potential of determining more accurate sales response estimates than the previous efforts of Perreault and Russ (1977) and Levy (1981) since the estimates are derived directly, thereby avoiding the linearity problem described above. This method is also potentially more useful for management than the traditional method since they can more easily grasp the significance of changes in sales rather than changes in utility. However, the data collection for the "sales dollar" method is significantly more difficult than the traditional conjoint analysis. Therefore, tests for statistically and managerially different results between the two methods were performed to determine if different strategies would be formulated on the basis of which data collection procedure was used.

RESEARCH DESIGN

Product and Sample Selection

Margarine was selected as an appropriate product classification for the following reasons: The promotion of margarine to retailers relies heavily on "deals" which the purchasing agent is relatively free to accept or reject. Further, these purchasing agents have some direct control over shelf space. Thus, they have a relatively large amount of control over the marketing efforts which are placed on any particular margarine, and thus have some control over sales.

Forty-eight merchandise managers or purchasing agents of margarine were interviewed for this study. Specific buyers and merchandise managers of those thought to be innovative and aggressive by top management of a nationally branded margarine manufacturer were included in the sample. The purposive sampling procedure is most appropriate in this situation since data collected from the most capable

experts in the industry would provide more meaningful information than a probability sample which could include many unknowledgeable people.

Activity Selection

The activities and levels of those activities chosen for study were selected so that they were not only important to the customers, but they were also those which could provide the manufacturer with a differential advantage. The activity levels chosen for study are equally important. They were designated to be highly specific and realistic to the respondents. Personal interviews with a margarine manufacturer's national sales manager, product manager, and vice president of physical distribution, the manufacturer's brokers, and four retail merchandise managers ensured that these criteria were met. The activities used in this study are found in Table 1. Note that margarine, as a product class, is not a highly differentiated product. Therefore, specific product characteristics need not be considered. In addition, margarine manufacturers emphasize a "push" marketing strategy; hence the emphasis on channel related marketing activities.

Data Collection

The data were collected via long-distance telephone interviews. During the initial telephone contact a brief explanation of the study was provided, then an appointment was made approximately ten days in the future for a second call to collect the data. In the intervening period, the interview materials were mailed to each respondent. As an incentive to cooperate, the participating manufacturer made a contribution to the American Cancer Society. Each respondent received a handwritten card stating that a donation had been made in his or her name to that charity in appreciation for his or her cooperation in this study prior to the second interview.

The full-profile method of data collection (Green and Srinivasan 1978) was used with an orthogonal partial-factorial design (Green 1974). Each respondent received nine cards, each displaying a unique combination of activities. An example card is found in Exhibit 1.

Respondents were first asked to rank order the cards from most preferred to least preferred, providing data for the traditional conjoint analysis. Then they were told their current annual purchases of soft tub margarine in cases and the specific activity package which they

were currently receiving from a "hypothetical" manufacturer. The respondents were asked to compare the activities which they were currently getting with each of the cards and use the scale provided at the bottom of each card to indicate how their sales would be affected by the different activity combinations. The sales estimates in cases were later converted to sales dollars using prices which were stable over the manufacturer's planning horizon. These sales dollar estimates were data input for the "dollar" conjoint analysis.

The method of data collection described here was very costly in terms of time and money. Each respondent took an average of 40 minutes which included explanations to secretaries, waiting time, callbacks, as well as the actual interviews. Thus, the rather limited sample size was deemed more than satisfactory in this particular situation.

Analysis

Both data sets were analyzed using ordinary least squares (O.L.S.) regression. Research has suggested that results obtained with O.L.S. regression are virtually indistinguishable from those obtained by nonmetric estimation methods such as Kruskal's (1965) MONANOVA (Cattin and Wittink 1976; Carmone, Green and Jain 1978).

The data from all 48 respondents were aggregated for the analyses. Numerous articles have recently addressed issues related to aggregation of conjoint analysis data e.g., Montgomery and Wittink (1980); Huber and Moore (1979); Jain, Malhotra, and Mahajan (1979). Specifically, Currim and Wittink (1980) demonstrate the equivalence of least squares results for four aggregation procedures. Moore (1980) empirically examines the predictive validity of four aggregation methods; individual, pooled, clustered segmentation, and componential segmentation. He stresses that a great advantage of segmented analyses over individual level analyses is in data collection. "To analyze data at the individual level, one must require each respondent to rate enough concepts to estimate individual utilities" (Moore 1980, p. 522). However, in the present study, the nine packages which each respondent evaluated were used to estimate coefficients for seven dummy variables.[1] An individual analysis would therefore have been insufficient for stable results.

The findings presented below illustrate how information derived from the sales dollar data can lead to different managerial decisions. In fact, the sales dollar data analyses provide interesting insights not apparent in the traditional rank-order data conjoint analyses. The relatively strong validity of these findings are also examined.

RESULTS

The results of the conjoint analyses for both rank-order utilities and sales dollar estimates are presented in Table 2. The entries in the table are interpreted by examining the relative magnitude of the values within each activity. For example, it appears that the customers slightly prefer cooperative advertising of 3 times a year at 15¢ per pound over 4 times a year at 10¢ per pound, and have a relatively low preference for cooperative advertising at 6 times a year at 7¢ per pound.[2]

The interpretation of the sales dollar entries in Table 2 is similar but subtly different. Recall that the sales dollar entries were derived directly from the O.L.S. regression coefficients. The dependent variable in those regression equations was the respondents' estimates of how their sales with the participating manufacturer would change with each activity package. Thus, the sales dollar entries are interpreted as how much each of the activity levels would actually affect sales for an average customer. For example, the average customer believes that his purchases per year would increase by $2,818 if his financial terms of sale were 2%/30 days rather than 2%/10 days/net 30. The remaining entries in Table 2 are interpreted in a similar fashion.

To determine if the two data collection techniques produce similar results, the data sets were scaled so that the two vectors of O.L.S. regression coefficient (**B** sales and **B** rank) could be directly compared.[3] A test of the hypothesis that these two vectors, **B** sales and **B** rank, are equal was rejected at $\alpha < .01$ (see the Appendix). Bonferroni confidence intervals were used to identify the specific coefficients where differences exist (Morrison 1976, pp. 33-34). The results presented in Table 3 indicate that the respondents' utilities are different from their "sales dollar" estimates for coupons and financial terms of sale. Figure 1 graphically depicts these differences.

The similarities and differences in findings based on the two data collection procedures are discussed below.

Cooperative Advertising. The Bonferroni confidence intervals reported in Table 3 indicated that there is little difference in the responses in either customer group for either data collection method. The utility and "sales dollar" values reported in Table 2 and illustrated in Figure 1 indicate that three times a year at 15¢/lb. is most preferred in both analyses. Cooperative advertising at 3 times a year at 15¢/lb. would then be the recommended strategy if there is no significant cost differential among the activity levels.

Coupons. The difference in results from the two data collection procedures indicated in Table 3 is readily apparent when examining Table 2 and Figure 1. Both the "sales dollar" and utility curves are negative, indicating a weak preference for this type of sales promotion. Two times a year at 25¢/lb. received the lowest utility, followed by 3 times a year at 15¢/lb. However, the almost flat "sales dollar" curve indicates that the respondents believe that there would be little difference in the sales for the three alternatives. The "sales dollar" curve is higher than the utility curve indicating that they believe that the coupons will affect sales, but they attribute relatively less utility to the activity. That is, the respondents don't particularly like the coupons, but they realize that it affects their sales.

Financial Terms of Sale. The Bonferroni confidence intervals (Table 3) indicate a difference exists between the two data collection procedures. Table 2 and Figure 1 indicate that the respondents ascribe higher utilities than "sales dollar" for better terms. These findings are particularly interesting since better terms may only affect a customer's gross margin and not his sales. A longer discount period will improve a customer's cash flow and reduce his interest expense applied to inventory. However, the customers may not necessarily pass the savings on to consumers to increase sales.

Service Level. Table 3 indicates no difference in data collection methods. As expected, the respondents' utility and their estimates of sales dollars increased as service level increased.

Validity

Recent attention has been directed toward validity and reliability issues in conjoint analysis (Acito, 1977, Acito and Jain 1980, Cattin and Wittink 1976, Green and Srinivasan 1978, Jain, et al. 1979, Montgomery and Wittink 1980, Parker and Srinivasan 1976, Scott and Wright 1976). This study examines the predictive validity and reliability of the findings using a series of holdout samples. The 48 respondents were randomly assigned to six groups. The O.L.S. regressions were performed six times for both rank and "sales dollar" data sets; each time a different group of eight were held out. The partial utilities and "sales dollar" estimates derived from the analyses were used to determine the overall utility and "sales dollar" estimates of the nine profiles using the additive model:

$$U_i = \sum_{j=1}^{n} B_j u_{ji}$$

where: U_i = the estimate of the overall utility or "sales dollar" estimate of the ith profile;
u_{ji} = the utility or "sales dollar estimate" contributed by a particular activity level j;
B_j = the value 1 or 0, depending on whether or not activity j characterizes the ith profile;
n = the number of different activity levels.

The overall utilities, U_i, were then ranked and are summarized in Table 4.

Predictive Validity. The regression equations used to determine the rankings in Table 4 were used to predict the rankings of the respondents in each corresponding holdout sample using Page's L statistic (1963):

$$L = \sum_{j=1}^{n} R_j \, r_j.$$

Where: R_j = the rank of package j derived from the regression equation of sub-samples;
r_j = the sum of the ranks of the holdout sample for the jth package;
n = the number of activity profiles.

The significance of L was determined by relating z from equation (3) to the standard normal tables.

$$z = \sqrt{m(n-1)} \left[\frac{12L}{m(n^3-n)} - \frac{3(n+1)}{n-1} \right]$$

where: n = the number of profiles
m = the number of holdout respondents
z = standard normal z statistic

These L statistics are not independent due to the overlap of the data in determining the R_j. However there is no overlap in the holdout samples.

The results of these predictive validity tests are found in Table 5. The null hypothesis being tested is: There is no relationship between predicted ranking, R_j, and the ranks from the holdout samples, r_j. Therefore, a small significance implies a strong relationship. The results indicate relatively strong validity. The average significance level for the ranked data is .115 and a low .083 for the "sales dollar" data.

Reliability. Conventional tests for reliability, e.g., test-retest, alter-

nate forms, and/or split-half, were not possible in this study due to the difficulty of the data collection and the relatively small sample sizes. The respondent pool would not have cooperated for a test-retest or alternate forms analysis. The sample was too small for stable results in a conventional split-half analysis. Had a number of the sub-samples been used in a series of split-half analyses, the assumption of independent samples would have been violated. Therefore, no statistical tests for reliability were performed. However, examination of Table 4 reveals strong stability of ranks across sub-samples, an indication of reliable results.

DISCUSSION

The results indicate that for coupons in newspapers and financial terms of sale the rank-order preference data may call for a different strategy than the "sales dollar" data. These differences can be explained, in part, by both behavioral and financial factors. First, the data were generated by one respondent per customer and may not always reflect the best strategy for the firm. This respondent may consider strategies which will benefit both his firm and himself. Debriefing sessions with the respondents did indicate, for example, that coupons did affect sales, but they "took too much time and trouble." These candid responses were consistent with the relatively low utlities for coupons. If manufacturers had only the traditional rank-order data, they would conclude that coupons in local newspapers four times a year at 10¢/lb. would be the most preferred strategy. However, the "sales dollar" results indicate customer indifference. Therefore a cost analysis of the three alternatives would determine the recommended strategy.

The results also indicated that better financial terms of sale had relatively high utilities compared to "sales dollars." This finding has strong "face validity" since better financial terms of sale will tend to increase a customer's gross margin. However, since this savings may not be passed on to consumers, sales may not be affected. Therefore, if a supplier utilized the traditional rank-order data collection method in conjoint analysis, the resulting strategy may serve only to endear the customers, and have little effect on sales revenue.

The use of the procedures described in this paper promotes a stronger marketing channel. Asking customers for their expert opi-

nions in developing marketing strategy strengthens the buyer-seller dyad. Not only is coordination and cooperation enhanced, but also the suppliers' "identification" power is strengthened (French and Raven, 1959). That is, by working with suppliers for a common goal, the customers' feeling of identity or "oneness" with their suppliers becomes stronger. Finally, a formal procedure for collecting channel-related data sensitizes management to the wants and needs of their customers.

The approach to developing marketing channel strategy described here could be extended to other, very different products. The key, however, to successful implementation of similar studies is in the researchers' ability to interview knowledgeable people who have had some experience in examining a products' sales response to different marketing activities. Herein lies the largest obstacle to successfully completing similar projects, that is, in data collection. Once a good respondent pool is identified, a difficult task is coordinating the interviews. Since the data requirements are rather different from the instruments most respondents would be accustomed to, self-administered questionnaires may produce unreliable and/or invalid results. In addition, since the respondents will likely be scattered throughout a large geographic area, personal interviews by the researchers are difficult. Two options remain. The first is to use the telephone interview procedure described earlier. This method requires a great deal of time, patience, coordination, and possibly telephone expense. The other option is to enlist the aid of field salespeople. This method can be successful with full top management support and monetary and/or psychological incentives for the salespeople. If the salespeople recognize that the exercise will eventually improve their sales or position in the firm, then their cooperation can be obtained. Nonetheless, the task of training the salespeople to administer the instrument still remains.

CONCLUSION

This paper has described a number of different methods of examining the perceived importance of various marketing mix variables within a marketing channel context. A variation of the conjoint analysis approach was presented in which ratio scaled "sales dollar" estimates for different levels of marketing mix variables were determined. These estimates are useful to marketing managers in that they represent how much they can expect sales to increase with an average customer with changes in levels of marketing mix variables. The results

of this "sales dollar" conjoint analysis were compared with results derived from the traditional rank order preference conjoint analysis. Differences were found in the results of the two data collection methods which could motivate quite different marketing strategies. The results from both data collection methods indicated a reasonably high level of predictive validity. The dual data collection procedure described in this paper is therefore recommended as a method of achieving richer information and a more complete perspective than would be possible if only the rank-order data used in traditional conjoint analysis were used.

APPENDIX

A Statistic for the Comparison of the Two Data Collection Results

Each respondent received the same partial-factorial design and returned two nine by one vectors of responses; one, $\mathbf{Y}_1$, of ranks and the other, $\mathbf{Y}_2$, of sales dollar data. Ordinary least squares regression coefficients are determined for each type response and a comparison is desired between these coefficients. Clearly a scaling is necessary in order for such a comparison to be meaningful. The scaling used recognized that the nine elements of $\mathbf{Y}_1$ are the first nine positive integers, thus the sum of squares of deviations from the mean of its elements will be 60 for all respondents. The sales dollar data for each respondent is then scaled so that the sum of squares of deviations of the scaled sales dollar data is the same as that of the rank data. This is accomplished by letting

$$\underset{\sim}{w}_{1i} = \underset{\sim}{y}_{1i} \qquad \text{and} \quad \underset{\sim}{w}_{2i} = \underset{\sim}{y}_{2i}\,(60/\underset{\sim}{y}'_{2i}\underset{\sim}{y}_{2i})^{1/2}$$

with $\underset{\sim}{y}_{\ell i} = \underset{\sim}{Y}_{\ell i} - (\underset{\sim}{1}'/\underset{\sim}{Y}_{\ell i}/9)\underset{\sim}{1}$, $\underset{\sim}{1}$ = a vector of nine ones and $\ell = 1,2$. The subscript i denotes the ith respondent.

The problem now is to compare the seven least squares regression coefficients from the ranks to the corresponding seven regression coefficients from the scaled "sales dollar" responses. This is handled by showing that the difference of these two sample vectors $(\mathbf{B}_1 - \mathbf{B}_2)$ is the average of n independent vectors from the same population. The generalized central limit theorem insures approximate normality; hence Hotelling's T^2 will furnish an approximate test of the null hypothesis of equal population regression coefficients. The argument for using Hotelling's T^2 for non-normal data is further strengthened by a recent article by Arnold (1980).

Now the partial-factorial design given all respondents defines a nine by seven design matrix, X, in terms of the seven dummy variables with columns orthogonal to a vector of ones. The regression coefficients can then be expressed as the seven by one vectors.

$$\underline{B}_1 \quad (\text{rank}) = \frac{1}{n}(X'X)^{-1}X' \left[\sum_{i=1}^{n} \underline{w}_{1i} \right]$$

$$\underline{B}_2 \quad (\text{sales}) = \frac{1}{n}(X'X)^{-1}X' \left[\sum_{i=1}^{n} \underline{w}_{2i} \right].$$

Letting $\underline{d}_i = (X'X)^{-1}X' [\underline{w}_{1i} - \underline{w}_{2i}]$ then

$$\underline{B}_1 - \underline{B}_2 = \frac{1}{n} \sum_{i=1}^{n} \underline{d}_i = \overline{\underline{d}} .$$

Note that each d_i is the difference in the estimated regression coefficient from the ith respondent. The $\underline{d}_i$ are independent since each is a function of the responses of independent respondents. Then the 7 x 7 matrix

$$S_d = \frac{1}{n-1} \sum_{i=1}^{n} (\underline{d}_i - \overline{\underline{d}})(\underline{d}_i - \overline{\underline{d}})'$$

is an unbiased estimate of the variance matrix of the $\underline{d}_i$.

$$\text{Thus, } T_1^2 = n\, \overline{\underline{d}}' S_d^{-1} \overline{\underline{d}} ,$$

is approximately distributed as Hotelling's T^2 and can be used to test the hypothesis that the population regression coefficients are equivalent for ranks and sales.

The value of T^2 for this data was 57.37 which converts to an F value of 7.15 with 7 and 41 degrees of freedom. The associated significance level is less than .01.

[1]Seven dummy variables are required to define the three activties at three levels and one activity at two levels since two dummy variables define a three level activity and one dummy variable defines a two level activity.

[2]The convention in presenting conjoint analysis results has been to scale the utilities so that the lowest value within an activity equals zero and the remaining attributes are positive. Since a purpose of this analysis is to compare the results of the two data sets, the utilities are presented in the raw, unscaled form for ease of discussion and illustration. This slightly different presentation will not change the interpretation of the results.

[3]A formal discussion of this procedure is found in the appendix.

Table 1

Activities Used in Study

	Activities	Activity Level
1.	Cooperative Advertising	3 times a year at 15¢ per pound
		4 times a year at 10¢ per pound
		6 times a year at 7¢ per pound
2.	Coupons in Local Newspapers	2 times a year at 25¢ per pound
		3 times a year at 15¢ per pound
		4 times a year at 10¢ per pound
3.	Financial Terms of Sale	2%/10 days/net 30
		2%/30 days
4.	"Service Level" (percentage of items shipped which were ordered)	96%
		98%
		99.5%

Table 2

Rank-Order Utilities and Sales Dollar Estimates

Activity Level	Utility	Sales Dollars
Cooperative Advertising		
3 times at 15¢/lb.	1.22	$5841
4 times at 10¢/lb.	1.10	3476
6 times at 7¢/lb.	.11	2365
Coupons in Local Newspapers		
2 times at 25¢/lb.	-1.55	-1244
4 times at 10¢/lb.	- .68	- 457
3 times at 15¢/lb.	- .87	- 787
Financial Terms of Sale		
2%/10 days/net 30	0	0
2%/30 days	1.35	2818
Percentage of Items Shipped Which Were Ordered		
96%	.35	1470
98%	.93	2752
99.5%	1.28	4222

Table 3

Simultaneous Bonferroni Confidence Intervals

Activity Level	Dummy Variable Coding		Dummy Variable	Mean	Standard Error of Mean	Confidence Interval
Cooperative Advertising						
3 times at 15¢/lb.	D_1	D_2	D_1	.91	.97	-1.53--3.30
4 times at 10¢/lb.	-	D_2	D_2	3.17	1.73	-1.06--7.40
6 times at 7¢/lb.	D_1	-				
Coupons in Local Newspapers						
2 times at 25¢/lb.	D_3	D_4	D_3	-2.46	.91	-4.70-- -.22*
4 times at 10¢/lb.	-	D_4	D_4	.82	.54	- .51--2.15
3 times at 15¢/lb.	D_3	-				
Financial Terms of Sale						
2%/10 days/net 30	-		D_5	3.29	1.12	.55--6.03*
2%/30 days	D_5					
Percentage of Items Shipped Which Were Ordered						
96%	-	D_7	D_6	2.11	.92	-.15--4.38
98%	D_6	-	D_7	-.77	.53	-2.05--.53
99.5%	D_6	D_7				

*Those confidence intervals which do not contain zero indicate the two data collection methods differ on that regression coefficient at $\alpha = .10$

Table 4

Rank-Order Preferences, R_j, Determined After Removal of the Six Holdout Samples Using Rank Order and "Dollar" Data Sets

Activity Profile	Holdout Samples: Rank Order						Holdout Samples: Dollars					
	1	2	3	4	5	6	1	2	3	4	5	6
1	4	3	2	2	3	3	3	4	2	4	2	3
2	9	2	9	9	9	9	8	9	9	9	8	9
3	6	8	6	6	7	7	7	6	6	6	7	7
4	3	4	3	3	2	4	2	1	1	1	1	2
5	1	1	1	1	1	1	4	3	4	5	5	4
6	8	9	8	8	8	8	9	8	8	8	9	8
7	2	5	4	4	4	2	1	5	3	2	3	1
8	5	6	5	5	5	5	5	7	7	7	6	6
9	7	7	7	7	6	6	6	2	5	3	4	5

Table 5

Test for Predictive Validity of Holdout Samples

Sub-Sample	Rank Data		"Sales Dollar" Data	
	Page's L	Significance	Page's L	Significance
1	1875	.11	1756	.23
2	1844	.23	1910	.03
3	1842	.24	1874	.11
4	2035	.00	1978	.02
5	1977	.00	1905	.04
6	1875	.11	1947	.07

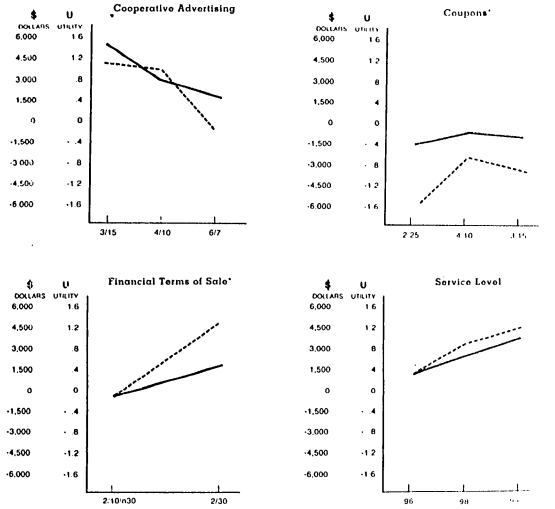


FIGURE I

Utility and Sales Dollars

---------- U Utility
———— S Dollars

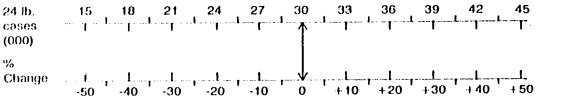
*Difference is greater than it would be with simple random variation

Exhibit 1

(1)

ACTIVITIES

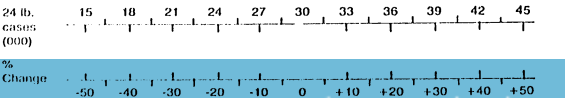
1. COOPERATIVE ADVERTISING: 3 times a year at 15¢
2. MANUFACTURERS ROP COUPONS IN NEWSPAPERS: 3 times a year at 15¢
3. FINANCIAL TERMS OF SALE: 2%/30 days
4. PERCENT OF TOTAL CASES ORDERED WHICH WERE SHIPPED: 96%



(A)

ACTIVITIES

1. COOPERATIVE ADVERTISING: 4 times a year at 10¢
2. MANUFACTURERS ROP COUPONS IN NEWSPAPERS: 3 times a year at 15¢
3. FINANCIAL TERMS OF SALE: 2%/30 days
4. PERCENT OF TOTAL CASES ORDERED WHICH WERE SHIPPED: 99.5%



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