

ADVERTISING, CONCENTRATION, AND MARKETING PUBLIC POLICY:
SOME NEW EMPIRICAL EVIDENCE ON SELECTED PRODUCT CATEGORIES

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A pressing marketing public policy issue is to what degree advertising and other image differentiation activities are detrimental to economic efficiency. Some economists have argued that pure informational advertising is appropriate to our economic well-being and that when advertising lapses into image differentiation to promote certain brands at the expense of other brands, economic waste results.

Most studies testing the advertising intensity and market concentration hypothesis use the advertising-to-sales ratio as the independent variable indicating advertising intensity. Some scholars argue that there is no correct rationale for its use, because economics of scale in advertising due to media rate structure are a function of the level of advertising expenditures and not the advertising-to-sales ratio. It is maintained that only if the advertising-to-sales ratio is highly correlated with levels of advertising expenditures and advertising messages will the ratio be appropriate to test the effect of advertising on monopoly. It is also argued that one cannot justify the use of the advertising-to-sales ratio on the basis of cost of entry because, no cost of entry problems exist in this situation and that all potential entrants have equal opportunity to compete and that advertising intense firms originally had to overcome such barriers when they entered the market.

Lancaster has provided one of the few studies to date which considers the problem with the advertising-to-sales ratio as the independent variable for advertising intensity and the implications of how the various media affect the level of concentration. (1) The author hypothesizes that the correct measure of advertising intensity is the use of total and six-media advertising expenditures and not the use of advertising-to-sales ratio. The purpose of this paper is to test the hypothesis that the advertising share is a better measure of advertising intensity than the advertising-to-sales ratio. Lancaster claims that it is, but does not empirically test his hypothesis. In this analysis, total and six media advertising sales ratios were used as the independent variable instead of total and six media advertising shares in testing the relationship between advertising intensity and market concentration. The data and statistical tests employed were identical to those of Lancaster which greatly facilitates comparison of the two measures of advertising intensity within economically relevant markets.

Total product category sales and brand share data were obtained from approximately 50 issues of Advertising Age from 1971 to 1977. Advertising expenditures matching the available market shares, including product category total advertising expenditures, were obtained from: LNA Class/Brand Year-to Date Expenditures, January-December, 1970 through 1975. For each

of the 11 product categories for which brand level market shares were available, corresponding media expenditures, by year, were obtained from LNA. Advertising media expenditures for each product category and brand include: (1) six media total advertising expenditures; (2) total magazine advertising expenditures; (3) total newspaper Sunday supplement advertising expenditures; (4) total network television advertising; and (5) total spot television advertising expenditures; and (6) outdoor advertising expenditures. Annual brand sales, used in the denominator of the various brand advertising-to-sales ratios were computed by multiplying total product category sales by a brand's market share.

Simple and multiple linear regression analysis were utilized to estimate the relationship between brand market shares and brand total advertising-to-sales ratios or brand individual media advertising-to-sales expenditures within and across product categories. The simple and multiple regression analysis ignored the time series nature of the data at the likely expense of some degree of serial correlation. The unequal number of years for most product categories, and missing years for some brands within product categories, present some difficult analytical problems. Therefore, a pooled cross-sectional time series analysis was employed.

The results indicate strong support for the Lancaster assumption that the use of advertising shares is a better measure than the use of the advertising-to-sales ratio. Furthermore, this research shows generally little relationship between advertising intensity and market concentration using the advertising-to-sales ratio contrasted with the Lancaster results showing a strong positive relationship using the advertising share measure. It should be reemphasized that both studies used the same data base and statistical procedures.

Perhaps this study only further complicates the already confused debate on the question of advertising intensity and concentration. Is there really a relationship, and if so, which measure is most appropriate to determine its relative strength? If the total and six media advertising share measure is a better indicator of advertising intensity than the advertising-to-sales ratio, as this study suggest, perhaps it might be well to replicate past research using this alternative measure. The findings of such research may prove extremely useful in clarifying this controversy.

- (1) Lancaster, Kent M., "Advertising and Market Concentration: Some Empirical Evidence on Selected Product Categories," unpublished paper, Department of Advertising, Michigan State University, December 1977.