

# Techniques for Measuring Advertising Effectiveness

*The construction-equipment manufacturers' perspective.*

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Most industrial marketers are faced with the same fundamental decision—i.e., the selection of an appropriate method for evaluating the firm's advertising campaigns and programs. However, relatively little is known about industrial marketing research practices, much less industrial marketers' views on the methods and criteria to employ when measuring the effectiveness of the firm's advertising efforts.

Why has so little attention been directed to industrial advertising? Greyser (1978) partially explained this when he noted that industrial marketers have traditionally placed most of their communications emphasis and resources on personal selling. Furthermore, one must recognize that writers/researchers have tended to be attracted by the higher-visibility consumer products/markets and have ignored the less glamorous industrial field.

Still, as Donovan (1979) has suggested, the industrial marketing manager annually has problems convincing top management of the value of advertising because of the lack of real proof that advertising is effective.

In fact, some industrial marketers appear to feel that the inquiry or sales lead offers the only proof that a given advertisement or campaign is effective (Hill, 1979). But due to the paucity of research, we are not certain how widely this view is held, much less the types of techniques employed to measure effectiveness. What has been reported about industrial marketing research is that industrial firms generally have not used the latest research techniques, especially the more sophisticated ones (Greenberg, Goldstucker, and Bellenger, 1977).

Now industrial advertising is on a sharp increase. American Business Press estimates indicate that the total expenditure for business-publication advertising tripled between 1960 and 1979 (Noble, 1979). The 1979 totals were 1.47 million advertising pages and an expenditure of \$1.7 billion. In addition, business advertisements appear to receive considerably more creative attention than they did in the past (Sullivan, 1972). Thus, the need for greater emphasis on advertising-effectiveness evaluation today would seem apparent.

These issues and concerns regarding industrial-advertising evaluation led to the research reported here. In this article, we will present findings from a survey conducted among one particular category of industrial marketers: heavy-construction-equipment manufacturers. This study was directed to the industrial advertising managers in these firms.

A number of questions were explored in this research. However, we will focus on the portion of the study designed to determine this group's views on the reliability of various tools that might be used in evaluating trade-paper advertising. Although this research narrowly focused on a single industrial group, it provides an initial step for building more general knowledge about the practices of industrial advertisers and specifically suggests to other industrial marketers how this group views various evaluation techniques.

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The authors wish to acknowledge the assistance of Mary Ruth Hotz, an M.B.A. candidate and research assistant at Kent State University, on this project.

## The Study

This research involved the use of a highly structured mail questionnaire, which was sent to a sample of major construction-equipment manufacturers in the United States. More specifically, the instrument was sent to the top advertising official (or marketing official responsible for advertising) by name in the 101 firms that are members of the Construction Industry Manufacturers Association, the leading trade association in the field. Responses were received from 35 firms, or roughly 35 percent of this sample, and 34 of these 35 provided complete responses to the bulk of the questionnaire.

The instrument included short answer questions, Likert-type scales, and open-ended questions. Each of the firm's advertising executives received a questionnaire, a blind letter explaining the nature (and relevance) of the study, and a stamped, self-addressed return envelope.

**Characteristics of the Respondents.** While 34 firms provided comprehensive responses, only three-fourths of the group were willing to provide total sales data. From these responses, it is estimated that

the responding firms had aggregate sales of \$10 billion and more.

Furthermore, the sales data permitted dividing the respondents into the following three groups:

- group 1—sales less than \$20 million;
- group 2—sales from \$20 million to \$100 million;
- group 3—sales greater than \$100 million.

Since only 26 firms provided sales data, however, this breakdown will only be used for a portion of the analysis presented here.

Next, the executives provided information on their own experience (1) in advertising and (2) with their present company. The 34 respondents averaged 12.5 years advertising experience and 12.3 years experience with their present company. In addition, the respondents also indicated their own current title in their organization. While slightly more than one-third (38 percent) retain the title of advertising manager, an additional 18 different titles were mentioned by the respondents, ranging from vice-president sales to marketing services manager. Considering the various "roles" industrial advertising plays in firms, this variation in response was not unexpected.

Finally, the respondents indicated the volume of their firm's trade-paper advertising (pages) and the relative breakdown between domestic and international advertising volume. The average number of trade-paper pages run by the firms in the study was 257, and roughly 77 percent of this total for the average firm was for domestic advertising. As one might expect, the largest volume of overseas advertising was placed by the larger firms (group 3), since some 27 percent of their advertising appropriations were nondomestic.

**Views on Advertising Research.** The research by Greenberg, Goldstucker, and Bellenger (1977) indicated that industrial firms conducted a limited amount of marketing research. This finding was substantiated in regard to advertising research in this study. In fact, only 13 firms, or 38 percent, reported that they had advertising-research expenditures in the past year. These research-budget expenditures ranged from an average of \$2,600 among

group 2 firms to \$67,000 among group 3 firms.

**Pre-Test Advertising.** While few firms reported advertising expenditures, an even smaller number (5 firms) indicated they conducted advertising pre-tests. Among the pre-test methods employed by (or for) these firms were split-run testing, in-house random groups, and agency telephone interviews.

Considering the high cost of advertising, this limited amount of advertising pre-test is surprising. However, the finding is consistent with earlier research.

**Advertising-Effectiveness Evaluation.** As noted at the outset, the focus of the research concerned the executives' views regarding various techniques for measuring or evaluating trade-publication advertising. The advertising measurement techniques were divided into three categories for this research: internally generated, media-generated, and externally generated.

Internally generated techniques refer to the firm's own in-house techniques, which range from change in sales to interviews with its customers or distributors. Media-generated techniques are those studies developed for or by the media (business publications) that provide their advertisers with readership surveys, inquiries, etc. Independently generated techniques are studies provided by independent research



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firms and may include a variety of survey techniques.

Based on the average reliability totals

per category (see Table 1), it is apparent that the firm respondents felt that internally and independently generated research

was more reliable than media-generated data. In fact, as shown in Table 2, only 1 of the top 10 most reliable techniques was media-generated.

On the other hand, the respondents perceived independently generated research as being the most reliable. Six of the highest-ranked methods, based on the mean ratings, were listed under the "independently generated" category (see Table 2). These results strongly suggest that the respondents view media-generated approaches as providing potentially biased data, perhaps favoring the publication. It should be remembered that we are dealing here with perceptions and that there is no evidence suggesting that media do provide self-serving findings. However, this finding should still be of considerable concern to business-publication researchers.

The two most reliable methods in the view of the respondents were advertising-readership surveys conducted by external/independent groups and interviews with customers conducted by the firm itself. Rated particularly "unimportant" in terms of reliability—i.e., 20th in importance—was change in sales data developed internally. This latter finding suggests the continued battle between top management and advertising managers over the use of sales change as a method for measuring advertising effectiveness.

*Cross Classification.* The responses to the various effectiveness measures were cross-tabulated by a number of independent variables, including research expenditures and budget size (see Table 1). Few significant response differences were identified, suggesting that the firm respondents tended to hold similar views on the reliability of most of the measurement techniques.

Perhaps the most interesting difference was found between those firms who conduct advertising research and those who do not view media-generated inquiries from publications. As shown in Table 3, those firms doing no advertising research considered such inquiries to be reliable, while respondents in firms doing research disagreed.

Similarly, two significant differences in response patterns were identified when the data were cross-tabulated on the basis of

Table 1  
Construction-Equipment Manufacturer-Respondents' Rankings/Ratings of Methods for Evaluating Trade-Page Advertising (N = 34)

	Rankings <sup>1</sup>	Reliability mean <sup>2</sup>	Total research expenditure <sup>3</sup> (sig. lev.)	Print budget size <sup>4</sup> (sig. lev.)
<b>Internally generated</b>				
Change in sales	10	3.03	.363	.265
Change in types of customers	7	3.23	.214	.599
<b>Brand-preference survey</b>				
Prior to ad	8	3.17	.499	.442
After ad	3	3.40	.439	.374
<b>Product-perception survey</b>				
Prior to ad	6	3.24	.747	.324
After ad	2	3.50	.832	.180
Magazine-preference survey	9	3.10	.400	.029 <sup>5</sup>
Comparison with competitor's ad	5	3.27	.064	.172
Interviews with distributors	4	3.30	.179	.106
Interviews with customers	1	3.79	.761	.020 <sup>5</sup>
<i>Total</i>		3.30		
<b>Media-generated</b>				
Ad-readership survey	2	3.18	.151	.504
Inquiries from publications	1	3.33	.033 <sup>5</sup>	.154
Magazine-preference survey	6	2.71	.454	.179
<b>Brand-preference survey</b>				
Prior to ad	5	2.90	.642	.898
After ad	3	3.09	.751	.466
Product-perception survey	4	3.06	.787	.153
<i>Total</i>		3.05		
<b>Independently generated</b>				
Ad-readership survey	1	3.82	.338	.943
Magazine-preference survey	5	3.45	.186	.935
<b>Brand-preference survey</b>				
Prior to ad	6	3.37	.762	.986
After ad	2.5	3.50	.650	.354
<b>Product-perception survey</b>				
Prior to ad	2.5	3.50	.652	.565
After ad	4	3.48	.420	.288
Ad contests	7	2.17	.603	.235
<i>Total</i>		3.32		

<sup>1</sup> Rankings are based on the highest mean response, excluding NR (column 2).

<sup>2</sup> Likert-like scale ranging from +1 (unreliable) to +5 (very reliable)—i.e., the higher the mean, the greater the perceived reliability. (All respondents.)

<sup>3</sup> Data cross-tabulated by total advertising research effectiveness expenditure (based on firms' response concerning whether or not they conduct such research). Significance level refers to mean differences between respondents classified by total advertising-research expenditure.

<sup>4</sup> Data cross-tabulated by print budget size—i.e., total print advertising categories (two categories were developed). Significance level refers to mean differences between respondents classified by total domestic trade-paper pages (1979).

<sup>5</sup> Indicates chi-square significance at the .05 level or better.

Table 2  
Construction-Equipment Manufacturer-Respondents' Rankings of 23 Techniques

Rank	Technique	Category
1	Ad-readership survey	Independent
2	Customer interviews	Internal
3	Brand-preference postsurvey	Independent
3	Product-perception presurvey	Independent
3	Product-perception postsurvey	Internal
6	Product-perception postsurvey	Independent
7	Magazine-preference survey	Independent
8	Brand-preference postsurvey	Internal
9	Brand-preference presurvey	Independent
10	Inquiries from publications	Media
11	Interviews with distributors	Internal
12	Comparison with competitors' ads	Internal
13	Product-perception presurvey	Internal
14	Changes in customer types	Internal
15	Ad-readership surveys	Media
16	Brand-preference presurvey	Internal
17	Magazine-preference survey	Internal
18	Brand-preference postsurvey	Media
19	Product-perception survey	Media
20	Change in sales	Internal
21	Brand-preference presurvey	Media
22	Magazine-preference survey	Media
23	Ad contests	Independent

Table 3  
Reliability of Media-generated Inquiries Cross-tabulated by Amount of Research Expenditure

Research expenditures	Reliability of inquiries (media)			Total
	Unreliable (+1 or +2)	Neutral (+3)	Reliable (+4 or +5)	
None	2/11.1%	5/27.8%	11/61.1%	18/100.0%
Some	7/58.3	3/25.0	2/16.7	12/100.0
	9/30.0	8/26.7	13/43.3	30/100.0

budget size. (Since advertising budget data per se were not obtained from all respondents, total annual U.S. advertising pages were used to represent budget size.) The respondents in firms doing the largest number of pages of advertising rated interviews with customers (internally generated) and magazine-preference surveys (internally generated) as significantly more reliable than did the smaller advertisers. This difference was particularly apparent regarding interviews with customers, which suggests that these larger advertisers had

employed this technique and felt it to be effective.

**Conclusions**

This article reports the findings of a study designed to determine how advertising executives in one industrial producers' group—i.e., construction manufacturers—view various methods of measuring advertising effectiveness. The results show that only about 38 percent of these

firms conduct (or sponsor) advertising research themselves, which supports earlier research focused more broadly on the marketing-research articles of industrial firms. This indicates that Greenberg *et al.*'s (1977) assessment of the sophistication of industrial research (or the lack thereof) was also supported.

Furthermore, the findings suggest that the executives feel that internally or independently generated research is considerably more reliable than that developed by the media. The most reliable was felt to be independent advertising-readership surveys and interviews with customers by the firms themselves. (Incidentally, the firms most active in conducting research felt the latter to be significantly more reliable than did firms sponsoring no research.)

One final conclusion is that the firms in this industry apparently do a limited amount of advertising pre-testing. In light of the recent increased expenditures for industrial advertising, especially business-publication advertising, this should be an area of greater concern (and increased activity) for such firms in the future.

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