Economies of scale in production in relation to the size of the market,
Absolute capital requirements for a plant of minimum efficient scale,[4] and
Advertising.

The specific variables used, the alternative functional forms, and other specifications of the estimated equations are described below. The conceptual relationship between advertising, product differentiation, and the height of entry barriers is discussed in the next two sections.

Before proceeding, however, it is useful to contrast the framework adopted here with that used by Telser. One of his major empirical findings is that the simple correlation between advertising outlays as a percentage of sales and the level of seller concentration is statistically insignificant. In each of the years studied, he finds that this coefficient is about 0.16, and from this, concludes that "There is little empirical support for an inverse association between advertising and competition."[5]

This approach raises the problem of whether concentration ratios are an adequate measure of the extent of competition. Telser justifies their use by stating that "Concentration of sales among the four leading firms is a widely accepted measure of monopoly."[6] While this statement is unfortunately correct, it ignores the fact that the concentration ratio measures only one dimension of market structure, and is therefore an inadequate indicator of market power, which depends on additional structural variables as well as on established behavior patterns. The significance of advertising expenditures depends on whether they represent an additional factor affecting the achievement of market power. The weak correlation between concentration and advertising simply indicates that these are independent rather than collinear variables.

ADVERTISING AND PRODUCT DIFFERENTIATION

The relationship between advertising outlays and product differentiation is important for an evaluation of the competitive effects of advertising because the former reflects the policies adopted by individual firms, while the latter is a dimension of market structure.

The degree of product differentiation in a market is measured by the cross elasticities of demand and supply which exist among competing products. Low cross elasticities of demand between these products indicate that buyers prefer the products or brands of particular sellers and will not switch in significant numbers in response to small differences in price. Low cross elasticities of supply, on the other hand, signify that firms are unable to imitate the products of their rivals sufficiently well to eliminate these consumer preferences. While cross elasticities between the products of existing producers affect the character of the rivalry which exists between them, cross elasticities between the products of established firms and potential entrants influence the height of entry barriers posed by product differentiation.[7]

Product differentiation reflects two sets of factors: the basic characteristics of products within the market, and the present and past policies of established firms with respect to advertising, product design, servicing, and distribution. On the demand side, products are more likely to be differentiable when buyers are relatively uninformed about the relative merits of existing products. This is particularly important for differentiation achieved via advertising. On the supply side, differentiation is more likely where the products of rivals cannot easily be imitated and where new entrants have difficulties in producing products which are simular to those sold by successfully established firms. In producer goods industries, successful imitation requires investment in product design and adequate service facilities. In consumer goods industries, successful imitation may require investment in advertising as well.

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[4] No attempt was made to measure any other absolute cost disadvantages of new entrants. Bain found that only in those industries in which established firms controlled scarce natural resources were these important. Bain, *op. cit.*, 155–156. In addition, no attempt was made to measure risk. The sources of the data and various technical adjustments are described in the appendix.

[5] Telser, op. cit., 544 and 558.

[6] Ibid., 542.

[7] It is important to distinguish product differentiation from product variety. The steel industry, for example, produces a great variety of products which are sold to knowledgeable buyers, but product differentiation is minimal. In contrast, the cigarette industry offers a smaller variety of products, but product differentiation—based largely on extensive advertising—is great. Bain, op. cit., 127–129.