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## Chapter IX

### SELLING COSTS

NEITHER classical nor neoclassical economic theory, concerned as they were with working out the problem of equilibrium under conditions of perfect competition, recognized the existence of selling costs. In a state of perfect competition all buyers have perfect knowledge of the market, there is a homogeneous product, only one price prevails, and numerous competitive sellers can dispose of whatever amount they wish at the market price. Under these circumstances, selling costs are obviously so uneconomic as to be ruled out by definition.

#### *1. The Problem and Its Setting*

Recently economic theory has been exploring markets which are more complex than those of perfect competition or pure monopoly. In the course of this exploration the existence of a problem of selling costs has been recognized and an attempt has been made to include the behavior of selling costs among the factors that will enter into the determination of the equilibrium position of an individual firm. As it has finally been worked out, the formal solution of the selling cost problem states that "selling costs will be incurred (with prices determined) up to the point at which an additional expenditure will add to revenue an amount just equal to the selling cost plus the cost of manufacturing the additional units to be sold."<sup>1</sup>

This formal solution, as has been noted in Chapter II, is

<sup>1</sup> For a stimulating treatment, see Norman S. Buchanan, "Advertising Expenditures: A Suggested Treatment," *Journal of Political Economy*, (August 1942), pp. 537-58.

severely limited both from the standpoint of the businessman who is trying to maximize profits and from the standpoint of an observer attempting explanation and appraisal. The problem of the present chapter is to evaluate possibilities of measuring empirically the type of cost-sales relationship basic to the logical theoretical model. The chapter will also discuss how the businessman approaches the problem of selling costs, and the relation of common business practices to the theoretical model.

Selling cost may arise under any form of imperfect market, but particularly in those characterized by lack of perfect knowledge and mobility on the part of the buyer. In a retail market, the differences in the location and convenience of various stores, as well as in management and services, all foster the existence of selling costs. When a new product is introduced, selling costs may have the primary purpose of increasing the knowledge of the public about the new product. A very interesting and much discussed basis of selling costs is the existence of product differentiation. This includes cases in which directly competing products are not identical, yet each has various advantages and disadvantages difficult for a buyer to appraise. Products that are practically identical are differentiated also by packaging and naming.

Selling costs may exist even when the buyers' knowledge is advanced; the imperfection of the market is then due to paucity of sellers rather than to nonstandardization of product. In this type of market imperfection, however, the selling costs cover mainly the costs of competing salesmen. The function of such salesmen may be to impart information, or to act as the instrument through which secret and discriminating price cutting occurs; in some instances their activity may degenerate into commercial bribery. The concrete situation and the theoretical issues, when selling costs exist in spite of perfect knowledge on the part of the buyer, appear so confused as to justify restriction of the discussion to other types of selling costs.

The relation between product differentiation and selling

cost is brought out by an examination of some market facts. *A priori*, one would expect that serious imperfection of the market would be associated with considerable expenditure for selling efforts. The complete test of this hypothesis is not available, but data on relative advertising expenditures for various kinds of firms are interesting. One such advertising analysis, and probably the best, is the periodic survey by the Association of National Advertisers. The last years for which a survey was made were 1934-35.<sup>2</sup>

This study shows, first, that the consumers' goods industries generally have higher advertising costs than those selling to industrial users. Furthermore, the consumers' goods industries selling merchandise about which consumer information is notoriously lacking—cosmetics, proprietary medicines and so forth—have advertising costs as high as 35 percent of net sales volume. These industries have attained a high degree of product differentiation and spend advertising money to maintain it. At the other end of the scale are such items as textiles and hardware, for which the markets are less imperfect, differentiation of product by brand name is less important, and the selling expenditure on advertising is much lower. Thus there seems to be some empirical evidence for an association between product differentiation and selling cost.

Another preliminary consideration is the importance of determining the role of selling costs in the behavior of our economy. While the facts on the wide existence of imperfect markets are being recognized more and more, the question of the net effect of this imperfection on the economy, the allocation of resources, the flow of capital, and the long run trend in prices has yet to be appraised thoroughly. The formal solution of Chamberlin and Robinson shows that selling costs will result in less than optimum use of resources. On the other hand, it is not possible completely to disregard the opinions of a considerable group who claim that, given the basic imperfection of

<sup>2</sup> "A Survey of 299 National Advertising Budgets, 1934-1935" (New York, 1935).

buyer knowledge and marked economies in large scale production, the existence of selling costs will actually improve the allocation of resources and reduce the net social effort involved in the production and distribution of a commodity.

It would appear, then, that useful as the theoretical solution is to guide further study, we need to know much more about the actual functional relations between selling costs and sales and how the businessman uses selling costs as a tool for the maximization of profits in concrete situations. Only then will it be possible to appraise the forces determining market equilibrium, to set in proper relation to each other the two market weapons—the manipulation of selling costs and the manipulation of price—and finally to determine the real result of product differentiation in the economy.

This chapter cannot pretend to give the answers to the problems raised above. It will, however, attempt to explore the question of how empirical studies might contribute toward some answers to the broader question.

## 2. *Problems of Definition*

A proper definition of selling cost is essential for a meaningful investigation. It is most important to point out that selling costs are not coextensive with the costs of distribution or marketing. For the purposes of this chapter, selling cost is considered to exclude those marketing costs, such as transportation, warehousing and order-taking, which are necessarily related to the physical handling of commodities between the factory and the final consumer. Many of these costs are similar in character to production costs. This does not mean that the behavior of these costs in relation to volume or other factors is insignificant, or that the entire problem of distribution costs should not be studied. Yet important as these problems are, they have less independent significance than do those of pure selling costs.

In individual cases, the proportion of distribution or mar-

keting costs which are properly selling costs may be hard to establish. While this will lead to problems in empirical investigation, the distinction can be made in theory. Selling costs are defined as costs incurred in the effort to obtain those sales which would not have been made without the impetus lent by the selling expenditure. In other words, selling costs are to be considered an independent variable which, along with price, the businessman can use to vary his volume of sales. Indeed, the determination of the selling-cost-to-sales relationships is much more analogous to a study of the demand function than it is to the study of the usual production function. Thus, empirical study should be directed to the manner in which volume varies as a function of such selling expenditures and to the ways in which the businessman can use a knowledge of this function to guide his policy decisions.

A consideration of the main kinds of selling costs will clarify the definition adopted. The first and most readily distinguishable selling cost is advertising, which can be defined broadly to include the expenditures so classified by the National Association of Advertisers. The list includes a number of media—newspapers, magazines, direct mail, outdoor advertising, premiums and so forth.<sup>3</sup> All of these items are properly part of selling cost.

It is more difficult to define the second major type of selling cost since the problem is to determine what part of the expense of the sales organization is a pure selling cost. From the definition given above, it is obvious that a great deal of this expense is not "pure." For example, there is the expense of keeping the records, the expense of keeping salesmen on

<sup>3</sup> *Loc. cit.* The study shows that in 1934 the following percentages of the total number of concerns studied used these media: dealer helps 77 percent, trade papers and industrial publications 74 percent, direct mail 74 percent, magazines 65 percent, newspapers 57 percent, sales and service literature 50 percent, conventions and exhibits 48 percent, outdoor 33 percent, publicity 32 percent, radio 32 percent, house organs 28 percent, free goods and allowances 20 percent, motion pictures 19 percent, samples 20 percent, price lists 18 percent, business papers 16 percent, farm journals 13 percent, car cards 11 percent, premiums 8 percent, miscellaneous 33 percent.

the road merely for order-taking, the overseeing of shipments, and warehousing. Much of this is an expense that would have to be incurred in moving merchandise from a central point to the spot where the customer can buy it.

Although it is extremely difficult to determine exactly how much of the cost of any particular marketing organization is pure selling cost, a number of distinctions can be made. One possibility of obtaining a measure of selling costs exists when a number of methods of distribution are available in an industry. The cheapest method may be taken as an approximation to the costs of distribution without selling effort. The difference between this and any higher cost method can be considered pure selling cost. In other cases it may be possible, by an analysis of a sales organization, to separate the costs of order-taking from the costs incurred in making additional sales.

Another type of selling cost arises from a decision to expand the selling territory, and particularly a decision to undertake national distribution. This expense may take the form of an added margin allowed the wholesaler, or extra salesmen hired to open up new retail outlets. While this type of expenditure is an absolutely necessary step prior to an intensive national advertising campaign, it is not necessarily a continuing cost, since once the distribution is secured and advertising has created and is maintaining a general demand, the merchandise can usually be distributed at a normal wholesale margin. This does not mean that "extra" marketing costs may not still be desirable to stimulate dealer interest. The expenditure, nevertheless, may be classified as part of regular advertising.

Another category which is sometimes included in selling cost is style cost. Style costs, however, have been treated frequently as production costs and it will readily be apparent that in many, if not in most, instances it is impossible to disentangle costs of style creation from costs of production, at least in any empirical investigation. Thus the dies for a new automobile body as well as the research and engineering for the creation of the model are style costs, and

more akin to selling than to production costs. Other examples include many of the costs of packaging, additions of vitamins to cosmetics, and so forth.

It appears preferable to keep style costs as a separate category similar to selling costs and distinct from production costs. The difference between advertising or market selling costs and style costs is essentially that the former are directed to creating and selling the idea to the consumer that a product is "different" and "better," whereas style costs are the costs which are necessary to create the physical basis for a "different" and "better" product. Style costs may include not only costs involved in the creation of a certain product but also costs in buying. The costs of a buyer in a department store, for example, consist in part of an outlay for the selection of merchandise "different" and "better" than those of competitors—in other words the cost of styling the store's assortment of merchandise.

Style costs, being closer to selling costs than to production costs, should be a part of the general selling cost problem. Because of the difficulties of empirical investigation, however, they will be neglected in the discussion to follow.

### *3. Types of Selling Cost Problems*

The first selling cost problem is a factual and historical one: how much of the final consumer's dollar goes for selling costs, and to what extent has this proportion changed in recent years? While these issues are of importance, they are of less theoretical and methodological interest than problems of relationships between volume and selling cost. Attention will be concentrated, therefore, on these more complex aspects of the broad question.

The traditional cost theory developed a classification of problems: costs and rate of output for a single plant or firm, short and long run cost functions for a firm and for an industry, etc. But the selling cost problem has as yet had no such work of classification applied to it; furthermore the traditional classifications of cost problems are not easily

adapted to the analysis of selling cost. Distinctions of short versus long run, for example, mean one thing for production costs and quite another for selling costs. An attempt to work out a final comprehensive classification for selling costs is beyond the scope of this chapter, but some preliminary attempt must be made if any direction is to be given to empirical investigation.

The usual classification of production cost problems is based upon the different types of decisions open to the entrepreneur; to expand output of an already existing plant, to bring a standby plant into operation, to build a new plant, and so forth. A classification of selling cost problems can be made along the lines of different types of entrepreneurial decisions.

The crucial business decision is whether to incur sizable selling costs at all. The need for this decision arises in practically all lines of manufacture and in retailing as well. Even in a field such as drugs and cosmetics, firms spending more than 35 percent of gross sales for advertising costs exist side by side with firms selling competing products with comparatively negligible direct selling costs. In retailing, to cite a New York example, the firm of S. Klein which has used no advertising competes directly with the Hearn Department Store—located only two blocks away—carrying similar price lines and advertising heavily.

The first selling cost problem, then, is just what happens when firms with little selling cost compete with firms that have heavy selling cost. This is not a pure selling cost-volume problem, but a distinction between the firm which depends on prices to build volume and maximize profit and the firm which relies on selling cost. The question the economist should answer is how price versus selling-cost competition in the same field influences a firm's profits, volume and market position, the resulting character of the market equilibrium or lack of it, and how the final consumer fares in this type of market.

If the first decision has been answered in favor of using selling cost to produce a profit, it is still possible to have

different selling cost problems, depending upon whether the enterprise is content with approximately the present share of the market or whether it seeks a big increase in its market position. In practice, of course, the two situations may not be clear cut, but the fundamental distinction is extremely important. If a firm is not attempting a sharp change in its market position, there will be a relatively straightforward selling cost-volume problem. The business decisions involved will include such matters as somewhat more advertising versus somewhat less, the covering of additional outlets by salesmen, or neglect of relatively unprofitable outlets.

The decision to attempt a big increase in a firm's share of the market, on the other hand, creates quite a different set of selling cost problems. A firm which is selling in a local market only may decide to expand into the national market. It must then spend money to obtain national distribution, which involves opening up new outlets so that merchandise is available to a larger share of the potential customers. This plan involves either payment of an extra wholesale margin or the resort to salesmen. In addition to the money spent for national distribution, the firm must start advertising on a national scale. A variant of this case may occur when a firm already has a national distribution but decides to buy a big increase in its market by doubling or trebling its advertising expenditure if necessary. A parallel type of situation exists when a retailing establishment decides to expand beyond the limits of its neighborhood. It must then start to spend advertising money in an attempt to draw people to a central location.

In all these circumstances, the selling cost-volume function is no longer short run, nor is it reversible. Even if a firm abandons the attempt to expand from a local to a national distribution, it will be unlikely to return exactly to its original position. Furthermore, many concerns will continue current heavy selling cost expenditures even though the initial outlay may not be regained, since current effort may bring in more profit than complete aban-

donment of the venture would do. The initial expenditure of advertising money is in the nature of a sunk cost. Obviously, there will be no simple relationship between volume and selling cost. The expenditure at the beginning of the expansion program cannot be related directly to the immediate sales volume, for if the venture is successful there will be an accumulated effect from the initial expenditure. Examples may frequently be found in which, after the first push, advertising is decreased below the levels of the initial expenditure while sales continue to expand. Thus the only valid volume-cost relationship will be a comparison between the position of a firm before an expansion program and its position over a number of years after the scale of operations has been changed.

Another type of business decision which distinguishes selling cost problems has already been touched upon. An enterprise may decide to change the marketing organization from a relatively low-cost to a relatively high-cost arrangement or vice versa, or within a given marketing organization it may apply more or less sales pressure by altering the number of calls made by salesmen. In the latter case, a short run reversible function will probably exist, whereas in the former case the selling cost-volume relationship is long run and probably not reversible.

The above classification of selling cost problems, while undoubtedly incomplete, indicates not only their multiplicity but also that even in the relatively restricted field of selling cost-volume relationships, problems differ essentially with the types of business decisions under consideration. This preliminary classification, moreover, emphasizes the need for an extensive knowledge of the actual market conditions and character of firms under comparison before an attempt is made to analyze or to interpret empirical data. Clearly the proper technique of analysis and interpretation of a given set of data on volume and selling expenditures will differ considerably according to the type of business decision involved.

#### 4. *Methods of Empirical Investigation*

The complexity of the selling cost problem requires a variety of methods for empirical investigation. Further study of the historical problem of changes in the size and importance of selling costs in the economy involves the collection of data rather than the use of unusual techniques. In the analysis of a market in which a group of firms depends on price competition and a competing group of firms depends on selling cost efforts, there is need chiefly for the collection of the significant material rather than for the application of elaborate methods. In general, the technique will be that of cross-section analysis treated later. The third problem discussed above centers about the relation between selling cost and volume. Since this involves a short run as well as a long run problem, and separate study of both advertising and marketing, a number of approaches should be considered.

The main obstacle to be surmounted in the identification of significant selling cost relationships is the difficulty of finding situations which are identical or similar except for the amount of the expenditure for selling cost. Basically, then, the major problem is the same as that encountered in a study of production costs. The difference is that production-cost-to-rate-of-output problems have been proven susceptible of statistical correction for "other factors" such as rates paid for input factors and trends in efficiency; here considerable use has been made of statistical techniques such as multiple correlation. The study of selling costs has not, however, proceeded far enough to utilize such elaborate methods. The major problem of method, therefore, is not one of finding suitable statistical techniques but one of showing how data can be gathered and arranged in such a manner that a significant selling cost-volume relationship is disclosed. The best approach, generally, is to find information on market situations which are similar except for

the amount of selling cost, rather than to devise statistical techniques for eliminating the influence of other factors. Probably the best that can be hoped for under present circumstances is to obtain some idea of the character of the selling cost-volume function even if a precise mathematical measurement cannot be achieved.

There are at least three approaches which may disclose a functional relationship between selling cost and volume:

(1) The first possibility is a cross-section analysis which compares, at a given time, the selling cost and volume of a number of firms competing and selling the same kind of merchandise. The assumption in this approach is that data can be obtained for firms which are sufficiently similar so that the differences in their expenditure for selling cost can be taken to be a basic cause for observed differences in volume.

(2) The second approach is through a historical analysis of a particular firm. The assumption here is that conditions for a given firm are sufficiently similar from one period to another (or can be made so by correction of the data) to permit attribution of the observed differences in volume to changes in selling expenditure.

(3) The final approach is an internal analysis of a firm's experience with selling costs and volume. Records may be available or experiments feasible on the volume resulting from specific selling cost schemes. One variant is to compare sales results in different territories which have varying amounts of selling pressure. The assumption in this approach is that sales results in different territories can be adequately corrected for influences of factors other than selling cost, so that the remaining variation in volume can be attributed to differences in selling expenditure. This approach requires the use of more formal methods than the first two.

The first and second methods for empirical investigation of selling cost-volume relationships are, of course, basically the same. In one case the comparison is between firms at the same time, and in the other between different periods of

time for a single firm. In both approaches there exists the basic problem of making certain that the differences among firms, or points of time, are only those that can be attributed to differences in the amount of selling expenditure.<sup>4</sup> The analysis of production costs also uses both approaches, but for the study of quite different problems, since in one case the subject of investigation is the relationship between cost and rate of output, and in the other the relationship between cost and size of firm. Such a distinction does not hold for a study of selling costs.

Both the cross-section and the historical approach are suitable for analyzing the long run, irreversible selling cost-volume function. In both approaches there is the major difficulty of obtaining data on firms which are similar except for the size of the selling expenditure. The investigator will run into the following problems, among others:

(1) Any comparisons which involve firms with different price policies must be avoided. A comparison of this sort may be significant for many purposes, but no definitive clue can be given to selling cost-volume relationships. For this specific problem the firms compared at one period of time or the same firm at different periods of time must have the same basic price policy. For example, the selling expenditure and volume of firms selling by brand name cannot be directly compared with firms selling on a price basis.

(2) Other variations in basic policy make selling cost ratios of competing concerns difficult to compare directly. In retailing, for example, one group of stores spends little on selling cost, strictly defined, but spends a high proportion of sales on rent. The high rent enables the store to take advantage of a confluence of traffic, whereas it might otherwise have to attract its customers largely by advertising. It is customary, in comparing stores of this type, to lump rent with selling costs to secure a proper comparison between concerns.

(3) Careful allowance must be made for possible lags between initial expenditure for selling cost and the resultant

<sup>4</sup>This problem is discussed also in Chapter X.

sales volume. In the cross-section analysis this means that comparisons cannot be made between long-established enterprises and the firms which have just begun an effort to increase their share of the market. Comparisons must be made either between established firms or between firms with local markets and firms which have exploited the national market for some time. A *pro rata* share of the initial costs of obtaining the national distribution should be added to the year-to-year costs to make the comparisons valid. Similarly, in a historical study of a single firm, if comparison is made between the period before the intense exploitation was begun and the period after, costs which were responsible for the increase in the firm's position must be spread over the volume for a number of years. The determination of the proper periods to be compared will be crucial for any investigator using this approach.

(4) When the nonadvertising selling costs are studied, it is necessary to include the entire selling costs of this type for the firms compared, or for the same firm at different periods of time. If one firm is using its own marketing organization and the other is marketing through a wholesaler, the wholesale costs in the second case must be included. Nonselling distribution costs such as warehousing and transportation must, however, be carefully excluded.

(5) In a study of nonadvertising selling cost, it must be ascertained that the different firms (or the same firm at different periods of time) are operating in comparable markets. It is not possible to obtain significant results on selling cost-volume relationships by comparing a firm selling through salesmen in sparsely populated territory with one selling through a number of large outlets in a densely populated area. Nevertheless, it may be significant to compare costs and volume for the firm whose sales effort is confined to a more concentrated part of the market with those of the firm which is selling to the entire market.

Once the data are obtained, the obvious technique will be to arrange them according to the volume, or the percentage of selling costs to sales, and then to examine the behavior of

the other variables. Arranged in proper order, the data may immediately disclose the apparent general character of the selling cost-volume function. The investigator who is particularly fortunate may uncover data suitable for actual computation of a functional relationship.

For the analysis of the short run problem, which was defined as the relationship between selling cost and volume when a firm is merely trying to improve its profits by relatively minor fluctuations in the amount of selling expenditure, the historical study of the single firm is probably the most suitable. The method is to correct the annual volume figures for influences of factors other than selling expenditure and then to relate the corrected figures to the amount spent on selling. In practice, of course, this correction may well be difficult. Some of the specific problems involved include the following:

(1) Factors other than selling expenses will obviously affect the year-to-year changes in the firm's volume. There may be changes in national income, changes in the acceptance of an item attributable to trends in public taste, or changes in the advertising effort of competitors. There are two different ways of correcting for these factors. One would be some kind of trend correction similar to that used in demand studies; the other would be measurement of a firm's volume against the total market available. If a change in relative market position can be measured, it can be translated into the dollar figure and then compared with selling expenditure.

(2) Comparison of year-to-year changes in volume and selling expenditure for a single firm is complicated by the budgeting practices of the typical established firm. It will be remembered that the functional relationship of greatest interest is that in which the selling expenditure is the independent variable and volume the dependent variable. Yet when the budgeting of the selling expenditure by the individual firm is studied, it is found that tradition strongly influences the setting of the advertising budget, and that a majority of such budgets are set on the basis of general

agreement on the percent of sales which should be spent for advertising.<sup>5</sup> The fact that a majority of firms set advertising budgets in this manner was disclosed in a survey by the Association of National Advertisers.<sup>6</sup> If it is assumed that a firm knows what proportion of the sales dollar to spend on advertising, the budget can be drawn up very simply on the basis of an estimate of future sales, of which a certain percent will be allocated to advertising. This method of budgeting will result, of course, in a close correlation between advertising and volume, but a correlation in which advertising must be considered as the dependent variable, rather than an independent factor which influences sales volume. Whether or not this method of setting the advertising budget is a sound one from the standpoint of maximizing profits, it means that in empirical investigation attention should be focused on cases where by accident or design this traditional method of setting the advertising budget has not been followed.

The third approach to the selling cost-volume relationship is the internal analysis of the individual firm. While such a study can be made only from within the firm, it has great possibilities, particularly if controlled experiments are feasible. At the same time it has certain limitations which must also be taken into account. In the first place, the method cannot easily be applied if the firm is selling only one product or in only one territory. Second, it cannot directly handle the problems which arise when the selling cost expenditure of a firm covers the entire market as it does in national advertising. Third, it may be difficult to obtain, from studies of individual phases of a firm's operations, an over-all selling cost-volume function for the total firm. These limitations should not, however, obscure the appreciable advantages of internal analysis. With this approach many types of advertising and a variety of market expenses, such as cost of salesmen, can be handled. More-

<sup>5</sup> This tradition is discussed at length in various articles in *Printer's Ink*.

<sup>6</sup> *Loc. cit.*

over, the problems of homogeneity are simpler here than in the other approaches, and technical corrections for non-homogeneity are at least possible. Finally, this method keeps the analyses as close as possible to the basis of specific business decisions.

Technically, internal study of individual firms involves a well known method of market analysis.<sup>7</sup> The first step is to set up accurate sales potentials for the different territories. This is done mainly on the basis of per capita income and total population. Next, it may be necessary to correct the sales potentials in the light of competitors' selling efforts. The actual sales volume in each territory is then compared with what it should be on the basis of the sales potential and competitors' efforts, and the resulting volume above or below the expected level is compared with variations in selling effort. The selling effort measured may include various advertising media, the number of calls made by salesmen or the type of wholesale outlet used. This comparison should disclose the volume effect of increased selling expenditure and under favorable circumstances may permit a measurement of the selling cost-volume function.

##### 5. *Empirical Studies of Selling Cost*

This section will attempt to survey some of the available data rather than to report on finished and satisfactory studies. The first selling cost problem mentioned was the historical one: has selling cost become a greater part of the cost of merchandise to the consumer in recent years and what is its share at present? It is commonly held that there has been a rise in selling costs, a greater degree of product differentiation, growing imperfection in the market structure, and an increase in the share of the consumer's dollar used for "wasteful" advertising. It is widely claimed also that the costs of distribution, of which selling cost is a part,

<sup>7</sup> Detailed methods of setting such sales potentials are described in various marketing books and articles. See, for example, Albert E. Haase, "Isolate for Profits," *Printer's Ink*, Vol. 180, pp. 16 and 69; and Harry Tosdal, *Problems in Sales Management* (4th ed., McGraw-Hill, 1939).

are too large and in fact interfere with the functioning of the economy.

A study by the Twentieth Century Fund calculates that nearly 60 percent<sup>8</sup> of the consumer's retail dollar goes for costs of distribution. No attempt is made in the study to determine exactly how much of this is selling cost. Advertising, however, which is pure selling cost, is estimated at \$2 billion for 1937. This estimate includes the cost of producing advertising as well as expenditures for media. If this figure is accurate it means that advertising averages about 3 percent of the consumer's retail dollar and about 5 percent of the cost of distribution. A large part of the balance of distribution costs consists also of selling costs, and the proportion of production costs assigned to purposes of styling may be considered in the same category. Detailed study would be required before any estimate of aggregate selling costs could be reached.

The trend of selling cost over time has not been accurately measured. It appears that distribution costs per unit of merchandise handled have not fallen in the past twenty-five years as compared with a large drop in manufacturing cost per unit of output.<sup>9</sup> It would be interesting to know the comparative behavior of pure selling costs. For advertising alone, estimates prepared by *Printer's Ink* are available for the period since 1921.<sup>10</sup> Advertising costs may have increased in the 1920's as compared with the pre-war situation, but the *Printer's Ink* index shows no similar trend since 1921. The amplitude and timing of the series for advertising expenditure and for national income paid out are practically identical. In the decade of the 1930's expenditure on advertising was, if anything, a smaller proportion of national income paid out than in the 1920's. It is

<sup>8</sup> *Does Distribution Cost Too Much?* (New York, 1939). For a lower estimate of distribution costs, see: Wilfred Malenbaum, "The Cost of Distribution," *Quarterly Journal of Economics* (February 1941), pp. 255-70.

<sup>9</sup> *Ibid.*, pp. 8-14.

<sup>10</sup> L. D. H. Weld, "P. I. Advertising Index," *Printer's Ink* (January 1935).

possible, of course, that the same dollar expenditure in advertising has had a cumulative effect, and that markets have become less and less perfect even though the annual effort of enterprises to foster product differentiation has remained about constant relative to national income. It is interesting to note, however, that in the twenty years during which economists have become increasingly interested in selling costs and their effect on the economy, the actual selling cost effort through advertising, as measured by its share of national income, has shown little change.

The second problem—the question of what happens when one group of firms competes on a price basis with another group making greater selling effort and selling at higher prices—should be of particular interest because of its relation to the whole controversy on retail price maintenance. One would expect to find considerable discussion of this topic in marketing texts and some records of empirical studies, but examination of the literature on marketing and that which has grown up about the subject of price fixing<sup>11</sup> discloses that the fundamental economic problem has been passed by. The literature includes discussions of the problems of manufacturers who sell through different types of retail outlets, and their attempts to avoid trouble by price fixing and by creating superficial changes in their products when selling to more than one type of outlet. There is some discussion also of the retailer's interest in developing sources of unbranded merchandise on which he can put his own private brand. The problem of competition of one type of seller as against another has not, however, been analyzed. Additional theoretical work needs to be done, and the entire terrain is open for original empirical investigation.

The field of selling cost-volume relationships has been treated somewhat more thoroughly, although generally not

<sup>11</sup> See, for example, Albert Haring, *Retail Price Cutting and Its Control by Manufacturers* (Ronald Press, 1935), and Ewald T. Grether, *Price Control Under Fair Trade Legislation* (Oxford University Press, 1939).

by econometricians. With some exceptions, the studies are the work of business statisticians and are reported only in broad outlines, for the most part in such business periodicals as *Printer's Ink*. In many cases the published reports supply little more than rough data and offer no refined analysis.<sup>12</sup>

Cross-section analysis has been attempted in both the retailing and the wholesaling field. The annual reports of the Harvard Business School on operating results of department stores give data on advertising costs as percentages of sales for stores in different size groups. The general usefulness of these reports has already been discussed in Chapter III. Inspection of the data on selling costs reveals that advertising cost as a proportion of sales tends to rise somewhat irregularly as the size of the store increases up to about \$10 million volume. For larger stores, the percentage decreases. These figures are difficult to interpret because stores of different sizes operate in different markets, smaller stores generally being located in smaller cities. The extent to which the size of the market influences advertising cost has not been appraised, and some correction for this factor would have to be made before any direct relationship between size and selling expenditure could be determined. Even if size of the market is not an independent factor and the observed relation of advertising costs to volume is indeed meaningful, it is still difficult to explain why there should be a reversal in the relationship when a sales volume of \$10 million is reached. One must conclude, therefore, that the Harvard data are inconclusive, and that more research is needed for their interpretation.

An article by Walter L. Mitchell in *Dun's Review*<sup>13</sup> presents a more informative cross-section analysis of volume

<sup>12</sup> In the preparation of this chapter, no attempt has been made to cover the entire field of business publications and no doubt there are additional studies and many more amateur analyses than are reported here. It seems unlikely, however, that any significant economic analyses have been made.

<sup>13</sup> "How Retail Advertising Expenditures Vary With Sales Volume in the Size of City," 1941.

and advertising. This study shows how advertising costs vary with both sales volume and size of city for a number of types of specialty stores. It is apparently the first study of its kind. By a rough but probably fairly accurate elimination of the influence of the size of the city, Mr. Mitchell was able to obtain a typical relationship between volume and advertising cost. The results show that for every size of city, expenditure for advertising rises faster than increases in volume. The author concludes that this relationship is, at least in part, one of causality, i.e., that the larger stores are larger because they advertise relatively more. This conclusion is probably an oversimplification. In general, a specialty store can grow to a certain limited size by virtue of its location and natural traffic. In these circumstances, little more than window advertising is required. If, however, it seeks a marked increase in volume, the store may have to move to a shopping center, enlarge its capacity and perhaps step up its merchandising efficiency. The interesting point to be noted from Mr. Mitchell's data is that increases in advertising proportionately greater than the increases in volume were apparently also required to obtain the volume results. In a limited sense, then, this is evidence of diminishing returns for specialty store advertising. It is doubtful that the data are adequate to support the conclusion that an actual functional relationship exists, but in a field in which research has been so slight, Mitchell's contribution is valuable.

Cross-section analyses of wholesaling also have been attempted. The results of the 1935 Census were studied by the Twentieth Century Fund in its volume, *Does Distribution Cost Too Much?* These cost figures do not separate strict selling cost from costs of warehousing, transportation and order-taking. The actual results<sup>14</sup> show that costs decline as a percentage of sales as volume increases, except that after a certain volume range is reached, costs in some wholesale lines go up. This finding suggests strongly that the markets and functions of various sized wholesalers differ so

<sup>14</sup> *Op. cit.*, p. 191.

much that the comparison becomes meaningless.<sup>15</sup> To date, the problem of selling cost-volume relationship has not been aided a great deal by a study of Census results, but further work with the 1939 Census may prove useful.

Comparison of costs of various types of wholesalers may also make possible a determination of volume-selling cost relationships. It has been suggested that if the cost of performing a wholesaling function is higher than the least-cost method of wholesaling, the difference can be regarded as pure selling cost. This spread, of course, is not necessarily the whole selling cost. It is interesting to examine the compilation made by the Twentieth Century Fund<sup>16</sup> from this point of view. The comparison which seems the most significant is that between a wholesale merchant and a manufacturer's sales branch with stock. In both cases, the costs of the physical handling of the merchandise should be similar, and the assumption that cost differences should arise from differences in selling effort—provided market conditions are similar—seems to be a reasonable one. However, it appears that in certain lines manufacturers' sales branches make the greatest selling effort while in others the wholesaler carrying private brands without the aid of national advertising exerts the stronger pressure. These differences make it impossible to derive a general selling cost-volume relationship until the problems of homogeneity have been explored and settled.

There has been some use of the historical approach to the single firm. Perusal of *Printer's Ink* discloses a number of discussions of a firm's situation before and after an intensive campaign. Unfortunately, the analyses are not precise and the fundamental data are frequently suggested rather than stated explicitly. A very interesting though inconclusive case is that of the promotion of Kotex by International Cellucotton Products Company.<sup>17</sup> Unfortunately, there

<sup>15</sup> Further discussion of the problems of using Census data is included in Chapter X.

<sup>16</sup> *Op. cit.*, p. 176.

<sup>17</sup> Arthur M. Howe in *Printer's Ink* (August 18, 1939).

is no indication of what would have happened without the intensive advertising promotion, but the data do afford a very vivid illustration of the cumulative effect of a promotional campaign. A promotion of the product was first attempted in 1920 and the advertising cost was \$60 thousand for a sales volume of \$200 thousand, or 30 percent. The relative advertising cost continued high for the next two years although sales began to increase faster than advertising. The peak in advertising expenditure was \$2 million in 1927, when sales reached \$11.3 million. After 1932 advertising expenditure ran less than \$1 million a year but sales volume remained higher than in 1927. Between 1936 and 1939 two to three times the 1926 quantity was sold annually; it should be pointed out, of course, that the price in the meantime declined from 65 to 20 cents at retail.

These data illustrate what might be discovered about the long run selling cost-volume relationships if a sufficient number of valid examples could be found. Various short run studies provide rather limited evidence on this point. In one instance a study of a building material manufacturer employed a rather ingenious correction of company sales for probable secular and cyclical changes in demand, so that the resulting figures could be related to advertising expenditure. The findings, unfortunately, were not very conclusive, although the report claimed to have proven the need for increased advertising expenditure. Issues of *Printer's Ink* in 1938 and 1939 describe the sales benefits obtained when concerns in the year 1938 disregarded the traditional method of making an advertising budget. In view of the general expectancy of sales decline in that year, the typical concern was reducing its advertising budget. A number of concerns moved counter to this tendency, augmenting their expenditure and enlarging their share of the market at the expense of competitors. Whether the resulting over-all advertising cost as a percentage of sales was higher than normal is not disclosed, so that there is no indication of the character of the function. More precise information might well have yielded significant results.

It seems likely that short run advertising-sales relationships are most evident when a company fails to follow the traditional methods of determining the advertising budget. The facts concerning such a policy in the Lydia Pinkham Medicine Company were brought out as a result of a family controversy which ended in the courts. Thanks to the attendant publicity, unusually detailed figures on sales and advertising are available. This case has been reported in a number of writings.<sup>18</sup> For many years the Lydia Pinkham Company had a "conservative" (*sic!*) method of budgeting advertising—spending each year about 50 percent of its gross sales for this purpose. Until the peak sales of 1925, advertising expenditure, if anything, lagged behind growth in sales volume. Beginning in 1925, a decline in sales set in, apparently as a result of a change in public taste or some similar factor, since the decrease cannot be attributed to a relaxation of promotional effort. The concern attempted "to buck" this sales decline until, at one point, it was spending as much as 80 percent of gross sales for advertising and suffering a severe loss. If a rough correction for trend is made for the decline in sales volume from 1925 to 1935, it will be found that fluctuations in volume around the basic downward trend show a definite correlation with the fluctuations in advertising. Furthermore, increases in advertising brought less than proportionate increases in sales (after rough correction for trend). It would appear that these data might well be subjected to more intensive analysis.

The approach to the selling cost function through analysis and experiment within a single firm has apparently been somewhat neglected despite the obvious usefulness of such information as an aid to immediate business decisions. Considerably more analytical work has been done with reference to the sales force than to advertising, but results of such analysis have not generally been published. There is one published study, however, which illustrates the ap-

<sup>18</sup> See, for example, Neil H. Borden, *Problems in Advertising* (McGraw-Hill, 1937).

proach.<sup>19</sup> Swift and Company, in order to determine the relative profitability of selling to different sizes of customer accounts, made a study of one week's direct out-of-pocket selling costs for each individual customer, keeping a record of every telephone call, delivery, invoice, interview by a salesman, and other relevant services. The total direct selling cost of doing business with each firm for that week was then compared with the volume and profits of the week's business with the firm. It was found that smaller firms buying relatively little poundage supplied no profits to Swift and Company because the selling expenses were extremely high. Such diminishing returns are undoubtedly common when volume is increased through coverage of the small distributor. The working out of this particular problem required a very simple technique; examples of the use of a more complex technique for more difficult problems of this sort might be found upon careful investigation of the literature.

Another type of internal analysis can be applied to a firm's use of specific advertising programs and sales experience. *A priori* it might be argued that increase in the intensity, frequency and coverage of advertising efforts will eventually bring diminishing returns. In specific cases this contention has been minutely tested by many advertising agencies and business firms, and considerable empirical evidence has been found to support it. But the evidence, unfortunately, is not generally available for publication. It should be pointed out, moreover, that these results do not necessarily prove that the over-all advertising-volume function for a firm shows diminishing returns.

### 6. *The Significance of Empirical Research*

Even though empirical studies of production cost and rate of output have been relatively rare, the results have been so similar as to justify some tentative generalizations

<sup>19</sup> D. R. G. Cowan, "Differential Selling Cost in Relation to Wholesale Prices," *Advertising and Selling* (January 1938).

with regard to the probable character of the production function. In the field of selling costs, however, fewer studies have been made, the approaches have been dissimilar, and, in many cases, the treatment of the material is too sketchy to permit even a tentative conclusion as to the character of the selling cost-volume function. Although for this reason one cannot properly discuss the significance of actual empirical results obtained up to the present time, it may still be worth while to consider the probable value of empirical results which might be attained by more thorough study. Up to this point attention has been concentrated on the technical aspects of procuring evidence on the character of the selling cost-volume function. Research will be most rewarding, however, if the study of the character of this function, based on concrete evidence, seeks also to determine the way in which the businessman actually approaches the problem of maximizing profits through a manipulation of selling cost. Consideration of his approach to the problem, limited as it must be, may nonetheless give greater point to the need for research in this field.

With regard to the problem of the long run selling cost function of an individual firm, there are strong *a priori* reasons for believing that it must show decreasing returns because of the nature of markets and selling efforts. Furthermore, the empirical evidence from the Mitchell study of costs in various sized specialty stores supports the idea that a larger volume can be obtained only by a proportionately greater increase in selling expenses.

It would not be surprising, however, if further study were to show that actually the largest concerns in some fields have much lower costs than the smaller concerns, or that after a business concern had spent greater sums for advertising, thereby buying a big increase in its market position, it did end up with a lower ratio of selling cost to sales than had prevailed before the campaign was started. The case history of International Cellucotton Products Company has already been noted. This company now has a comparatively low selling cost-sales ratio, probably actu-

ally below that of a number of much smaller competing concerns.

Even if further research were to provide these results, the notion of a diminishing selling cost-volume function would not be effectively contradicted. Selling cost is not just a matter of the dollars spent, for the results obtained from a given expenditure can differ greatly. The fact that one concern can grow to a certain size by spending, say, \$1 million, does not mean that another firm can reproduce this result. An enterprise, confronted with the necessity of deciding whether or not to attempt to buy an increased share of the market, cannot base the decision solely on the fact that another concern succeeded in doing so and ended up with a low cost ratio. There will be a factor of uncertainty in this situation, and the selling cost-volume function upon which the firm will act must be quite different from that based upon the actual results obtained by successful concerns.

Thus, while empirical results may not throw any direct light on the basis for a business decision, they will nevertheless supply one of the missing factors in an analysis of this type of market. Considered in association with other known factors in the competitive situation, they will help to show the nature of the market forces at work.

Certain strong *a priori* expectations for decreasing returns also exist in the short run problem. Here it is assumed that the businessman is reasonably well satisfied with his present share of the market and is trying to decide whether he should spend a little more or a little less for selling cost. Up to a certain point, an increase in the number of advertising impressions, for example, may have a cumulative effect on the consumer, but thereafter the benefit to be derived from additional impressions will decrease. The empirical evidence for this conclusion was noted above. Further, there are a limited number of ways in which a firm can spend its advertising dollars. For example, a large national advertiser, say one of the major cigarette companies, may start off its advertising schedule with a page a

week in the major weekly magazines. From that point on, it must necessarily run into diminishing returns. It can hardly derive twice as much benefit from two pages a week as it does from one. If the company then turns to the use of daily papers it begins to cover some of its audience a second time. The same thing happens when the medium of the radio is employed. On the other hand, if the advertising is concentrated in the monthly magazines or the weekly magazines with more limited circulation, the costs of reaching a reader climb sharply because here the advertising rates are higher. In addition to the foregoing argument, some slight empirical evidence has been adduced in support of the idea of diminishing returns. The record of the Lydia Pinkham Company provides the clearest illustration of this point.<sup>20</sup> The question then arises: if there is a functional relationship between selling expenditure and volume, knowledge of which should enable a concern to maximize profits, why should advertising budgets be determined on the basis of a traditional or correct percent to sales which should be spent?

Interestingly enough, the businessman is generally firmly convinced that increased advertising brings decreasing returns. (This attitude shows up clearly in discussions such as those found in *Printer's Ink*, e.g., 1941.) He believes, further, that his spending has come fairly close to the point at which profit will be maximized, and he expresses this opinion by stating that increased advertising will come out of profits. At the same time, he hesitates to reduce his spending below the traditionally "correct" amount. Frequently he can see the possibility of increasing his immediate profit by decreasing the amount of selling effort. He refrains from this step, however, because he fears that a relaxation of his selling pressure will enable his competitors to drive him from a certain part of the market which he might lose permanently or regain only at great expense. There is also a considerable degree of doubt in the businessman's mind as to just what the over-all selling cost-volume

<sup>20</sup> Neil H. Borden, *op. cit.*

function is. In view of this uncertainty he may be wise in following a traditional pattern of behavior. It should be noted that direct mail concerns which can measure results accurately probably manage effectively to equate marginal returns from advertising to marginal revenue from sales.

The apparently irrational and unimaginative approach to the advertising budget may nevertheless result in maximum long run profits. What empirical investigation should seek to do, then, is to determine whether the selling cost-volume function as measured by the econometrician behaves as does the one on which the businessman bases his decisions. Does an examination show that the businessman is coming reasonably close to the selling expenditure which in fact maximizes profits? Here again, empirical research will be most valuable if an analysis of the factual data is focused directly on the entire market situation.

### *7. Research Possibilities*

There is no part of the field of selling costs that does not merit further research, and little of it is completely closed to a resourceful investigation. Probably the whole historical problem of the trend in selling costs is beyond the scope of a single investigator. Even an individual student might, however, do some valuable work in tracing the effects of increasing product differentiation and greater selling costs on the price structure of a particular industry.

The problem of competitive relationships between firms which use price primarily as a competitive weapon and those which employ selling cost instead is a very important research field, as yet largely uncultivated. Here, moreover, an investigator can find a considerable amount of case material already gathered for other purposes. Concentration on a selected industry should bring the problem within manageable limits.

From the standpoint of economic theory the crucial problem is that of the selling cost-volume function. One approach involves a historical analysis of an individual firm.

Such a study is within the competence of an individual student provided the satisfactory business contacts are available. Published information can also be used to a considerable extent. Cross-section analysis requires the compilation of a wider group of data, but it may still be within the scope of the individual investigator who takes advantage of published information as a starting point. The internal analysis of a firm requires especially close business contacts, and these may be difficult to arrange. Perhaps business statisticians concerned with the problem might be persuaded to make public material which would not disclose confidential information. The final aim of researchers in the field of selling costs should be to combine an analysis of the market, and a case study of the way in which crucial business decisions are made, with a statistical measure of selling costs and sales.