

**EXPLORING THE EFFECTIVENESS OF FREE SAMPLES:  
A COMPARATIVE EVALUATION OF COMPETITIVE BRANDS**

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**ABSTRACT**

In spite of the industry's frequent use of free sampling, very little is known about effectiveness of free sampling and about contingencies that may nurture the practice of free sampling. An experimental design was developed to investigate the effectiveness of free-sampling on inducing consumers' attitude change and on enhancing their intentions to buy a convenience product. The findings show that free-sampling, under the experimental condition, has a significant impact on consumers' brand comparison in evaluative and cognitive components of attitudes.

**INTRODUCTION**

Recent data have shown that many companies are spending up to 70 percent of their marketing expenses on sales promotions, with almost half of that amount going toward consumer promotions (Kotler and Armstrong 1991). Among the sales promotional tools, the importance of product sampling as an element in the marketing mix appears to have increased in recent years. For example, though grocery shoppers traditionally have been a main target of in-store sampling for a variety of products, consumers now are being targeted in shopping malls (Freedman 1986) and at rock Concerts, rodeos, and athletic events (Meyer 1982). In addition, the improved technology enables marketers to disseminate accurate samples of many specially flavored products through magazine sampling (Fine 1985).

Despite such widespread use of free sampling, very little is known about its effectiveness and about conditions in which free sampling can generate positive results. In fact, marketing practitioners often use free sampling without evaluating its effectiveness in terms of their ability to improve the promoted brand's competitive position in consumers' minds. While there exists abundance of research in effectiveness of other promotional tools, only a handful of studies have dealt with the effectiveness of free sampling strategies.

The purpose of this paper is to report the results of an exploratory experimental study which measured the short-run effectiveness of free-sampling for a specific convenience product brand on potential consumers.

Information obtained in this study will aid in understanding the consumer's response to free samples. In addition, it is expected that information on the promotional treatment, under controlled experimental conditions, will contribute a valuable input for managerial decisions facing promotional managers.

**BACKGROUND STUDY**

Sales promotion is an incentive giving activity used to facilitate short-term purchase of the product (Buzzell and Salmon (1990). In generating short-term behavioral result, sales promotional activities such as incentive giving tend to reduce buyer's perceived risk (Settle and Alreck 1989) and increase trialability of the product, which encourages the important first step toward the adoption of the product (Rogers 1983). Among the sales promotional tools, free samples are especially viewed as a way to minimize the risk involved in buying an unfamiliar product/brand and as a way to induce product trial.

As such, product sampling has been described as an excellent way to introduce new and unusual products, dislodge an entrenched market leader (Freedman 1986), change the image of a product (Bettinger, Dawson, and Wales 1979; Hamn, Perry, and Wynn 1969), generate word of mouth communication (Holmes and Lett 1977), build consumer franchise quickly (Meyer 1982), and contribute to belief and attitudinal confidence (Marks and Kamins 1988).

It is viewed that free samples induce product trial and that as product trial leads to purchase, free samples may be instrumental in leading to changes in consumers' attitudes toward the product (Charlton and Ehrenberg 1976; Hamn, Perry, and Wynn 1969; Sunoo and Lin 1978; Marks and Kamins 1988). In other words, if free samples are an effective promotional tool they will favorably influence consumers' attitudes toward the product.

Free samples have also been observed to build consumer franchise. Free sample packages do include selling messages, and therefore, the free sample should be viewed as another form of advertising, with the ability to enhance the value of the brand in the mind of consumers. Several studies have examined free samples and evaluated their effectiveness in terms of

their ability to change product image and consumers' attitudes toward the product (Bettinger, Dawson, and Wales 1979; Hamn, Perry, and Wynn 1969).

In spite of the aforementioned positive results of free sampling, some researchers have skeptical views in that it is an expensive strategy to pursue and it typically does not have the reinforcing effects of multiple advertising exposures, as consumers may be exposed to the sampling experience only once (Exter 1990; Schroer 1990). In addition, the research of attribution theorists suggests that sampling might be counterproductive if consumers perceive an external rationale for their product usage behavior. In such cases, rewards or incentives for product use have been found to lead to lower product evaluations than are obtained when such rationale is absent (Scott 1976; Scott and Yalch 1978).

To summarize, there has been mixed evidence in past research, that free samples may either positively or negatively affect product image perception. In general, more of previous studies seem to support positive effects in that free samples may build consumer franchise and that the effects of free samples can be measured in terms of consumer attitudes and buying intentions. Measurement of short-run effectiveness is especially adequate for the product used in the experiment, as it is a convenience product likely to be purchased frequently.

This study is a pilot experiment. Since a small sample is being used, and because of its exploratory nature, the study hypotheses will be stated in the null form: There will be no significant difference among the ranks of three competitive brands' scores on evaluation of attitude toward and intention to buy those brands prior to and after the treatments.

## METHODOLOGY

The exploratory research design used is a before and after experiment with control group. It was felt that this design would be more appropriate in order to control the interaction of external variables and the existence of internal sample biases.

College students are not representative of average consumers, but the exploratory nature of the study and the fact that only before and after measurements of the promotional effects are investigated allow more latitude of sample choice, provided that results are not generalized, but rather serve as a starting point for future research. In the study, more than 90% of the

respondents reported that they used the product. Therefore, it can be said that college students are among users of the product used in the experiment.

The product chosen for use in the experiment is a disposable personal care product (i.e., disposable razors). The product category can be characterized as a relatively mature market with a slow market growth dominated by a few established brands. A specific brand of disposable razors was selected among the few most popular brands in the market. Mediamark Research Incorporated's studies (1989) estimated that the testing brand holds the second largest share of volume with approximately 10% difference from that of the market leader in the disposable razor market.

Disposable razors were chosen because there appeared to be no differences in their use among respondents by sex. The choice of brand was necessary for the use of the experimental treatment. The two experimental groups did not differ as to their use, knowledge and preference for different types of disposable razors.

A quota sample of 65 college students was selected from two sections of an introductory advertising class at a state university. Students from each section were assigned into either the experimental group or the control group. In order to be certain that the two groups were comparable, the composition of the sample in each group was tested in terms of sex and product usage. Chi-square tests showed that there was not significant difference among the two groups in terms of sex, frequency of shave, experience with disposable razors and the use of different brands of razors.

In the study, the control group received no treatment. The experimental group received a free sample package of disposable razors, identical to those distributed through supermarkets and drugstores across the nation. A total period of two weeks was used to conduct the experiment. One week after the before measurement was taken, the experimental treatment was conducted. The after measurement was taken one week after the introduction of the experimental variable.

The data were collected using self-reporting questionnaires. The questionnaire was designed to measure the overall evaluation of competing brands, global attitude toward brands and the subjects' intentions to buy. Likert-type scales, using adjective ratings, were selected as the instruments for attitude

measurement. The bipolar adjective ratings were chosen because such scales have been widely used in attitude studies and are resistant to influences caused by the method of administration (Hawkins, Albaum, Gerald, and Best 1974). A five-point scale was selected to avoid the habitual random responses (Peabody 1962).

Therefore, the data generated from the questionnaire are measured on five-point intervals, ranging from the lowest 1 to the highest 5. In the study, the subjects were asked to compare three brands on a scale; the testing brand's scores are considered to be meaningful in relationship to those of other brands.

The effectiveness of free samples on attitude change was judged by the pre-post comparison of consumers' preferences of three competing brands regarding their evaluation of, attitudes toward, and intentions to purchase three brands. The data were transformed to ordinal measures for the purpose of the analysis. A rank order statistics, the Friedman Two-Way Analysis of Variance, was used to test the aforementioned hypotheses.

The following discussion of the results of the study provides valuable insights for the evaluation of the promotional tool under investigation.

### RESEARCH FINDINGS

Table 1 illustrates the results of Friedman Two-Way ANOVA tests. It shows that prior to the treatments, there was no significant difference among the ranks of three brands' scores on all three dependent measures, and that the control group showed no significant difference both in pre and post measurements. However, the free-sample group showed some significant differences among three brands in the post-treatment measures: the free-sample group showed significant differences in the evaluations of brands ( $p < .01$ ) and in buying intentions ( $p < .05$ ).

As a result, two of the three null hypotheses regarding the post-treatment measures (i.e., in each of two experimental groups, there is no significant difference among the ranks of three brands in terms of evaluation and buying intentions in post-measurements), were rejected. The free sample treatments showed a change in the groups' ranking of the three disposable razor brands in terms of global evaluation of the brand and of respondents' buying intentions. The following section discusses the implication of such findings.

TABLE 1  
THE RESULTS OF THE FRIEDMAN TWO-WAY ANOVA

	Before		After	
	Mean	$\chi^2$	Mean	$\chi^2$
<b>Good/Bad (Evaluation)</b>				
Control Group				
A	2.00		2.15	
B	2.03	.059	2.01	1.632
C	1.97		1.84	
Sample Group				
A	1.93		2.092	
B	2.34	5.793	2.34	9.052 <sup>b</sup>
C	1.74		1.57	
<b>Favorable/Unfavorable (Attitude)</b>				
Control Group				
A	2.07		2.19	
B	1.91	.443	1.99	2.309
C	1.72		1.82	
Sample Group				
A	2.03		2.16	
B	2.17	2.138	2.16	4.190
C	1.79		1.69	
<b>Probable/Improbable (Intention to Buy)</b>				
Control Group				
A	2.10		2.26	
B	1.94	.529	1.87	3.471
C	1.96		1.87	
Sample Group				
A	2.13		2.12	
B	2.15	3.617	2.25	6.317 <sup>a</sup>
C	1.72		1.63	

Degrees of Freedom = 2

<sup>a</sup> Significant at .05 level

<sup>b</sup> Significant at .01 level

Note: The smaller the rank, the better the brand's rank.  
Brand B was the testing brand.

### CONCLUSION AND IMPLICATION

The experiment results indicate that no significant change was found in the attitudes toward the competing brands. However, significant change was found in the evaluation of three competing brands and

the intentions to buy the brands in the case of the free sample group. As can be noticed from Table 3, although the testing brand's position remained somewhat stable, brand C's (the market leader) position was noticeably improved from pre-measures to post-measures in the treatment group. This seems to indicate that the testing brand's free-sampling efforts were not only ineffective in terms of improving the attitude toward the brand but also positively influenced the evaluation and the buying intention of the competing brand.

The results of this study are contrary to most of what is found in the literature and to the expectation of promotional managers. There may be several explanations for such an outcome. First, the product used in the study may not have been appropriate for free sampling. The product used in the study (i.e., disposable razors) is a functional product in the industry that is dominated by only three well known brands. It is speculated that in such condition, consumers can easily compare the sampled brand's quality with other brands. Unless the product quality is better than or at least equal to the other brands, consumers' experience with free samples can adversely influence the brand's quality perception. Second, the sampled brand was in poor quality. An ad hoc interview with respondents revealed that the quality of free samples were such that consumer's use of free samples resulted in a competitive edge for the competitor who has a strong brand franchise. Third, free sampling may have a limited role in promoting an established moderate share brand for the reason that consumers may expect more than what the brand can offer. Finally, according to attribution theory, sampling can be counterproductive when consumers perceive an external rationale for their product usage behavior (Scott 1976; Scott and Yalch 1978). It may be speculated that in the study, consumers felt their product experience involuntary and such perception may have lead to lower product evaluations.

Furthermore, a couple of reasons might be responsible for the short-term lack of effectiveness of free-sampling on inducing consumer attitude change regarding the testing brand. First, the product itself is such that changes in consumers' attitudes can only be achieved by a substantial change in the product design or quality. With the product used in the study, consumers may not necessarily be interested in choosing alternative brands for their image or for their ability to meet consumers' tastes. It is speculated that in cases of other products with which consumers are more emotionally attached (e.g., foods, fragrances, and other

personal items), free sampling may generate more positive results in changing attitudes. Second, The pretested attitudes toward the brand are such that changes cannot be registered after one experimental treatment alone.

It is important to note that free-sampling influenced the brand comparison in terms of evaluation (i.e., goodness) and buying intentions. The reason for this result might be such that in the operationalization, the product evaluation was related more to the quality of the product while attitude was related to the emotional attachment to the product.

Theoretically, the use of free samples is justified in that it induces trial of a new product among consumers. However, the results of this study indicate that the effect of the free sample may not always be positive in promoting a familiar moderate share brand of the given product category. The study findings speculate that the effects of free sampling may be depending on a number of contingent factors such as the type of product, the brand's market position, the industry's competitive intensity, consumers' emotional involvement with the product, and consumers' variety seeking behavior in the product category. Therefore, it is recommended that the free-sampling strategy should be carefully planned and pre-tested whenever it is to be applied in the market, considering the potentially intervening variables such as the type of product or brand life cycle, the image of the brand and competitive reaction.

It is also important to point out several limitations of the research. The study was exploratory in nature, the subjects were college students, the study examined only one product category with treatments on one specific brand and the effectiveness of the treatments were measured only for the short term.

Future research should deal with a broader range of target consumers, with various product categories, and measure the long-term effectiveness of various promotional tools. In addition, in future studies, much effort needs to devoted to identifying contingencies in which free sampling as well as other promotional activities can be nurtured. The difficulties, of course, are the researchers' ability to gain such opportunity and to maintain control of the experimental and environmental variable over extended time periods. Nevertheless, such research is essential in order to contribute to the theoretical and practical knowledge of promotion effectiveness.

## REFERENCES

- Bettinger, Charles O., Dawson, Lyndon E., Jr., and Wales, Hugh G. (1979) "The Impact of Free Sample Advertising." *Journal of Advertising Research* (June): 35-39.
- Buzzell, Robert D., John A. Quelch, and Walter J. Salmon (1990), "The Costly Bargain of Trade Promotion," *Harvard Business Review*, (March-April), 141-149.
- Exter, Thomas (1990), Advertising and Promotion: The One-Two Punch," *American Demographics*, (March), 18-22.
- Charlton, P., and Ehrenberg, A.S.C. "An Experiment in Brand Choice." *Journal of Marketing Research* 8 (May 1976): 152-60.
- Fine, Phyllis (1985), "Smells That Sell," *Marketing and Media Decisions*, 20 (December) 78-81, 124, 126.
- Freeman, Alix M.(1986), "Use of Free Product Samples Wins New Favor as Sales Tool," *Wall Street Journal* (August 28), 17.
- Holmes, John H. and John D. Lett, Jr.(1977), "Product Sampling and Word Of Mouth," *Journal of Advertising Research*, 17 (October), 35-40.
- Hamn, B. Curtis, Perry, Michael, and Wynn, Hugh F. (1969), "The Effect of Free Sample on Image and Attitude." *Journal of Advertising Research* 9-4 (August): 35-37.
- Hawkins, Del D., Albaum, Gerald, and Best, Roger. (1974), "Staple Scale or Semantic Differential in Marketing Research?" *Journal of Marketing Research* 11 (August): 321.
- Kotler, Philip and Gary Armstrong (1991), *Principle of Marketing*, Fifth edition, Prentice-Hall Inc., Englewood Cliffs, New Jersey, p. 458.
- Marks, Lawrence J. and Michael A. Kamins (1988), "The Use of Product Sampling and Advertising: Effects of Sequence of Exposure and Degree of Advertising Claim Exaggeration on Consumers' Belief Strength, Belief Confidence, and Attitudes," *Journal of Marketing Research*, 25 (August) 266-281.
- MediaMark Research Inc., Spring 1989.
- Meyer, Ed (1982), "Sampling Builds Better Business," *Advertising Age* (July 12), M-22.
- Peabody, Dean. "Two Components in Bi-Polar Scales: Direction and Extremeness." *Psychological Review* 69 (March 1962): 65-73.
- Rogers, Everett M.(1983), *Diffusion of Innovations*, third ed. (New York: Free press 1983) p.247.
- Schroer, James C. (1990), "Ad Spending: Growing Marketing Share," *Harvard Business Review*, (Jan-Feb) 44-48.
- Scott, Carol A. (1976), "The Effect of Trial and Incentives on Repeat Purchase Behavior," *Journal of Marketing Research*, 13 (August) 263-269.
- \_\_\_\_\_ and Richard F. Yalch (1978), "A Test of the Sell Perception Explanation of the Effects of Rewards on Intrinsic Interest," *Journal of Experimental Social Psychology*, 14 (March) 180-192.
- Settle, Robert B., and Pamela L. Alreck (1989), "Reducing Buyers' Sense of Risk," *Marketing Communications*, (January) 19-24.
- Sunoo, Don, and Lin, Lynn Y.S. (1978), "Sales Effects of Promotion and Advertising." *Journal of Advertising Research* 18 (October) 37-40.