

# Preference Oriented Measurement Of Advertising Response

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## Abstract

*As the information overload and an extension of the mass media reduces the possibility to get the message to the target group, the firms have to increase their advertising budget to reach the same amount of ad contacts. To be sure, that they don't waste the money, the companies more often use the instrument of pretesting the commercial campaign. The aim of this paper is to document the advantages of the conjoint-analysis (CA) as a technique for pretesting ads. To evaluate the possibility of using the CA we try in to measure in an empirical study, if informative and emotional ads have an influence on the preferences of the respondent.*

## Introduction

In view of the increasing technical homogeneity of products, the majority of marketing experts see advertising as a proven means of differentiating the products they are offering from those of the competition. Advertising allows a product to be presented to the consumer with a special value-added image. Exaggerating somewhat, some authors contend that the value to the customer of a consumer product is not produced in the factory any more but in the advertising agency. At the same time, because of changed communications conditions it is becoming increasingly difficult to achieve the desired effects among the target group. The result of this phenomenon is that, as advertising is having less impact, companies must greatly increase their advertising budget if they are to achieve at least the same amount of advertising exposure. In view of this greater financial risk, an increasing number of companies are basing their decision on which communications measures to take on the results of advertising pretests (Haley/Baldinger, 1991).

Meanwhile many methods have been used to pretest ads. To the authors' knowledge Conjoint analysis (CA) has not yet been used as an advertisement pretest. Using CA as an advertising pretest must be balanced against the thesis that preferences cannot change on the basis of one single exposure to advertising (Hansen, 1995). However, an empirical application of conjoint

analysis to verify this assumption does not yet exist in the field of advertising research. In order to rectify this omission, the study we have conducted aims to verify the suitability of using CA as an advertising pretest. Therefore, the key question concerns sensitivity. Can CA be used to record the changes in partial utility values as a result of one exposure to advertising? On the basis of the results obtained, we shall make recommendations on how to proceed in everyday advertising situations and point to areas where research is still required.

## Intention and Design of the Study Objective of the Study and Generation of Hypotheses

Kroeber-Riel/Weinberg emphasized explicitly in his stage model of effect paths the differing effects of advertising information as a function of the various conditions under which advertising takes place. He considers the conditions for the creation of effect patterns are determined, by the type of advertising stimuli (informative, emotional and mixed advertising information) to which the consumer is exposed (1996, p. 586ff). It is important to recall at this point that it is not the definition of the effect paths which is the focus of this study: it is only the influence of the different effect determinants brought out by Kroeber-Riel which is of interest. In concrete terms, in an initial phase of this study attention to what determines influence is shifted from informatively and emotionally designed advertising to the preference judgements of those surveyed. This is undertaken with the help of CA. The requirement is to furnish proof as to whether, irrespective of the form of advertising message, after exposure to advertising consumer preferences change in respect of the attribute which is the subject of the advertising.

The result of deliberations to date and the potential for gaining differentiated knowledge on product and brand preference inherent in the method have made it possible to formulate the following hypotheses for the purposes of verification. Based on a study done by Mitchell/Olson (1981), who found that emotional as well as informative advertising has an influence on the attitude toward a brand we try to test the

following hypothesis.

H1: After advertising exposure in an experimental group, a significant difference in respect of the partial utility value of the brand

Furthermore the results of experiments done by MacKenzie/Lutz (1989) suggest, that an emotional ad of a certain brand has only an influence on this attribute, but not the other relevant attributes of the product. This idea represents the >pure affect transfer=-situation in their model. The reason, why this happens, is based on the experience, that the individual, confronted with a low advertising message involvement, does not invest any cognitive effort to analyze the ads or the product in more detail.

H2: The attribute given the greatest emphasis in the emotional advertisements are not assessed in a significantly different way in the post exposure groups.

If the >message based persuasion=-situation in the MacKenzie/Lutz model holds, the individual invests cognitive efforts. He is confronted with informational content of the ad. This results in a cognitive evaluation of the product of interest.

H3: The attribute given the greatest emphasis in the informative advertisements are assessed in a significantly different way in the post exposure groups.

### **Selection of the sample group, product category, attributes and their levels**

Students participating in a series of lectures on economics at a German University took part in the survey. This would ensure that largely the same group of persons would be encountered at the various times when the survey was made. The subject of the study was inkjet printers.

A preliminary study was carried out to establish the relevant attributes and levels. Experts, people with a high buying intention, lead-as well as non-users were asked to determine the attributes (brand, colour, resolution, speed, warranty and price). The selection of concrete levels for the other attributes was made on the basis of realistic factors, practical considerations and on the basis of knowledge gained in discussions with students, sales personnel and company representatives. Table 1 shows the attributes and levels incorporated in the main study.

Four different advertisements were used in the main study. Two of these were designed by an

advertised exists between the experimental group and a control group which was not exposed to the advertising.

advertising agency. In the opinion of experts, these are two somewhat emotionally oriented versions of a motif which will feature in a campaign which has been planned but not yet implemented. The two advertisements only point to one difference. One advertisement focuses on the printer=s ability to print images of photo quality, the other advertisement highlights the relatively cheap price in the headline and text. A colour image is printed in both advertisements to illustrate the improved colour printing. The point of interest was which of the two attributes - price or colour - incorporated in the main study ought to be communicated by an advertising agency in an advertising campaign for students. Thus a realistic situation was created in which CA=s suitability for use could be verified.

Another advertising agency created in addition two informative advertisements. In addition, the two informative advertisements were selected so that one concentrated mainly on the product as a whole with a focus on the speed of the printer, and the other one focused largely on the brand. The >brand ad= informs about the resolution of a HP printer. Providing the postulated hypotheses are valid, in both cases there should only be a difference in respect of the brand attribute between the experimental and control groups under consideration. In view of the way the advertisements were crafted, the change in the partial utility value of HP in respect of brand advertising ought to be higher than for the product advertising. We formed four experimental groups in total. The Aprice@ experimental group was shown the advertising which promoted the product on the basis of both price and - because of the colour image - the colour printout, for the Acolour@ group the advertising was based purely on colour; the Abrand@ group only concentrated on the brand and the Aprinter@ group looked at the product as a whole.

### **The design of the study**

The 18 (fractional, orthogonal design) objects to be evaluated were presented on cards. A total of 333 students participated in the first conjoint analysis survey. The first part was used to survey various sociodemographic and psychological criteria. Respondents were also asked to give information about their interest in computers and printers. Once they had completed the

questionnaires, the participants were given the sets of conjoint cards. The students were also asked to give a personal ID word. This would make it easy to identify those who took part in both surveys. A total of 276 students from the foundation course took part in the second conjoint analysis survey three weeks later. Those interviewed for the various survey groups were selected randomly. In the control group we only ascertained preferences using CA. For the four experimental groups, each student was first given a coloured copy of the relevant advertisement and a questionnaire to ascertain their opinion of the advertising. In contrast to the first study, the students first had to indicate on the questionnaire which advertisements they were assessing and from which company. For this purpose, a number appeared on the back of the coloured copies.

### **Summary of the results of the study**

All in all we analyzed a total of 257 completed questionnaires in the second CA. After eliminating some outliers the control group for this consisted of 42 respondents and the numbers of students in the experimental groups were 63, 65, 40 and 45. The various markings in Table 3 refer to the aggregated results obtained by comparing the with OLS computed standardized partial utilities and importances for the various experimental groups with those of the control group. A two-page t-test for independent samples and the F-test for verifying the variance homogeneity is used for comparing mean values. Instead of a detailed analysis, the tables indicate by means of different shades of grey whether the zero hypothesis of the t-test according to which the mean values do not differ can be rejected with a certain probability of error. The dark-shaded boxes (surrounded by a thick line) refer to a 5% probability of error with the light shaded boxes indicating a probability of error of 10%.

Table 1 provides a comparison between the control group and the Aprice@, Acolour@, Aprinter@ and Abrand@ experimental group. In contrast to the change in the control group, the HP level remained at roughly the same level in the experimental groups. This difference in the change of preference values proved to be of statistical significance. We find that, the HP ads have an influence on the evaluation of attributes of the product. A significant difference in respect of the partial utility value of the brand advertised exists between the experimental group and a control group which was not exposed to the advertising.

This confirms H1. The next step is now to test, if the levels given the greatest emphasis in the emotional advertisements are not assessed in a significantly different way in the two groups. Price and colour levels have been of primer interest in this part of the study.

Although the changes in the partial utility values between the dates of the two surveys in respect of the levels of the colour attribute are positive, they cannot be considered to be of statistical significance. Instead of this, monochrome printers are assessed considerably less positively. One of the factors for this can be traced back to the fact that the Acolour@ level was listed as being very important even during the first survey. Only very few students accept a monochrome printer. Respondents are very well aware of the significance of colour printing, even without seeing the relevant advertising. The preference for monochrome printers falls after exposure to advertising, whereas the utility value for the colour printing facility remains at a plateau at what is still a very high level. In line to the assumptions, the attribute colour does not have any significant effect. Hypotheses H2 is thus confirmed. The Aprinter@ product advertising resulted in a statistically significant effect in respect of the relative importance of the speed attribute when the second survey was taken. This supports hypothesis H3. A relatively large number of statistically relevant differences are produced by the Abrand@ experimental group. The warranty, an attribute not taken into account in the advertisement design, was assessed considerably less positively during the second survey than it was the first time. The change in the partial utility values for the levels of the attribute warranty might be due to greater confidence determined by the advertisement in respect of branded products. Furthermore the resolution of the printer is a topic the individual invested cognitive efforts. As a result we saw the increase in part worth utilities of the low and a decrease of the high level resolution. Hypothesis H3 are confirmed partially. Based on the results obtained, the CA is suitable for determining advertising effects.

Insert Table 1 here

### **On the suitability of conjoint analysis for advertising effect research**

Results of the empirical study show that CA is well-suited to record assessment differences on the basis of advertising exposure in respect of the

brand advertised and the relative significance of the attribute brand. The levels highlighted in the advertising are not assessed in a generally significantly different manner by the respondents. However, the analysis does not show any fundamental contradictions: the directions of the changes are generally in line with expectations. If an attribute is emphasized in the advertising, significant differences occur if there is no dimensionality of the other attribute. It can be assumed that the lack of a significant difference in

respect of the level advertised can be attributed to the design of the advertisement. From a pragmatic perspective, the efficiency and effectiveness of an advertising pretest should be of primary interest. Although a two-part survey is a high-cost option, to counterbalance this it must also be taken into account that pre/post surveys are a relatively common practice. Also, the fact that CA is coupled with surveys relating to product policy, offers considerable potential for cost savings.

## **References**

Will be furnished upon request