maintain a market share which is twice that of a rival. Higher output levels are associated with lower unit costs.[10] As a result, smaller firms, including most entrants, are placed at a strong disadvantage.[11]

Economies of scale in advertising also result when the cost per advertising message declines as the number of messages supplied increases. An increased use of some forms of advertising leads to a lower most per message, and available evidence suggests that this is very important for advertising on national television and in national magazines.[12]

If advertising in a particular industry is characterized by economies of scale for either of these reasons, an entrant will suffer an additional cost disadvantage if he enters at a relatively small scale. If he enters at a scale sufficient to realize available economies of scale in advertising, however, his actions are likely to influence the price or advertising policies of the established firms. The possible reactions of established firms increase the costs and risks of entry.

Finally, if economies of scale exist either in production or in advertising, the need to obtain funds for advertising will give rise to capital requirements over and above those needed for physical plant and equipment. Furthermore, this investment in market penetration will involve a particularly risky use of funds since it does not generally create tangible assets which can be resold in the event of failure. The required rate of return on such capital will therefore be high.

These various effects are illustrated diagramatically in figure 1. Curve APC represents average production costs for established and prospective firms, and MESP is minimum efficient scale in production. Curve AAC describes average advertising costs for existing firms as well as for new entrants after they have become established. It denotes unit advertising outlays which are required in order to maintain a firm's market position and to preserve a given volume of sales once it has been established. This will depend on both the total level of advertising outlays and their distribution among established firms, and therefore, it describes prospective advertising costs for entrants only if existing firms do not react to any loss of market share. To the extent that they do respond, required advertising outlays will be higher. Curve ATC, the vertical sum of these two curves, represents average total costs for established firms.[13] MES denotes the minimum efficient scale in both production and advertising for an established firm with a given market share.

In addition, curve AMPC describes average market penetration costs for new entrants. Penetration costs represent an investment in establishing a market position and therefore depend on the opportunity cost of capital as well as on total penetration expenditures.[14]

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[10] In the automobile industry, for example, the two smaller firms during the 1950's were forced to spend more than twice as much on advertising per car sold as did either Ford or General Motors. Between 1954 and 1957 Studebaker and American Motors spent annually on national advertising approximately $64.04 and $57.89, respectively, per automobile sold while G.M. spent $26.56 per unit and Ford spent $27.22 per unit. Chrysler was in an intermediate position, spending $47.76 per unit. Leonard W. Weiss, *Economics and American Industry* (New York: John Wiley and Sons, 1961) 342.

[11] This result occurs *within* the relevant market. When a firm in a regionally segmented market expands its national market share by moving into new geographic areas, unit advertising costs do not decline.

[12] The extent of discounts given to large advertisers is documented in *Federal Trade Commission vs. The Procter & Gamble Company,* Brief for the Federal Trade Commission in the Supreme Court of the United States (Dec. 1966), 12–13.

[13] For simplicity, we assume here that advertising constitutes the only form of selling expense.

[14] Penetration costs include extra advertising outlays which are required for entry. These outlays will represent total penetration costs if the price charged by the entrant is the same as that set by established producers. If the entrant is forced to set a price below that of existing firms, there are additional penetration costs which equal the price differential times the amount of output sold by the entrant at the lower price.