

2092 COMPETITIVE PROBLEMS IN THE DRUG INDUSTRY

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ADVERTISING MARKET STRUCTURE AND PERFORMANCE

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This paper presents an empirical analysis of the role of advertising in consumer goods industries. The primary finding is that advertising has a statistically significant and quantitatively important impact upon profit rates which provide a measure of market performance as well as indicate the existence of market power. This result is robust, and the estimated multivariate equations account for half of the inter-industry variance of profit rates.

This finding has implications which are precisely the opposite of the conclusions reached by Telser in a recent important article.¹ This contradiction is a reflection primarily of differences in the conceptual and statistical approaches adopted rather than differences in data or sample, for with minor exceptions, we used the same set of industries, and drew upon the same basic data for advertising outlays.

We shall therefore proceed as follows. First, we shall describe the conceptual framework used. Then we shall examine the relationships which are likely to exist between product differentiation, advertising and entry barriers. Finally, we shall present the empirical results which are the core of this paper.

FRAMEWORK OF ANALYSIS

The analytical approach is to examine the joint effect of various dimensions of market structure upon profit rates. Not only do profit rates provide some indication of market performance in terms of the normal criteria of allocative efficiency, but also high returns signal the possible existence of market power.² If exercise in the direction of profit maximization, market power should lead to rates of return which exceed those in competitive industries that are comparable in terms of risk and growth of demand.

In this framework, concentration is simply one dimension of market structure and is not of itself a measure of monopoly or market power. Another major dimension is the height of entry barriers, which is determined in part by technical factors such as the extent of production economies of scale relative to the size of the market, the absolute amount of capital required to operate a plant of minimum efficient scale, and other absolute production cost disadvantages of new entrants.

Product differentiation, a third major dimension of market structure, plays a dual role. Not only does it directly influence the character of competition among established firms, but it also raises the height of entry barriers.³ In this study, however, we do not deal directly with product differentiation, but focus instead upon advertising expenditures, which are both a symptom and a source of differentiation. Not only are advertising budgets influenced by product and market characteristics, but also they depend on the policies pursued by individual firms. In addition, past advertising outlays appear to be important determinant of the extent of product differentiation. Differences in advertising, therefore, reflect both structural and behavioral differences between industries.

On these grounds, the empirical analysis which follows takes the form of multi-variate regression equations which explain the inter-industry variation in profit rates as a function of different combinations of the following variables:

Seller concentration,
The rate of growth of demand,

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¹ Lester Telser, "Advertising and Competition," *Journal of Political Economy* (Dec. 1964).

² Low or average profit rates do not necessarily indicate that market power is absent. Firms may become lax in minimizing costs when the discipline of competition is weak. For a discussion of such behavior, see Carl Kaysen, *U.S. vs. United Shoe Machinery Corporation* (Cambridge: Harvard University Press, 1956) 114-116.

³ Joe Bain, *Barriers to New Competition* (Cambridge: Harvard University Press, 1956) 21,