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ABSTRACT

COMPENSATION OF SALESMEN IN THE METALS SERVICE CENTER INDUSTRY AS A FACTOR IN THE PROFITABILITY OF THE FIRM

by Leonard Dalton Orr

This study was designed to accomplish three basic objectives: to identify and classify current salesman compensation practices in this industry; to study the relationship of differences in these practices with distinguishable characteristics of the service centers, e.g., size of operation; and to assess the congruence of salesman compensation practices with management's strategic and tactical plans for profitable operation of the firm.

Usable questionnaires were returned by sixty of a selected sample of sixty-six member companies of the Steel Service Center Institute. In addition, personal interviews, using the questionnaire as the basic interview format, were held with executives of fifty-five of the sixty-six companies in the sample.

It was found that approximately one-half of the respondent companies had made at least one major change in their outside salesman compensation plans during the six year period just prior to the study (1960-1965 inclusive), and slightly more than one in five had made two major

changes in that period. Two-thirds of the respondents reporting major changes were adding a profitability factor to their plans, or increasing the importance of a profitability factor already present in their plans.

Only a small minority of the respondents reported the regular use of non-money (psychological) rewards in their salesman compensation programs. The plans reported by the large majority were strongly money-oriented.

The components of money compensation were studied separately. Selected fringe benefits were found to be widely offered as part of the compensation package throughout the industry.

Although individual company practices with regard to reimbursement of expenses normally incurred by salesmen in this industry (automobile travel and customer entertainment expenses) varied somewhat in details, in general these practices were characterized by the uniformity of the end result in terms of reimbursement.

Typically, much of the responsibility for deciding whether or not to make a customer entertainment expenditure was left to the salesman, with only ex post facto management review control. Only about one in four respondents reported the use of budgetary control of these expenses and less than one-third of these tied the budgetary control to either the sales volume or profit volume level of the territory.

Although only about one respondent in ten reported the use of straight salary plans for these salesmen, fixed compensation (salary) was a major component in most reported plans. Salary-bonus plans typically were 80% salary; salary-commission plans typically 50%-60% salary.

The pool bonus was the predominant type of bonus used and, although frequently the pool amount was based on a general profit-sharing formula, the individual bonus share was allocated on the basis of employment factors (salary and years of service), or by management fiat, or both in the great majority of plans. Commission incentive, where a profitability factor was used, was based on an objective measure of product, product-line, or territorial profitability--usually a gross profit measure.

An outside salesmen compensation plan custom-designed to accomplish clearly defined marketing objectives which were based on clearly defined corporate objectives was found to be the exception rather than the rule in this industry.

As a communication system between management and the outside salesmen, the compensation plan was found to be a factor in the profitability of the firm. A significant association was found between the presence of a profitability factor in the outside salesmen compensation plan and the relative profitability of a firm in this industry.

However, no significant association was found between profitability and the incentive method used, i.e., salary-

bonus, salary-commission, etc.; nor between profitability and the level of reward as measured by the proportion of total cash compensation paid to outside salesmen to Gross Profit earned by the firm.

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CENTER INDUSTRY AS A FACTOR IN THE
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By

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CHAPTER 1

INTRODUCTION

Purposes of the Study

As proposed, this investigation of salesman compensation in the Steel Service Center Industry had three fundamental objectives:

1. To identify and classify current salesman compensation practices and the kinds of incentive plans for salesmen in use in this industry.
2. To study the relationships of differences in practice to distinguishable characteristics of the service centers, e.g., size of operation, product-service mix, etc.
3. To assess the congruence of compensation and incentive practices with management's strategic and tactical plans for profitable operation of the firm.

Interest and Discontent

That this study was underwritten by the Steel Service Center Institute is an indication of the importance that management in this industry attaches to this subject.

That salesman compensation is a subject of intense interest to management generally is attested to by the almost simultaneous publication of three extensive studies in this area of management responsibility in 1965.¹

Two of these studies, by RIA and by Dartnell Corporation, investigated salesman compensation practices among firms in the United States. The Tack study reported on salesman compensation practices in Great Britain. The RIA study, for example, covered the data contained in useable questionnaires from 2,000 of the 10,000 Institute members that were polled--manufacturers, wholesalers, retailers, and service firms in a wide spectrum of two digit SIC industries.² A summary and review of these studies in Sales Management magazine characterized their findings by saying "they all point in the same direction--to a mixture of security and gamble instead of the old-fashioned and simple straight salary or straight commission."³

Not only is the subject of salesman compensation of current interest to management, but managers are rather dissatisfied with the salesman compensation plans they are

¹Sales Compensation Practices--An RIA Survey (New York: The Research Institute of America, Inc., 1965); Compensation of Salesmen (Chicago: Dartnell Corporation, 1965); Salesmen's Pay Incentives and Pensions (London, England: Tack Research, Ltd., 1965).

²RIA, ibid., p. 1.

³Philip Salisbury, "Compensating Salesmen," Sales Management, (January 21, 1966), p. 46.

using, and they have been for some time. In 1953, Tosdal and Carson found that "one out of four sales managers was actively dissatisfied with his company's compensation plan and was seeking improvement. There was a substantial dissatisfaction with all plans."¹ In 1965 the RIA study found "Only 13% of the companies were willing to rate their current plans 'Excellent'; 21% actually labeled their plans 'Unsatisfactory'."²

Although "unsatisfactory" and "actively dissatisfied" may actually represent different criteria and thus may not describe comparable states of discontentment, it would appear that the dozen years between these two surveys have brought little upgrading of management's evaluation of the performance of salesman compensation plans in implementing its strategic and tactical planning.

Yet salesman compensation plans have not remained static. The RIA report points out that

Despite almost five years of rising sales and today's record-breaking profits, one out of every three companies made some change in its method or basis of sales compensation recently--and one out of five still finds its plan "unsatisfactory".³

¹Harry R. Tosdal and Waller Carson, Jr., Salesman's Compensation (Boston: Graduate School of Business Administration, Harvard University, 1953, Vol. I), p. 329.

²Sales Compensation Practices--An RIA Survey, op. cit., p. 1.

³Ibid.

The RIA report describes these changes as

. . . milling around . . . two-thirds of the changes involved the proportions of salary and incentive. Without further data, one might jump to the conclusion that this is a continuation of the long-term trend to more-fixed, less-variable sales compensation. But apparently this trend reached a plateau at least three years ago. The changes in proportions since then are almost equally divided among "more salary," "more incentive," and "about the same" . . . They (managers, Ed.) were equally uneasy with the usual compensation plans ranging from straight salary thru straight commission . . .¹

The RIA study included a poll of the salesmen employed by the cooperating companies. This survey indicated that these salesmen were somewhat more content with current compensation practices than their bosses. "Almost one-fourth (23%) rated their current pay plan 'Excellent' while less than one in five (19%) said 'Unsatisfactory'."² The percentages in parentheses are from Sales Management's summary and were not included in the published RIA report.³ The same source indicated that 13,000 salesmen were polled.⁴

These salesmen were asked by RIA what proportion of salary should be in a salary-incentive plan. The answer was "half of the salesmen said salary should be 75% or more; almost nine out of ten wanted at least 50% salary."⁵

¹Ibid., p. 2.

²Ibid.

³Salisbury, op. cit., p. 52.

⁴Ibid., p. 50.

⁵RIA, op. cit., pp. 2-3.

If a head-count of substantial changes in salesman compensation plans is actually indicative of management's dissatisfaction, this study of salesman compensation practices in the Metals Service Center industry would seem to show that its management is even more dissatisfied than the RIA survey found management in general to be. The period 1960-1965, inclusive, was selected for comparison with the similar period used in the RIA study. This Survey Period was divided into First Half (1960-1962, inclusive) and Second Half (1963-1965, inclusive).

Of the Metals Service Center companies which cooperated in this study, slightly more than 20% (13 of 60) reported making thirteen major changes in the First Half of the Survey Period in their compensation plans for outside salesmen. In the Second Half, almost 50% (28 of 60) of the respondents reported making thirty-one such changes--three companies made two major changes in their plans in the latter three year period. Ten of these respondents were making a second major change in their plans following changes made in the First Half, and eighteen were making their first change during the Survey Period. Thus, over one-half of the responding companies (31 of 60) made forty-four major changes in the plans under which they compensated their outside salesmen in the six year Survey Period 1960-1965, inclusive, and slightly over 20% (13 of 60) made two major changes in that period of time.

There appeared to be no significant association between company size as measured by annual net sales and the proportion of companies in each of three size categories¹ that made major changes in their outside salesman compensation plans. Approximately one-half of the companies in each size category made such changes.

However, management in this industry was not "milling around" in making these changes. Of the thirty-one respondents that changed their plans in this Survey Period, twenty-eight made changes that moved toward a greater proportion of incentive compensation to fixed compensation in their plans, two moved toward a greater proportion of salary, and one made a change that did not effect the proportion of incentive compensation in its plan. Furthermore, the changes reported by more than two-thirds (21 of 31) of the responding companies which reported major changes in their outside salesman compensation plans involved adding a profitability factor, or increasing the importance of a profitability factor already incorporated in their plans. These profitability factors ranged in concept from simple profit sharing to "return on investment."

¹Throughout this study, for statistical purposes, the respondent companies were divided into three size categories based on annual net sales--less than \$5 million (21 companies), at least \$5 million but less than \$20 million (21 companies), and more than \$20 million (18 companies). For some purposes, a dichotomy of less than \$10 million and \$10 million or more was used. See Appendix A for a detailed discussion of the sample.

The increased rate of changes noted above in the Second Half of the Survey Period seems to reflect the acceptance by the industry of trends toward: (1) proportionately more incentive in compensation plans for outside salesmen, and (2) profitability based incentive compensation. Of the nearly one-half (29 of 60) of the responding companies that reported no major changes in their outside salesman compensation plans since 1959, ten indicated that their plans already included a profitability factor.¹ Only four of these twenty-nine respondents used salary only plans and two used commission only plans. The remaining twenty-three of these respondents reported using plans combining salary with bonus components, or commission components, or both.

Of the responding companies that had 1964 annual net sales of less than \$5 million (21 of 60), eleven reported making changes during the Survey Period in their compensation plans for outside salesmen. Of these respondents, 55% (6 of 11) reported adding profitability factors to their plans. Of the respondents in this size category that did not report changes in their plans during the Survey Period,

¹Robert G. Welch, President of the SSCI, in a letter to the writer dated January 24, 1967, points out that few of the member companies, prior to 1959, had accounting systems that produced figures on product line, item, or territorial profitability. A distribution cost analysis program was developed by SSCI in 1956, but for the first few years this type of information was available only to a limited number of companies.

50% (5 of 10) already had profitability factors in their plans.

Of the responding companies that had 1964 annual net sales of at least \$5 million but less than \$20 million (21 of 60), eleven reported making changes during the Survey Period in their compensation plans for outside salesmen. Of these respondents, 72% (8 of 11) reported adding profitability factors to their plans. Of the respondents in this size category that did not report changes in their plans during the Survey Period, 30% (3 of 10) already had profitability factors in their plans.

Of the responding companies that had 1964 annual net sales of \$20 million or more (18 of 60), nine reported making changes during the Survey Period in their compensation plans for outside salesmen. Of these respondents, 78% (7 of 9) reported adding profitability factors to their plans. Of the respondents in this size category that did not report changes in their plans during the Survey Period, 22% (2 of 9) already had profitability factors in their plans.

On balance, at the end of the Survey Period, i.e., as 1966 began, approximately one-half of the responding companies in each size category had profitability factors incorporated in their compensation plans for outside salesmen. However, it would seem that the smaller companies, as a group, began to move toward profitability based compensation components for outside salesmen before the larger

companies did.¹ The small sub-sample size involved here casts some doubt on the statistical significance of this observed difference, and conclusions should be drawn cautiously.

The Evolution of the Modern Steel Service Center²

The history of metals service centers in the United States dates back to colonial times when "blacksmiths, wagonmakers and other craftsmen could obtain a few bars of iron, or hammered sheets, or a gross of cut nails from 'iron mongers' who stocked the products of English and Swedish mills."³ The first metals warehouse in America that was engaged solely in the distributive function as opposed to the production function was established in 1765 as Abeel Steel, Inc., of New York City. The name of this company appears on the membership roster of the Steel Service Center Institute for 1965-1966 cited below. One hundred and twenty years before Abeel began operations, the Saugas Ironworks in Saugas, Massachusetts, according to tradition, founded the domestic iron (and steel) industry

¹See footnote, p. 7.

²Unless otherwise cited, this section of this thesis relies heavily on "All About Steel Distribution and Steel Service Centers," a reprint from Kaiser Aluminum News, Vol. 19, No. 5, published by Kaiser Aluminum and Chemical Corporation, 1962, 23 pages.

³"Steel Service Centers for Industry," 1965-1966 Roster (Cleveland, Ohio: Steel Service Center Institute, 1965), p. 4.

by pouring its first iron pot in 1645. This infant industry during its first two hundred years was oriented toward local markets and had no problem of "less than mill order" quantities to contend with. Sales agents in New York and Philadelphia maintained and sold small inventories of foreign metal. Not until 1856-57, when Bessemer converters "went on stream," did the steel producing industry reach mass-production proportions. A commercial process for the economical production of aluminum was patented in 1899.

As the twentieth century began, the open-hearth process became the dominant technique in steel making and, coupled with the continuous strip mill that was introduced in 1924, set the stage for "preproduction" processing which has become a large element in the operation of a modern metals service center. Mass production and standard widths and lengths are "blood brothers" and "mill order quantity" is at least an economic "first cousin."

The original steel warehouse operator was a wholesaler (when he was not acting as a retailer) and his modern counterpart, the metals service center, is still involved in the "break bulk" process. An estimated¹ 40,000 metal users out of an estimated 200,000 use sufficient amounts of steel in a year to deal directly with the producing mills. The needs

¹Kaiser Aluminum News, op. cit., p. 10.

of the remaining 160,000 metal users are for smaller quantities, at longer and/or irregular intervals, and often with special alloy, size, or shape requirements. However, servicing these special requirements of these smaller metal-using manufacturers accounts for only about 20% of the sales volume of the metals service center industry. The remaining 80% of the industry's sales volume is accounted for by the large metal-using manufacturers who are direct mill buyers, but who also have some requirements which best can be met by the centers. These requirements often involve "preproduction" processing--cutting or shearing blanks or shapes, heat-treating, slitting, edging, flattening, bending, grinding, or otherwise performing what would be the "first operation" for the manufacturer if standard shape and size metal were purchased from the mill. The individual service centers and their Steel Service Center Institute also have been selling actively the concept that "Cost of Possession" can offset the apparent savings of volume orders from the mills and that letting service centers "hold inventory" and provide "preproduction" processing results in lower total cost despite the loss of volume discounts. Steel producers have aided in this effort.

The Kaiser Aluminum News reprint cited on page 9. cites a 1962 survey of this industry as the source for an estimate that it is comprised of about 800 firms operating

about 1,400 plants or locations employing about 45,000 full-time people to process 35 million customer orders a year representing gross metal sales of about \$3 billion annually.¹ The Steel Service Center Institute, from whose membership the sample for this study was drawn, is composed of member companies that distribute "85% of all the industrial steel products that reach the market through distributors."² Two other associations, the National Association of Aluminum Distributors and the Copper and Brass Warehouse Association, are active in the more broadly defined "metal service center" industry. A substantial number of the steel service center firms also stock and supply non-ferrous metals such as aluminum, brass, bronze, as well as the more "exotic" metals such as titanium. Cross membership in two or more associations is not unusual.

The SSCI supplies statistical reports to its membership, sponsors association insurance plans, sponsors educational programs, and otherwise promotes the welfare of its membership and the entire industry. Much of the data upon which this thesis is based simply would not have been accessible without the cooperation of the Institute.

Domestic shipments (actually receipts by metals service centers) of industrial steel products to metals

¹Kaiser Aluminum News, op. cit., p. 9. See Appendix A for additional industry size information.

²Ibid., p. 15.

service centers totaled 10.0 million tons in 1964 which represented 16.4% of the total domestic producer shipments of this category of steel products for the year. When merchant products and miscellaneous and semi-finished products are added to this total, the grand total of steel products shipped to steel service centers reached 15.5 million tons or 18.3% of such products that reached consumers in 1964.¹

The modern metals service centers and their predecessors are and have been primarily concerned with the wholesale distribution of steel and other metals. Thus, these firms are classified under SIC categorization as wholesalers and are so classified in the RIA study previously cited. But, today, "better than 60% of all the metals they handle now undergo processing of some sort or other, bridging the gap between the standardized output of the mills and the special requirements of the fabricator."² Much of this processing³ has a relatively minor impact on pricing and profit margins, being traditional cutting-to-length and similar operations with which the service center

¹Company Operations and Operating Ratios in 1964
(Cleveland, Ohio: Steel Service Center Institute, 1965),
p. 1.

²Kaiser Aluminum News, op. cit., p. 20.

³Preproduction processing has grown from 60% in 1960 to 68% today and is growing steadily. Robert G. Welch, President of SSCI, estimates it will reach close to 80% in the next five to eight years. From the letter of January 24, 1967 from Mr. Welch to the writer previously cited.

operator has had ample experience. In the past he has often absorbed at least some of this cost, depending on his gross margin being sufficient to cover this practice. However, an increasing amount of this preproduction processing has become processing involving expensive equipment which must be utilized at or near capacity to keep costs at a reasonable level. The cost of holding inventory does not disappear because the service center assumes that function for its customers--it is transferred, though probably at a reduced level because of a number of factors.¹ In short, the gross margin concept no longer is as servicable a tool for the service center operator who is no longer acting like a typical wholesaler, but is, in fact, a fabricator in much of his operation. Such an operator must be concerned with "more realistic pricing" and "profit improvement."² He must think of profitability in a product-service context. Orders, customers, and even territories will be more or less profitable in relation to other orders, customers, and territories in terms of their product-service mixes. A previous study³ concerning inventory management practices

¹The economics of the center's carrying such a wide variety of inventory from which it services many accounts, mechanization of handling and processing with better and more efficient equipment than the buyer is likely to have for this work are some of these factors. From the previously cited letter to the writer from Mr. Welch, January 24, 1967.

²Kaiser Aluminum News, op. cit., p. 20.

³John D. Demaree, "Inventory Management--Positive and Normative Models of Decision-Making in the Metals

was sponsored by the Institute because this is a subject of vital interest to the management of a metals service center in the present competitive environment. This study will be concerned with the impact this environment has had and will have on industry practices in salesman compensation--the major cost associated with demand creation in this industry. RIA reports that the metal service centers that responded to its questionnaire reported spending a median 4% of sales revenue on direct sales expense alone (salesmen's compensation and expenses plus compensation and travel and entertainment expenses of sales supervision).¹ In contrast, the Steel Service Center Institute reports that nearly 90% of all respondents to their annual survey of company operations and operating ratios spent less than one-half of one percent of sales on advertising in 1964.²

Service Center Industry" (unpublished doctoral dissertation, Graduate School of Business Administration, Michigan State University, 1964).

¹RIA, op. cit., p. 63.

²Company Operations and Operating Ratios in 1964, op. cit., p. 3.

CHAPTER 2

SALESMAN COMPENSATION CONCEPTS

Salesman compensation will be examined here in terms of three broad concepts: (1) as a system of rewards, (2) as a system for control of the salesman's activities, and (3) as a system of communication between management and the salesman.

A Reward System

Conceptually the term "compensation" includes both the money rewards and the non-money rewards received by the salesman in return for the performance of duties and activities assigned to him by his management. Non-money rewards include a wide range of psychological rewards, such as titles, prestige automobiles, honorary awards (Salesman of the Year, etc.), potential promotion--to name only a few. Money rewards can be direct, such as salary, or indirect, such as company paid insurance and/or pension plans. However, the line of demarcation between "money" rewards and "non-money" rewards is not always a clear one. For example, in the case of a company-paid country club membership or an all expense paid vacation contest prize,

the reward has a money value but the prestige value may be disproportionate to the money value.

In practice, however, the term "compensation" is usually used with the connotation of money rewards and often to refer only to the direct money rewards--salary, commissions, and bonuses. The emphasis in this study will be on money rewards because the prevailing view of the executives of the responding companies who were interviewed was that the use of money rewards was the most effective approach to salesman compensation, given the business environment of their industry and the general characteristics of their salesmen. Consequently, as would be expected given this management view of compensation, the salesman compensation plans which were studied and which are reported upon in this thesis proved to be money-oriented plans. This is not to say that non-money rewards were not used for they were. However, they were not a major incentive factor in the thinking of most management in this industry. There were dissenters from this viewpoint, but they were a rather small minority.

The term "compensation" will be used in this study to mean "direct" money rewards unless the combination of "direct" and "indirect" money rewards is specifically indicated. It will not be used in the sense that would include "non-money" rewards.

Only one out of three of the responding companies in this study (20 of 60) reported the use of contests in their compensation plans for outside salesmen. Furthermore, a number of these respondents reported that contests were used only infrequently (to clear out slow-moving or otherwise unwanted items in inventory, for example) and were a small part of their overall salesman compensation plans. Where contests were used, cash prizes were reported slightly more frequently by these respondents than were merchandise prizes, which in turn were reported more frequently than were travel prizes.

The group of respondents that reported annual net sales of less than \$5 million (21 of 60) reported using contests less frequently (19%, 4 of 21) than either the group that reported annual net sales of at least \$5 million but less than \$20 million (21 of 60), of which 43% (9 of 21) reported using contests, or the group that reported annual net sales of over \$20 million (18 of 60), of which 39% (7 of 18) reported using contests. It should be noted here that the smallest size companies tended to use salary plus bonus plans more frequently than the other size categories did (see Chapter 3). Such bonuses were often paid monthly or quarterly and thus, in a sense, may have been substitutes for contests.

Commonly Accepted Compensation Plan Characteristics

Basic or principles texts in managerial marketing agree pretty well on the characteristics a "good" salesman compensation plan should have.¹

This list of characteristics is taken from Matthews et al.: (1) Control, (2) Incentive, (3) Security and Income Regularity, (4) Simplicity, (5) Economy, (6) Fairness, and (7) Flexibility.²

Certainly these appear to be admirable characteristics for a salesman compensation plan to have, but the architect of a salesman compensation plan will probably find that, as guides to a useful plan, they are more likely to confuse him than to guide him. They will confuse him because they contradict one another and are relative rather than absolute terms.

If sales managers would realize there are inherent conflicts in the objectives of most compensation plans, some of their frustration and dissatisfaction might be reduced. Two examples of the dilemmas in which executives often find themselves are as follows: (1) They want a plan that will maximize

¹E. Jerome McCarthy, Basic Marketing: A Managerial Approach (rev. ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1964), pp. 690-695; John B. Matthews, Jr., Robert D. Buzzell, Theodore Levitt, and Ronald E. Frank, Marketing: An Introductory Analysis (New York: McGraw-Hill, 1964), pp. 399-410; William J. Stanton, Fundamentals of Marketing (New York: McGraw-Hill, 1964), pp. 568-570; Thomas A. Staudt and Donald A. Taylor, A Managerial Introduction to Marketing (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965), pp. 446-448.

²Matthews et al., ibid., pp. 400-401.

the salesman's income and minimize the company's outlay; (2) they want one plan to offer to the men both security and stability of income and much incentive. In each situation, the desires are diametrically opposed to each other. About all a manager can do is adjust and modify until a reasonably satisfactory compromise is reached. Because perfection is unattainable, the administrator must recognize that he will always have a problem that requires constant surveillance.¹

The characteristics cited above, although "control" and "economy" (which might be termed company objectives) are included, have an orientation toward the reward system aspects of a compensation plan and a specific concern with the impact of the system upon the salesman--in short, how he will fare under the plan. The focus of this study is rather on how the company will fare, i.e., how the compensation system communicates with the salesman and controls his activities so that they are congruent with the objectives of the firm.

A Control System

Stanton and Buskirk continue after the passage cited above to point out that no single plan will suit the purposes of all companies, i.e., "there is no perfect plan," and observe that each company should have a salesman compensation plan specifically designed to suit its own needs and purposes, and that "a compensation system should make it possible for the sales executive at all times to keep the

¹William J. Stanton and Richard H. Buskirk, Management of the Sales Force (Homewood, Illinois: Richard D. Irwin, Inc., 1964), p. 353.

work of the men aligned with company interests, policies, and objectives."¹

It would seem to follow that the best way to assure the congruence of the compensation system with the objectives of the firm would be to have the compensation plan, as originally conceived, be based upon those objectives. Of course, the objectives of the company would have to be articulated in some detail so that they could be translated into specific actions and activities of the sales force which would help to attain those objectives. Hazy general objectives to be attained by the salesman compensation plan, such as "increase sales" and "make the salesmen work hard," are valueless in this context. The objectives must specify information such as what kind of sales are wanted, from what kinds of customers, etc., to be of value in building the compensation system. Considerable research may be necessary to gather such specific information. Contradictory company objectives may also plague the designer of a salesman compensation plan.

In a survey on planning conducted by the Steel Service Center Institute among its members in 1965, the question was asked--"Does your company have a series of long-term corporate goals?" One hundred sixty-five respondents answered this particular question. Sixty-three respondents (37%) said "no," seventy-one respondents (42%) said

¹Ibid., p. 355.

"yes-informal," and only thirty-one respondents (18%) said "yes-written." The percentages in the parentheses refer to the proportion of those answers to the one hundred seventy usable questionnaires that were returned --so five respondents (3%) did not answer this question.¹

But the compensation plan is not management's only tool for the direction and control of the sales force.

Maynard and Davis caution

A compensation plan, even the most scientifically designed, will not serve as a substitute for soundly conceived policies relating to selecting, training, and supervision. Yet many firms expect it to do just that, and blame their present plans for failures which have nothing to do with the way men are paid.²

The salesman compensation plan cannot be expected to perform the entire supervisory activity of a sales force. Only the aspects of the salesman's job that can be controlled best by the compensation plan should be assigned to it. "Complicated" plans as opposed to "simple" plans, which are "approved" in the framework of characteristics cited above, often become complicated because the designer tries to incorporate too many supervisory objectives into the plan.

¹Steel Service Center Institute, 1965 Survey on Members' Planning, a report prepared by the Institute (Cleveland: Steel Service Center Institute, 1965), p. 3.

²Harold M. Maynard and James H. Davis, Sales Management (3rd ed.; New York: The Ronald Press Co., 1957), p. 355.

The straight salary plan is usually described as one end of a continuum of the degree of control exercisable by management and the straight commission plan as the other end. Salary plans are said to permit maximum control--commission plans minimum control. However, Stanton and Buskirk point out that control (by supervision) becomes necessary¹ when a straight salary or high salary element plan is used to compensate salesmen. The straight salary compensation plan provides no guidance of the salesman's activities in and of itself. However, the administration of the salary plan may provide guidance that is just as disruptive of supervisory objectives as a commission component in a compensation plan may be. If the supervisory effort is directed toward some objective such as "customer service," but salary raises appear to the salesman to follow "sales volume," it will be extremely difficult to get him to devote much time to activities that do not lead directly to greater sales volume. The straight salary plan may not offer incentive to the salesman, but the manner in which it is administered, especially the apparent criteria upon which salary increases are based, is an "incentive plan" in a very real sense to the salesman.

¹Stanton and Buskirk, op. cit., p. 377.

A Communication System

A salesman compensation plan, then, communicates management's objectives for the firm to the salesman. More precisely, it communicates some message to him--the content of the message as he receives it may or may not correctly inform him of management's objectives. Furthermore, the compensation plan is not the only communication system between the two parties. Setting aside the opportunities for misunderstanding inherent in any communication system, the messages that are flowing through the multiple systems (direct supervision, "grapevine" or unofficial system, etc.) may, in fact, be conflicting.

Assuming rational behavior (in an economic sense) on the part of the salesman (and if he does not act rationally in this sense, the whole concept of money incentive compensation falls into ruins), he will act to further his own interests (presumably, at least up to a point, to increase his total income). When the messages concerning company objectives that he receives through at least the official channels (such as the compensation plan and supervisory personnel) are congruent with his own personal objectives, he will act in a manner that will also help to attain those company objectives.

The kind of compensation plan is not important in and of itself, but the potential of that plan to communicate to the salesman that portion of the firm's objectives

on which management wishes to have him concentrate his efforts for attainment is important. However, the compensation plan is only one communication system and cannot carry the whole burden of communication and control in the absence of a coordinating selecting, training, and supervising program.

CHAPTER 3

PATTERNS OF COMPENSATION OF OUTSIDE SALESMEN IN THE STEEL SERVICE CENTER INDUSTRY

For the purposes of this investigation, compensation was separated into four components: fringe benefits, fixed compensation, incentives, and expenses.

The first three components are clearly compensation. However, the last category, expenses, is not usually classified as a component of compensation. They were so classified in this study because the personal use of a company car (or, alternatively, a liberal allowance for the cost of operation of the salesman's car) represents a financial benefit to the salesman. Furthermore, depending upon the degree of control exercised by management, the entertainment expense allowance could also represent a financial benefit to the salesman.

As a rather extreme example of entertainment expense allowance contributing financial benefit to the salesman, it was found in one instance that company practice allowed the salesman to keep any unspent portion of the monthly entertainment allowance allotted to him and gave him essentially full control of these expenditures. As it turned out this practice was atypical. The typical practice

in the industry was found to be relatively close management control and review of entertainment expenditures by salesmen. The expense component of compensation is discussed more fully later in this chapter.

While it would be useful to identify the patterns used in compensating salesmen in this industry as a matter of information, the major purpose of this investigation is to study the effect on company profitability of incentive (bonus and commission) compensation. By examining company practices in connection with all four compensation components it should be possible to determine areas where some firms might enjoy differential advantage in attracting and retaining the more proficient salesmen in the industry. If, in fact, such areas of differential advantage do exist they must be evaluated in assessing the effect on company profitability of incentive compensation.

If a high degree of disparity exists with regard to a particular component of compensation, it may be presumed that differential advantage in attracting and retaining the more proficient salesman may be present. Conversely, if a high degree of uniformity of practice with regard to a particular component of compensation is found, it is unlikely that differential advantage accrues to one firm over another because of its practices with regard to this component and, consequently, the effect on company profitability should be nil.

Fringe Benefits

Specific consideration of fringe benefits as compensation to the outside salesman was restricted to two categories: insurance plans and pension (retirement) plans.

In the questionnaire an open category, "other," was included to allow respondents to indicate other benefits they considered to be "fringe benefits." The "other" category was almost completely ignored. Those few respondents who checked "other" mentioned country club memberships for selected, mostly senior, salesmen and the use of high prestige model automobiles for salesmen who met certain performance criteria.

The recently released Research Institute of America study of salesmen's compensation states that among wholesale distributors of steel, aluminum, and other metals "where salesmen's pay includes some element of salary" 90% allow six or more paid holidays and 76% give one to four weeks paid vacation based on length of service. Of the companies in this industry who responded to the RIA questionnaire, 80% indicated that their compensation plan for salesmen included an element of salary.¹ For those salesmen who receive no salary component in their compensation, "paid holidays" and "paid vacations" are meaningless terms and have no application to their situation.

¹Sales Compensation Practices--An RIA Survey (New York: The Research Institute of America, Inc., 1965), p. 63.

Insurance Benefits

The incidence of availability and the extent to which the firm shared the cost of four kinds of insurance coverage were investigated: life insurance, hospitalization, sickness and accident indemnity, and disability income continuation (see Tables 1, 2, and 3).

Of the respondents to the questionnaire, 43% (26 of 60) made available all four coverages, 80% (48 of 60) made available three or more coverages, and all of the companies made available two or more coverages. Almost all of the responding companies (59 of 60) made the two basic coverages, hospitalization and life insurance, available.

Of the respondents to the questionnaire, 10% (6 of 60) made available and fully paid the cost of all four coverages, 37% (22 of 60) made available and fully paid the cost of three or more coverages, 55% (33 of 60) made available and fully paid the cost of two or more coverages, and 73% (44 of 60) made available and fully paid the cost of at least one coverage. Thus, only 27% (16 of 60) respondents said that they did not fully pay the cost of even one coverage.

When the criterion was broadened to include those respondent companies who shared the cost of the coverages in addition to those who fully paid the cost, 32% (19 of 60) of the respondents offered and contributed a part or all of the cost of each of all four coverages, 68% (41 of 60) offered and contributed a part or all of the cost of

TABLE 1.--The incidence of selected insurance coverages in the Metal Service Center Industry, 1964.

Made Available	1964 Annual Net Sales							
	All Responding Companies		Less Than \$5 Million		\$5 Million But Not \$20 Million		\$20 Million Or More	
	Cos.	%	Cos.	%	Cos.	%	Cos.	%
All 4 Coverages	26	43	9	43	7	33	10	56
At Least 3	48	80	16	79	17	81	15	83
At Least 2	60	100	21	100	21	100	18	100

NOTE: The selected coverages were life insurance, hospitalization, sickness and accident indemnity, and disability income continuation. The availability of these coverages to outside salesmen in the industry was studied.

three or more coverages, and all but one respondent company offered and contributed part or all of the cost of two or more coverages. All of the respondent companies offered and contributed part or all of the cost of at least one coverage.

Analysis by size of company (annual net sales) indicates that smaller companies were more likely to pay the full cost of coverages than larger companies (see Table 2). However, they were not more likely to offer the coverages nor were they more likely to contribute a part or all of the cost of coverages (see Table 1 and Table 3, respectively).

An a priori hypothesis might be that those companies which included no salary component in their compensation plans for their outside salesmen (hereafter they will be called commission plan companies) would follow different practices with regard to offering and paying for these insurance coverages. There were four such companies among the respondents. Two of the four made available all four coverages. One of them fully paid the cost for the four coverages, the other fully paid for three coverages and shared the cost of the fourth. The remaining two companies offered three coverages. One of them fully paid two coverages and shared the cost of the third. The other company shared the cost of two coverages and asked the salesman to pay the cost of one coverage. These data would seem to suggest the commission plan companies were more likely to offer and pay

TABLE 2.--The incidence of non-contributory plans of selected insurance coverages in the Metal Service Center Industry, 1964.

Made Available and Cost Fully Company Paid	1964 Annual Net Sales							
	All Responding Companies		Less Than \$5 Million		\$5 Million But Not \$20 Million		\$20 Million Or More	
	Cos.	%	Cos.	%	Cos.	%	Cos.	%
All 4 Coverages	6	10	3	14	2	10	1	6
At least 3	22	37	10	48	7	33	5	28
At least 2	33	55	15	71	11	52	7	39
At least 1	44	73	18	86	14	67	12	67
None	16	27	3	14	7	33	6	33

NOTE: The selected coverages were life insurance, hospitalization, sickness and accident indemnity, and disability income continuation. The availability of these coverages to outside salesmen in the industry was studied.

TABLE 3.--The incidence of non-contributory and shared cost plans of selected insurance coverages in the Metal Service Center Industry, 1964.

Made Available and Cost Fully Company Paid or Shared	1964 Annual Net Sales							
	All Responding Companies		Less than \$5 Million		\$5 Million But Not \$20 Million		\$20 Million Or More	
	Cos.	%	Cos.	%	Cos.	%	Cos.	%
All 4 Coverages	19	32	6	29	7	33	6	33
At least 3	41	68	13	62	14	67	14	78
At least 2	59	98	20	95	21	100	18	100
At least 1	60	100	21	100				

NOTE: The selected coverages were life insurance, hospitalization, sickness and accident indemnity, and disability income continuation. The availability of these coverages to outside salesmen in the industry was studied.

for these coverages than the companies which paid salaries. However, this sub-sample is very small and relatively large differences in proportions are not significant. A better interpretation of the data would be that they probably followed the same practices as the salary companies with respect to insurance coverages and the a priori hypothesis that they did not would be rejected.

Life Insurance.--Some specific coverages were offered more frequently than others. Of the respondents, 98% (59 of 60) said that life insurance coverage was made available to their outside salesmen and 48% (28 of 59) of these companies reported paying all of the cost of the coverage. Only 7% (4 of 59) reported that the salesman paid all of the cost of the coverage. All four of the commission plan companies made this coverage available to their salesmen and three of them paid the full cost. The fourth company shared the cost.

Hospitalization.--All sixty responding companies reported that they made hospitalization coverage available to their outside salesmen and half of them furnished this coverage at no cost to the salesman. In 8% (5 of 60) of the reported plans the salesman paid all of the cost. All of the four commission plan companies, of course, offered this coverage and two of them paid all the cost. One company required the salesman to pay the full cost of the coverage and one company shared the cost with the salesman.

Sickness and Accident Indemnity.--Two out of three of the sixty responding companies reported that sickness and accident coverage was offered to their outside salesmen. Of these forty companies, 65% (26 of 40) paid all the cost of the coverage. Only one company required the salesman to pay all of the coverage cost. Two of the four commission plan companies offered this coverage to their salesmen. The other two did not. The two which offered it paid all of the cost.

Disability Income Continuation.--Of all of the insurance coverages, this one was reported by the fewest companies. Compared with the other three coverages this one is relatively new as a commercial offering on a group basis. In 1965 the Steel Service Center Institute sponsored a disability income continuation plan called IMAGE to be made available to member companies on an association basis. Presumably this coverage will become more widespread than the findings of this study (the data was collected in the Fall of 1965) indicate.

Of the respondents, 58% (35 of 60) offered disability income continuation coverage to their salesmen and 60% (21 of 35) of these companies reported that they paid all of the coverage cost. Five of the companies, 14%, reported that the salesman paid all of the cost. All of the four commission plan companies offered this coverage and two of them paid the full cost of the coverage. The remaining two shared the cost.

Summary and Conclusions--
Insurance Benefits

The insurance coverages that have been discussed were not special offerings to the outside salesmen but were offered to salaried employees of the company as well. It has been noted above that smaller companies were no more likely to offer a specific coverage than larger companies but that they were more likely to pay the full cost of the coverage. This was consistent through all of the coverages. A purely mechanical feature of group plans sold commercially may explain the greater frequency of contributory plans among larger companies.

Individual coverage amount limits under group life plans sold by commercial companies, for example, are determined by the size of the group. Requirements vary somewhat among the states, but "true" group limits and rates begin at 25 to 50 lives. For groups smaller than the required size, limits of coverage may be reduced. For groups of ten lives, for example, and again for groups of five lives, progressively smaller limits may be set. The rates are increased, but not in proportion to the coverage limit decrease. The net effect of rate and limit changes where only a relatively few lives are involved is a total premium that management often accepts on a non-contributory basis. On the other hand, where a larger number of lives and higher coverage limits are involved, the resulting

premium is not acceptable to management on a non-contributory basis. Often the company chooses to pay for a certain schedule of individual coverage and the higher coverage limit is made available to the individual on a contributory basis. The same or similar requirements apply to the other coverages.

Possibly other factors also are involved in the observed characteristic of higher frequency occurrence of non-contributory plans among smaller companies than larger ones, but it is suggested that the mechanical restraint discussed above plays a substantial role.

The four insurance coverages investigated are widely offered in this industry. All of the respondent companies offered at least two of the four averages to their outside salesmen and four out of five of the companies offered three or more coverages. Essentially all (98%) of the respondent companies offered and contributed a part or all of the cost of two or more coverages, and two companies out of three did so on three or more coverages. Nearly three companies out of four fully paid for at least one coverage, and over one-half of them offered and paid all the cost of two or more coverages.

Life insurance and hospitalization are basic coverages which have been offered by commercial carriers on a group basis more widely and for a longer time than sickness and accident indemnity and disability income

continuation. These two basic coverages were offered by essentially all of the companies responding to the questionnaire (one company of the sixty respondents did not offer life insurance). Eight of the companies (14%) required the salesmen to pay the full cost of one or the other of these coverages, but none of them required him to pay all of the cost of both of these coverages. About one-half of the companies paid the full cost of both coverages.

There appeared to be little difference in company practice with regard to insurance coverages between companies which compensated their salesmen only with a commission plan and those which included a salary component in their compensation plan.

It was noted that smaller companies were more likely to offer insurance coverages on a non-contributory basis than larger companies, although they were no more likely to make the coverages available on some basis than were larger companies. It was suggested that this might be partially explained by the inherent technical characteristics of commercial group plans.

There seemed to be little room for differential advantage among firms with regard to insurance benefits which might enable some firms to attract and retain a disproportionate share of the more proficient salesmen in the industry. The terms of coverage variable among specific

plans was not studied, but it is difficult to impute sufficient knowledgeability of insurance coverage to the non-insurance professional to make this an important factor in the salesman's choice.

Pension Plans

The pension plans reported by respondents were classified as fixed contribution plans or profit sharing plans. Some companies, 15% (9 of 60) of the respondents, reported plans that combined components of both kinds of plans (Table 4).

The fixed contribution plan, from an employer's viewpoint, entails an annual money commitment that is determined by the level of benefits offered, the number of participants, and the employee contribution formula, if any. Although there are usually provisions written into the plan that provide limited relief from the money commitment in times of financial stress, and the right to discontinue the plan is almost invariably reserved to the employer, his contribution to the plan represents a fixed cost that is relatively independent of profit earning and is extremely difficult to reduce in times of low profitability.

On the other hand, the profit sharing plan is designed to tie the employer's contribution to the earning of profit by the company. The employer's contribution to the plan is set by a formula based on the level of profit

TABLE 4.--Incidence of pensions and funding methods for pensions in the Metal Service Center Industry, 1964.

		1964 Annual Net Sales							
		All Responding Companies		Less Than \$5 Million		\$5 Million But Not \$20 Million		\$20 Million Or More	
		Cos.	%	Cos.	%	Cos.	%	Cos.	%
Have Pension Plan		53	88	15	71	21	100	17	94
Have No Plan		7	12	6	29	0	0	1	6
Total		60	100	21	100	21	100	18	100
Have Plan:									
Fixed Contribution									
Plan Only		31	59	8	53	13	62	10	59
Profit Sharing									
Plan Only		13	25	6	40	5	24	2	12
Components of									
Each Kind		9	17	1	7	3	14	5	29
Total		53	101*	15	100	21	100	17	100
Where Fixed Contri-									
bution Plan or Fixed									
Contribution Com-									
ponent Was Used:									
Non-Contributory		26	65	6	67	11	69	9	60
Contributory		14	35	3	33	5	31	6	40
Total		40	100	9	100	16	100	15	100

* Note: Adds to more than 100% because of rounding.

the company earns in a stated period of time. Consequently, the money commitment is less rigid and varies more or less directly with profit.

During the personal interviews which were held with executives of the respondent companies where concern over fixed costs was voiced, it was usually mentioned by the executives of the relatively smaller companies. This was not an unexpected development, but some a priori hypotheses are suggested by their concern. In the null form they are:

1. Company size would not affect the decision to offer a pension plan.
2. Where pension plans were offered, company size would not affect the choice of the kind of plan to be used, i.e., fixed contribution or profit sharing.
3. Where fixed contribution plans were offered, company size would not affect the choice of contributory versus non-contributory plans.

Of the responding companies, only 12% (7 of 60) reported that they did not have a pension plan in which their outside salesmen participated. Among companies with annual net sales of \$20 million or more, 94% (17 of 18) reported a pension plan. Among companies with annual net sales of at least \$5 million but less than \$20 million, 100% (21 of 21) reported a pension plan. Among companies with

annual net sales of less than \$5 million, 71% (15 of 21) reported pension plans.

After making due allowance for the small size of the sub-samples, it is apparent that companies with annual net sales of less than \$5 million did offer pension plans significantly less often than those companies with annual net sales of \$5 million or more. The first a priori hypothesis is rejected.

Of the respondents reporting a pension plan in which their outside salesmen participated, 75% (40 of 53) reported fixed contribution plans, and 42% (22 of 53) reported profit sharing plans. These percentages total to more than 100% because 17% (9 of 53) reported combination plans that included components of both kinds of plans.

Of the responding companies which reported pension plans, 88% (15 of 17) of those companies with annual net sales of \$20 million or more offered a fixed contribution plan or a fixed contribution component of a combination plan; 76% (16 of 21) of those companies with annual net sales of at least \$5 million but less than \$20 million offered a fixed contribution plan or a fixed contribution component of a combination plan; and 60% (9 of 15) of those companies with annual net sales of less than \$5 million offered a fixed contribution plan or a fixed contribution component of a combination plan.

Where a pension plan was offered, the incidence of fixed contribution plans or fixed contribution components of combination plans was significantly higher as company size increased.

The presence of combination plans which were reported by some of the respondents did not present any problem in evaluating the incidence of fixed contribution plans or fixed contribution components of combination plans. However, in evaluating the incidence of profit sharing plans and profit sharing components of combination plans it was necessary to distinguish between them.

When the characteristic criterion was "offers a profit sharing plan or a profit sharing component of a combination plan," the incidence of the characteristic was probably independent of company size measured by annual net sales. Of those companies offering pension plans whose annual net sales were at least \$20 million, 41% (7 of 17) offered profit sharing plans or profit sharing components of combination plans. Among such companies with annual net sales of at least \$5 million but less than \$20 million, 38% (8 of 21) offered profit sharing plans or profit sharing components of combination plans. Among such companies with annual net sales of less than \$5 million, 50% (7 of 14) offered profit sharing plans or profit sharing components of combination plans.

But, when the characteristic criterion was changed to "offers a profit sharing plan only," an association

between company size and the incidence of profit sharing plans as the only method of funding the pension plan did emerge. The presence in the combination plan of a fixed contribution component establishes a fixed money commitment. The presence of the profit sharing component may enhance the probable retirement value of the combination plan but it does not change the fixed money commitment. A company that wishes to avoid a fixed money commitment would not choose either a fixed contribution plan or a combination plan.

Among the respondent companies which offered pensions, 12% (2 of 17) of those companies with annual net sales of at least \$20 million offered profit sharing plans only, 24% (5 of 21) of those companies with annual net sales of at least \$5 million but less than \$20 million offered profit sharing plans only, and 40% (6 of 15) of those companies with annual net sales of less than \$5 million offered profit sharing plans only.

The incidence of fixed contribution plans and fixed contribution components of combination plans was found to increase as company size increased and the incidence of profit sharing plans as the only method of funding the pension plan was found to decrease as company size increased. The second a priori hypothesis is rejected.

Where fixed contribution plans were used (either alone or as fixed contribution components of combination plans),

65% (26 of 40) were non-contributory plans. Among those companies with annual net sales of at least \$20 million, 60% (9 of 15) offered non-contributory plans; among those companies with annual net sales of at least \$5 million but less than \$20 million, 69% (11 of 16) offered non-contributory plans; and among those companies with annual net sales of less than \$5 million, 67% (6 of 9) offered non-contributory plans. The difference in incidence of non-contributory plans is probably not significant and the third a priori hypothesis should be accepted.

Of the four commission plan companies, all offered fixed contribution pension plans. One plan was non-contributory and three were contributory.

Summary--Pension Benefits

Pension plans are relatively widely offered to outside salesmen in this industry. Only 12% (7 of 60) companies reported that they did not have a pension plan in which their outside salesman participated.

Although the sub-samples are small and, consequently, relatively large differences in incidence of a characteristic were not significant, an association between company size and the inclusion of a pension in the fringe benefit package did exist. The larger companies were more likely to offer pensions than the smallest companies (annual net sales of less than \$5 million). Furthermore, the larger companies were more likely to offer plans which were either

fixed contribution plans entirely or combination plans with fixed contribution components. The smaller companies were more likely to offer profit sharing plans only.

When smaller companies did offer fixed contribution plans they were as likely to offer them on a non-contributory basis as the larger companies.

If the profit sharing only plans are classified as "non-contributory," 74% (39 of 53) of the reported plans required no contribution by the salesmen.

There was no significant policy difference concerning the offering of pension plans to outside salesmen between the commission plan companies and those companies which included a salary component in their compensation plans.

Pension practices among these companies seemed to offer little opportunity for differential advantage in attracting the more proficient salesmen, especially among companies whose annual net sales were at least \$5 million. The smallest companies were less likely to offer pension plans, although almost three out of four of them did so, and their plans were more likely to be profit sharing only plans. Here, again, it is difficult to ascribe to the salesman sufficient knowledge to distinguish between the two funding methods as an important factor in his choice of companies.

Expenses

Expenses incurred by outside salesmen in the steel service center industry in the course of their selling activities customarily are of two kinds. Expenses are incurred by the salesmen for necessary travel in their territories and to promote customer good will.

Travel Expenses

Although these salesmen sometimes incurred expenses for airplane and railroad travel, together with some lodging and meals away from home expenses, primarily travel expense meant automobile travel expense in this industry.

Automobile Expenses.--The use of company-furnished cars by outside salesmen in the metals service center industry was the predominant practice.

Almost two out of three of the responding companies, 62% (37 of 60), reported that all of the cars used by their outside salesmen were company-furnished. An additional 15% (9 of 60) reported that both company-furnished and salesman-owned cars were used. The remaining 23% (14 of 60) of the respondents reported that only salesman-owned cars were used. Among this latter group were numbered three of the commission plan companies. The fourth commission plan company furnished company cars to some of their outside salesmen. Thus, only about one in five (11 of 56) of the responding companies which included a salary component in

their compensation plans for outside salesmen did not furnish company cars to any of their outside salesmen.

The personal interviews¹ conducted with executives of the companies which comprised the sample for this study disclosed several reasons for the dual practice of using both salesman-owned and company-furnished cars that was reported by nine responding companies.

Some years ago the predominant practice in this industry was the use by outside salesmen of their own cars, with or without reimbursement. Many companies when they began to furnish company cars to outside salesmen allowed the salesman the option of using his own car with reimbursement for expenses incurred. Some salesmen, usually a minority, preferred to use their own cars with reimbursement. This option allowed the salesman freedom of choice as to the make and model of car he drove, and as to when he traded for a new model.

The second reason for the existence of this dual practice was related to the trend in this industry in recent years toward larger companies. This growth in company size often was accomplished by merger of two or more companies or by the outright purchase of one company by another. Where practices with regard to the cars used by outside salesmen in the combining companies differed, they

¹ Executives from fifty-three of the sixty companies which comprised the sample were interviewed.

were often allowed to continue unchanged somewhat indefinitely. This was also true of other practices and policies, e.g., salesmen's incentive compensation. It merely reflects the autonomy that is frequently allowed the combining companies in these situations, and the time lag which often occurs between legal combination and full integration of management.

Another reason for the existence of this dual practice was related to the company's compensation plan for outside salesmen. One of the commission plan companies and some of the salary plus commission plan companies that responded to the questionnaire reported that not all of their outside salesmen were compensated according to their primary compensation plans. These exceptions, because of inexperience or because they sold in territories that would not support them on the primary plan, were compensated by a straight salary arrangement. Salesmen who devoted part of their time to supervision and product specialists often were compensated with straight salary or predominantly salary arrangements also. Such salesmen frequently drove company-furnished cars while the other salesmen drove their own cars.

Some companies which furnished company cars met the problem of satisfying the salesman's preference for a particular make or model car by allowing him some latitude of choice, provided that any additional cost due to his

choice was paid by him. Dissatisfaction with this practice was voiced by a few executives because of hidden extra costs, such as for maintenance and repair, of the more expensive models and makes which some salesmen chose under this arrangement.

As was mentioned previously, some companies which furnished company cars to their salesmen offered higher prestige model cars at company expense to salesmen who met certain performance criteria as an incentive for them to do so.

It is apparent in Table 5 that the incidence of company-furnished cars for outside salesmen's use increased with company size as measured by annual net sales.

Of the responding companies which had annual net sales of \$20 million or more, 72% (13 of 18) reported that only company-furnished were used by their outside salesmen. An additional 22% (4 of 18) of these respondents reported that both salesman-owned and company-furnished cars were used. Thus 94% (17 of 18) of the responding companies in this size category reported furnishing company cars to at least some of their outside salesmen, and only 6% (1 of 18) reported that all cars used by their outside salesmen were salesman-owned.

Of the responding companies which had annual net sales of at least \$5 million but less than \$20 million, 67% (14 of 21) reported that only company-furnished cars were used by their outside salesmen. An additional 10%

TABLE 5.--Company practices with regard to auto travel expenses in the Metal Service Center Industry, 1964.

1964 Annual Net Sales						
	All Responding Companies		Less Than \$5 Million		\$5 Million But Not \$20 Million	
	Cos.	%	Cos.	%	Cos.	%
Salesmen Use:						
Company-furnished Cars Only	37	62	10	48	14	67
Salesman-owned Cars Only	14	23	8	38	5	24
Some of Each	9	15	3	14	2	10
Total	60	100	21	100	21	101*
Where Company Cars Were Furnished, They Were:						
Leased Cars Only	28	61	6	46	10	63
Company-owned Only	13	28	5	39	5	31
Some of Each	5	11	2	15	1	6
Total	46	100	13	100	16	100
Where Company Cars Were Furnished, the Company:						
Paid All Expenses	40	87	12	92	15	94
Paid a Flat Dollar Allowance	4	9	1	8	1	6
Paid a Mileage Allowance	2	4	0	0	0	0
Total	46	100	13	100	16	100

*NOTE: Adds to more than 100% because of rounding.

(2 of 21) of these respondents reported that both salesman-owned and company-furnished cars were used. Thus 76% (16 of 21) of the responding companies in this size category reported furnishing company cars to at least some of their outside salesmen, and 24% (5 of 21) reported that all cars used by their outside salesmen were salesman-owned.

Of the responding companies which had annual net sales of less than \$5 million, 48% (10 of 21) reported that only company-furnished cars were used by their outside salesmen. An additional 14% (3 of 21) of these respondents reported that both salesman-owned and company-furnished cars were used. Thus 62% (13 of 21) of the responding companies in this size category reported furnishing company cars to at least some of their outside salesmen, and 38% (8 of 21) reported that all cars used by their outside salesmen were salesman-owned.

In the majority of the cases where a dual practice (use of both salesman-owned and company-furnished cars) was reported, most of the salesmen used company-furnished cars, e.g., one very large company appeared in this category although only 6% of its many salesmen exercised their option to use their own cars.

Where company-furnished cars were used by outside salesmen (including the companies which furnished company

cars to only some outside salesmen), the cars were predominantly leased by the company.

Of these responding companies which reported furnishing company cars to their outside salesmen, 61% (28 of 46) reported the use of leased cars only. An additional 11% (5 of 46) of these respondents reported that they leased some cars furnished to their outside salesmen and owned some. Only 28% (13 of 46) of these respondents reported that they owned all of such cars.

During personal interviews with executives of four of the five companies that reported a dual practice (some leased cars and some owned), it was reported that two companies were moving toward company-owned cars, one was moving toward all leased cars, and one was not moving intentionally in either direction. No executives of the fifth company were interviewed.

The incidence of the use of leased cars probably increased as company size measured by annual net sales increased. At least the incidence of this practice among the largest companies was significantly higher than it was among the smallest companies.

Of the responding companies which furnished cars to their outside salesmen and had annual net sales of \$20 million or more, 71% (12 of 17) reported furnishing

leased cars only. An additional 12% (2 of 17) reported furnishing both company-owned and leased cars. Thus 82% (14 of 17) of the respondents in this size category reported that at least some of the cars furnished to their outside salesmen were leased cars, and only 18% (3 of 17) reported that they furnished company-owned cars only.

Of the responding companies which furnished cars to their outside salesmen and had annual net sales of at least \$5 million but less than \$20 million, 63% (10 of 16) reported furnishing leased cars only. An additional 6% (1 of 16) reported furnishing both company-owned and leased cars. Thus, 69% (11 of 16) of the respondents in this size category reported that at least some of the cars furnished to their outside salesmen were leased cars, and 31% (5 of 16) reported that they furnished company-owned cars only.

Of the responding companies which furnished cars to their outside salesmen and had annual net sales of less than \$5 million, 46% (6 of 13) reported furnishing leased cars only. An additional 15% (2 of 13) reported furnishing both company-owned and leased cars. Thus, 62% (8 of 13) of the respondents in this size category reported that at least some of the cars furnished to their outside salesmen were leased cars, and 39% (5 of

13) reported that they furnished company-owned cars only.

Where company-furnished cars were used by outside salesmen (including the companies which furnished company cars to only some outside salesmen), 87% (40 of 46) of the responding companies reported that they paid all operating expenses for these cars. Typically, credit cards were issued to the outside salesmen and gas, oil, incidental maintenance, etc. were charged to the company by the salesmen. Of the remaining six companies, four reported paying monthly flat dollar allowances to their salesmen to cover operating expenses, and two companies reported paying a mileage allowance for operating expenses.

The incidence of the practice of paying all operating expenses where company-furnished cars were used by the outside salesmen probably was independent of company size as measured by annual net sales, although four of the six companies which reported arrangements other than the simple payment of all operating expenses for the cars furnished to outside salesmen also reported annual net sales of \$20 million or more. It should be noted, however, that even among the responding companies in this largest size category, 76% (13 of 17) simply paid all operating expenses of these company-furnished cars (see Table 5). If the payment of a flat dollar allowance or a mileage allowance actually

represented an attempt to control these operating expenses more closely, few of these companies were exhibiting much concern on this score.

None of the responding companies that furnished company cars to their outside salesmen (including those companies that furnished cars to only some salesmen) reported prohibiting the personal use of the company car by the salesman. However, various plans for recovering the cost of personal use of the company car from the salesman were reported.

These cost recovery plans ranged from simple "honor systems" which required the salesman to report and pay for personal travel in the company car, e.g., "the expense of personal use" and "gas and oil for personal travel," to more formal arrangements requiring either mileage payments (which were set at various levels by the companies from 2¢ per mile to 6¢ per mile) or flat dollar amount reimbursement, e.g., "\$12.50 per month plus vacation expenses." Many of these cost recovery plans were tax inspired, i.e., to prevent some portion of the value of the car from being classed as income to the salesman because of his personal use of the car. Such plans were tailored to satisfy Internal Revenue requirements rather than to recover fully the cost of personal use of the car by the salesman. Probably the majority of the companies with formal plans charged mileage.

It is clear that some "income" to the salesmen resulted from their personal use of the company cars, although the amount of such "income" varied among the companies and among the salesmen depending upon the amount of personal use the individual salesman made of his company-furnished car. It is also clear that where company cars were furnished to the salesmen the cost of business travel was borne by the company--completely by almost 9 out of 10 responding companies which furnished cars and to the extent of the allowances in the remaining six instances.

Where salesman-owned cars were used by the outside salesmen (including those companies where only some salesmen drove their own cars), the mechanics of the plans used to reimburse the salesman for the use of his car varied rather widely among the companies. Furthermore, all four commission plan companies were included in this category, and they generally acted differently from those companies which included a salary component in their compensation plans for outside salesmen.

Two of the commission plan companies did not reimburse their outside salesmen for the auto travel expenses they incurred, i.e., the salesmen paid their own auto travel expenses. The other two commission plan companies followed a dual practice with regard to these expenses. One of these dual practice commission plan companies paid an

outside salesmen a flat allowance of \$100 per month to cover auto travel expenses if his territory was a branch office territory, but he paid his own auto travel expenses if his territory was a head office city territory. The other one paid the salesman a flat allowance of \$45 per month plus a mileage allowance of 3.5¢ per mile, if his territory was a head office city territory, but branch office outside salesmen drove company-furnished cars for which all operating expenses were paid by the company. Branch office outside salesmen for this company were usually salaried employees.

The remaining nineteen companies where salesman-owned cars were used by the outside salesmen included a salary component in their compensation plans for outside salesmen. Eight of these were dual practice companies, i.e., some cars used by their outside salesmen were company-furnished, and eleven of these companies did not furnish company cars to any of their outside salesmen. No significant differences in practice were reported by these two kinds of respondents.

Of these respondents, 47% (9 of 19) paid the salesman a mileage allowance to reimburse him for the use of his car for business activities. The rate (cents per mile) paid varied substantially among the companies. Monthly flat dollar allowances were paid by 21% (4 of 19) of these respondents, and 32% (6 of 19) of these companies used a

combination plan, i.e., a monthly flat dollar allowance plus a mileage allowance for reimbursement.

In order to be able to compare the practice of reimbursing the salesman for the use of his own car with the practice of furnishing a company car, it was necessary to construct a model of the operation of reimbursement practices. Lacking specific information on travel rates (miles per month driven on business activity) it was necessary to make some assumptions with regard to operating expenses and vehicle replacement costs. These assumptions were:

1. Operating expenses for the kind of car typically used by these salesmen were estimated at \$55 per month for 1000 miles per month business travel rate, \$65 per month for 1500 miles per month travel rate, and \$75 per month for 2000 miles per month travel rate. These expenses included gas and oil, tire replacement, insurance, and routine maintenance and repair.
2. Replacement of the vehicle was estimated at every two years for business travel rates of 1000 and 1500 miles per month and every year for a business travel rate of 2000 miles per month.
3. Business use of the salesman's car was estimated at approximately two-thirds of total use, personal use at one-third of total use. As will be discussed later, this turned out to be a non-critical assumption.

4. It was estimated that reimbursement above operating expense would accomplish replacement of the vehicle every two years if it equalled \$75 per month (\$1800 in two years) and would accomplish replacement of the vehicle every year if it equalled \$90 per month (\$1080 in one year). Two-thirds of these amounts are \$50 per month and \$60 per month, respectively.

No claim is made as to the level of accuracy of these estimates. Obviously, operating expenses will vary considerably among different geographic areas, for example, and the cost of replacing a vehicle will be influenced by the bargaining position and skill of the individual salesman. However, it is suggested that these estimates are accurate enough to evaluate the plans used for reimbursement as to their general effectiveness in defraying the cost to the salesman for the use of his car for business travel, and for comparing the general effectiveness of these reimbursement practices with the practice of furnishing a company car to the salesman. A weakness of this approach is the lack of information as to the intent of the reimbursement plan, i.e., was the plan intended to reimburse the salesman completely for the use of his car, or was its intent to reimburse him only for actual operating expenses plus one-half or two-thirds of the vehicle replacement cost to reflect some personal use? However, the model is useful in spite of this weakness.

Certain general statements can be made about the three reimbursement practices that were used by these nineteen respondents.

For instance, the flat dollar amount allowance method, once established for a given territory, probably minimizes bookkeeping, but it is rather inflexible unless the mileage driven varies very little from month to month. Furthermore, it invites the charge of unfairness among territories, especially when it is varied in amount by territory as was the practice usually followed.

The mileage allowance method requires some bookkeeping, but it is easily understood and eliminates the charge of unfairness mentioned above. However, because it attempts to cover fixed costs which are time related (vehicle replacement cost and, probably, insurance expense) and variable costs which are mileage related (gas, oil, maintenance and repair, tire replacement, etc.), it can cause difficulties. This method, assuming that a given amount of the fixed costs are to be paid by the company, will overpay at some travel rates (miles driven per month) and underpay at other travel rates. Two of the nine respondents that used this method used a graduated scale of reimbursement--10¢ per mile for the first 1000 miles and 6¢ to 8¢ for additional mileage in stipulated brackets. This practice, of course, minimizes the overpayment and underpayment weakness of this method.

The combination method--a flat amount allowance plus a mileage allowance meets the conceptual weaknesses of the other two methods. It recognizes the presence of fixed (time related) and variable (mileage related) costs and allows reimbursement related to a preselected level with regard to each kind of cost.

Seven of the nineteen companies discussed above (those which included a salary component in their compensation plans for outside salesmen) had annual net sales of \$10 million or more. Of the seven: four used a combination plan of reimbursement to the salesman for the use of his car, two used mileage plans with reimbursement in the range of 5¢ to 9¢ per mile, and one used a flat amount allowance.

The remaining twelve of these nineteen companies had annual net sales of less than \$10 million. Only one of these respondents used a combination plan for all of its outside salesmen, but one other company used a combination plan for some of its salesmen and a flat amount allowance for the rest. Seven of these companies used mileage allowance plans: three reimbursed in the range of 5¢ to 9¢ per mile, two in the range of 10¢ to 14¢ per mile, and two with graduated mileage allowances of 10¢ per mile for the first 1000 miles and 6¢ to 8¢ per mile for additional mileage in stipulated brackets.

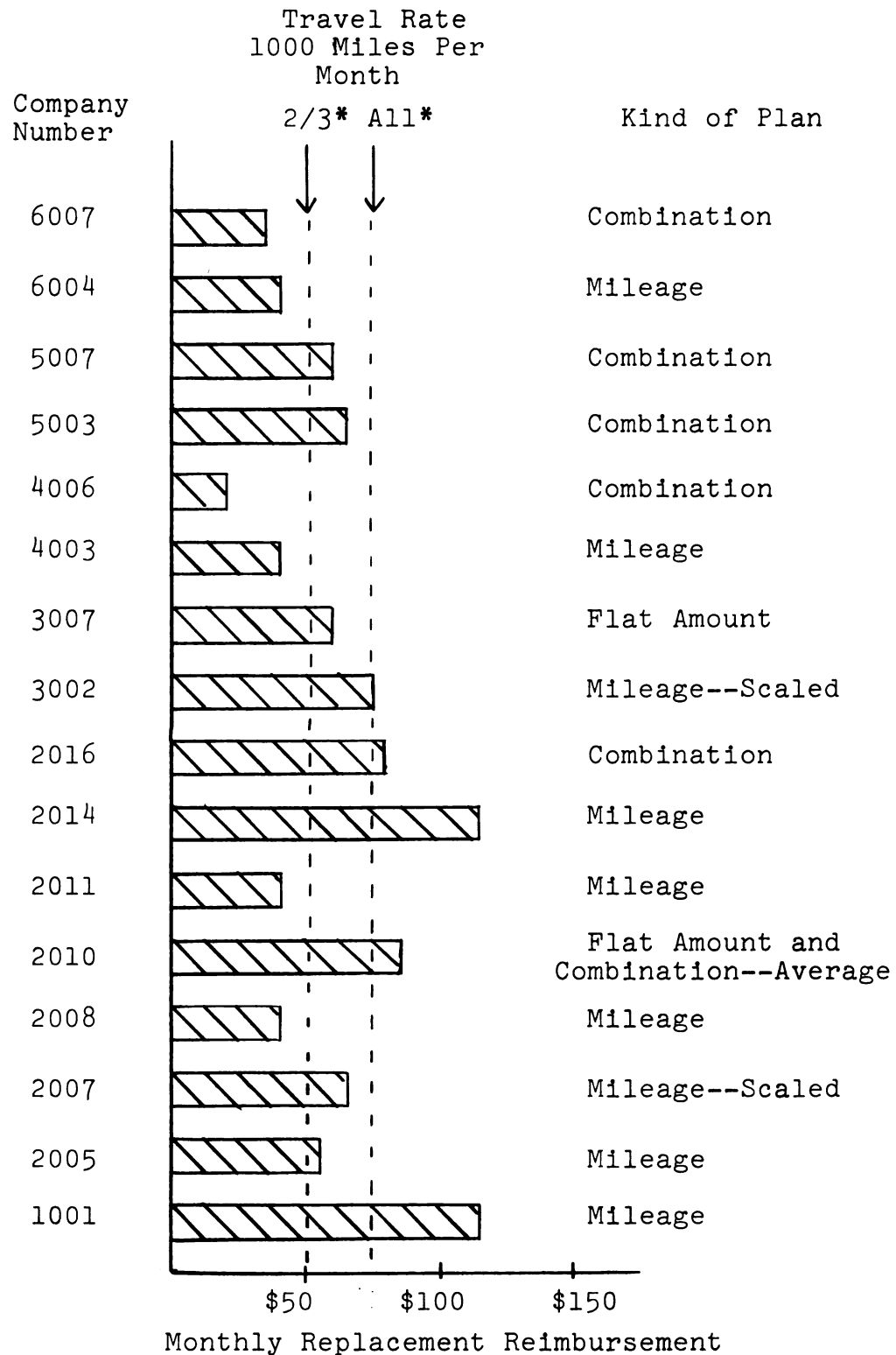
Sixteen of the nineteen respondents furnished enough information about their reimbursement plans to allow calculation of the level of reimbursement at various travel

rates. The reimbursement level above estimated operating expenses (including insurance cost which could be allocated at a given travel rate) is depicted graphically in Figures 1-a, 1-b, and 1-c. This reimbursement above estimated operating expenses will be called "replacement reimbursement" hereafter.

At a business travel rate of 1000 miles per month the replacement reimbursement of 56% (9 of 16) of the plans would defray two-thirds or more of the cost of vehicle replacement every two years under the assumptions of the model,¹ and in 19% (3 of 16) of the plans it would defray all of this cost. Of these responding companies six reported annual net sales of \$10 million or more. Two of the six qualified at the two-thirds or more level of replacement cost and none of them qualified at the 100% level of replacement. Of these responding companies ten reported annual net sales of less than \$10 million. Seven of the ten qualified at the two-thirds or more level of replacement cost, and three qualified at the 100% level of replacement cost (Figure 1-a).

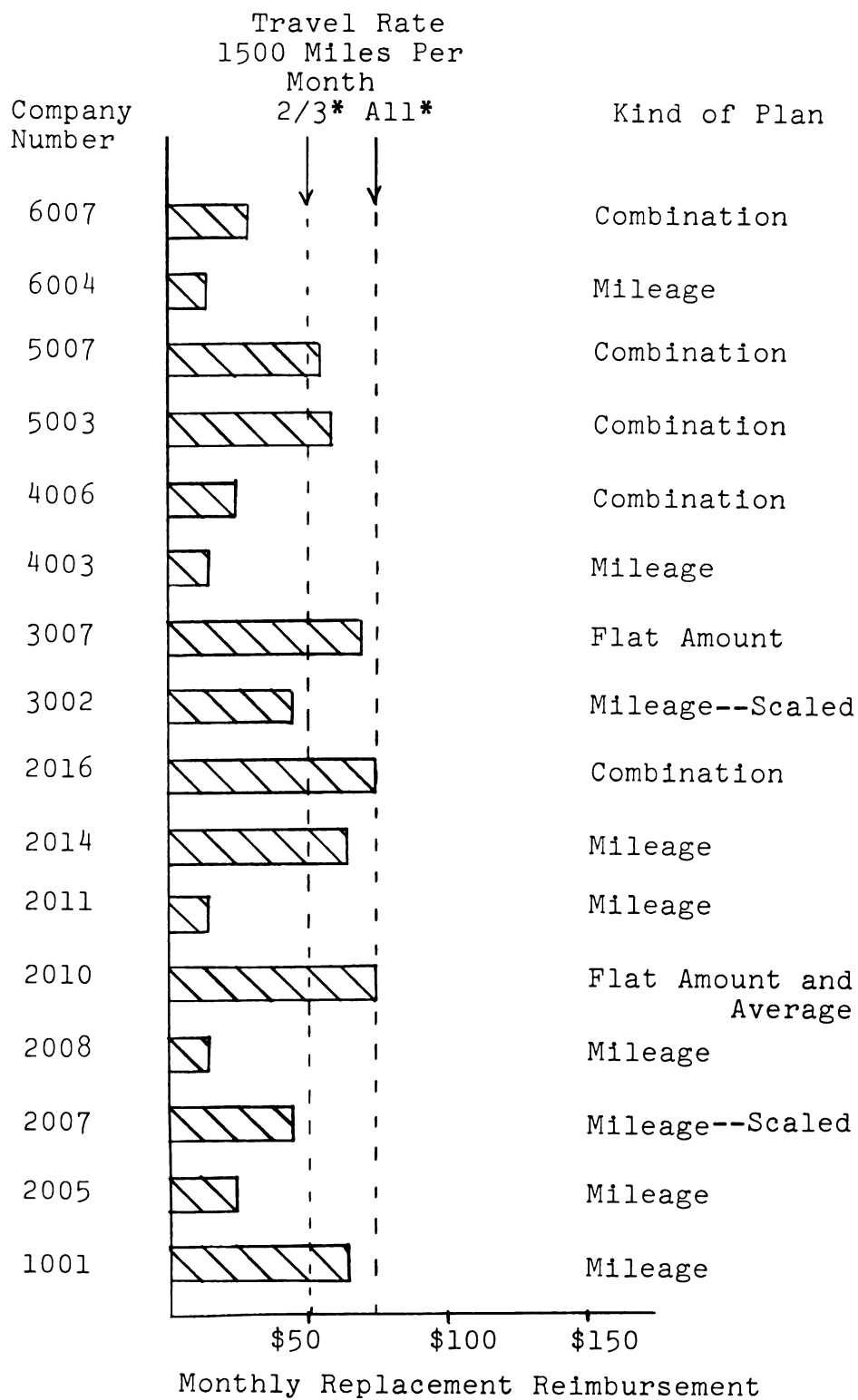
At a business travel rate of 1500 miles per month the replacement reimbursement of 63% (10 of 16) of the plans would defray two-thirds or more of the cost of vehicle replacement every two years under the assumptions of the model, and in 31% (5 of 16) of the plans it would defray all of this cost. Again, at the two-thirds or more level of defrayment, two of the six respondents that reported

¹If the replacement reimbursement of the plan came within \$5 per month of the assumed monthly vehicle replacement cost, it was counted as qualifying. This was a concession to the crudity of the model.



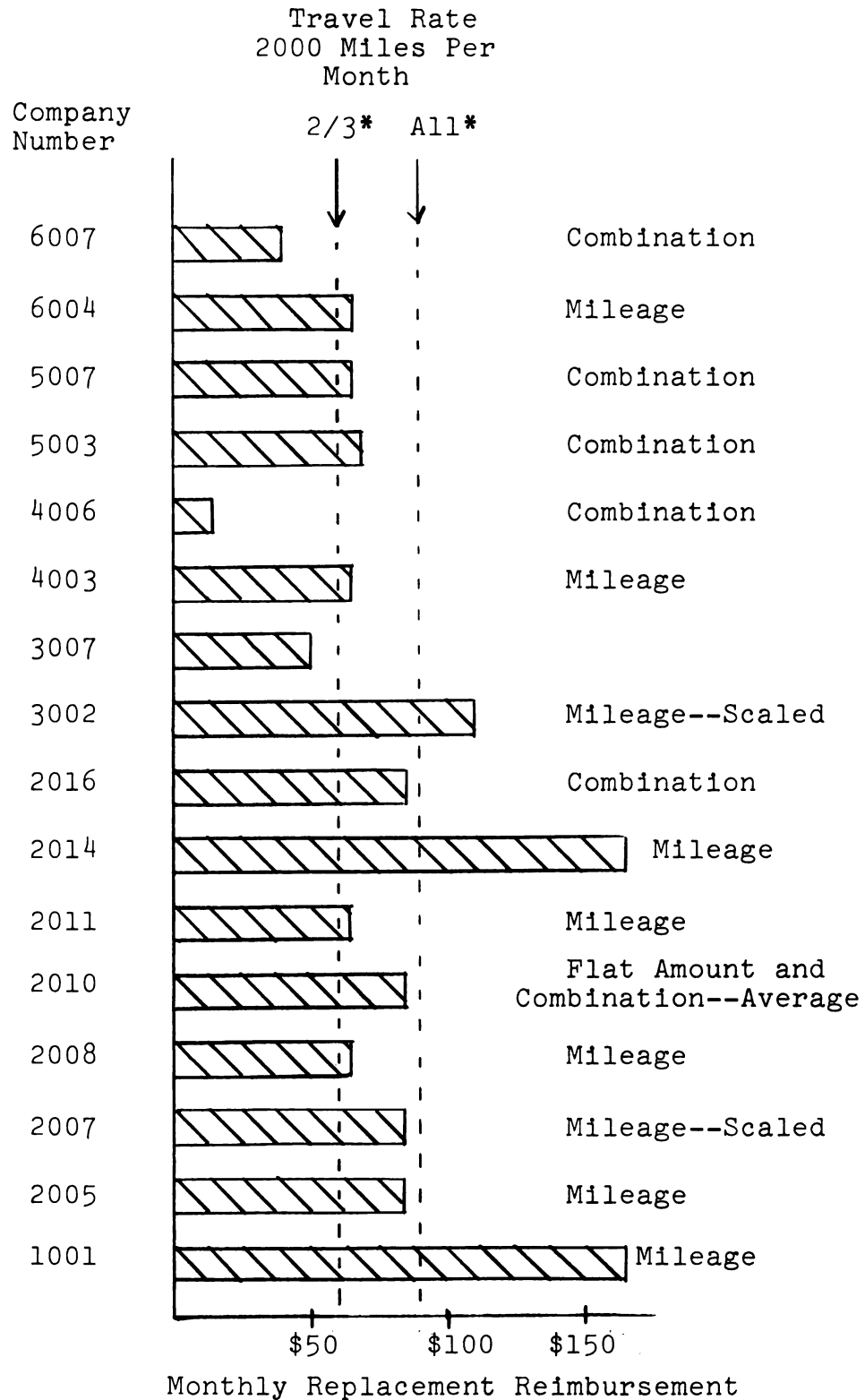
*Note: Of the cost of vehicle replacement every two years.

Figure 1a.--Replacement reimbursement for the use of sales-man owned cars: 1000 Miles Per Month.



*Note: Of the cost of vehicle replacement every two years.

Figure 1b.--Replacement reimbursement for the use of sales-man owned cars: 1500 Miles Per Month.



*Note: Of the cost of vehicle replacement every year.

Figure 1c.--Replacement reimbursement for the use of sales-man owned cars: 2000 Miles Per Month.

annual net sales of \$10 million or more qualified. Eight of the ten respondents that reported annual net sales of less than \$10 million qualified at this level. At the 100% defrayment level, all five qualifying companies were from the group of respondents that reported annual net sales of less than \$10 million (Figure 1-b).

At a business travel rate of 2000 miles per month the replacement reimbursement of 81% (13 of 16) of the plans would defray two-thirds or more of the cost of vehicle replacement every year under the assumptions of the model, and in 44% (7 of 16) of the plans it would defray all of this cost. At this travel rate four of the six respondents with annual net sales of \$10 million or more and nine of the ten respondents with annual net sales of less than \$10 million qualified at the two-thirds or more defrayment level. At the 100% defrayment level, all seven qualifying companies were from the group of respondents that reported annual net sales of less than \$10 million (Figure 1-c).

It was estimated when building the model used above that business mileage represented two-thirds of the total mileage that the salesman traveled in his car. This assumption turned out to be non-critical. At the business travel rate of 1000 miles per month, if business mileage had been estimated at three-fourths instead of two-thirds of total mileage driven, only two of the respondents that qualified at the lower defrayment criterion and reported annual net sales of less than \$10 million would not have

qualified also at the higher (three-quarters or more) replacement cost defrayment level. At the 1500 and 2000 miles per month business travel rates, no changes in qualification would have occurred.

It is clear that the reimbursement practices for these expenses of the smaller respondents (annual net sales of less than \$10 million) were more liberal than those of the larger ones. This liberality probably was a function of the mechanics of the different reimbursement plans chosen by the respondents in these respective size categories. Whether or not this difference in liberality between the larger and smaller respondents was a deliberate policy difference was not determined.

If the ten respondents that "qualified," as discussed above, at the 1500 miles per month business travel rate are added to the thirty-seven respondents that furnished only company cars to their outside salesmen, nearly four out of five responding companies, in effect, furnished cars to their outside salesmen for personal use for which the salesmen paid only a nominal proportion of the replacement cost. Furthermore, if the seven respondents that reported partial use of company cars but reported reimbursement plans that did not "qualify" are added, nine out of ten respondents, in effect, furnished such cars to at least some of their outside salesmen.

Summary--Travel Expenses

Travel expenses incurred by outside salesmen in this industry were almost entirely automobile travel expenses. These expenses could be categorized as direct operating expenses and vehicle replacement expense.

Only two of the sixty responding companies paid none of the direct operating expenses incurred by their salesmen because of automobile travel in their territories. One other respondent reported that some salesmen paid their own travel expenses and some were reimbursed for automobile travel expenses at a level that exceeded direct operating expenses. All three of these respondents were commission plan companies. Only four responding companies reported compensating their outside salesmen with commission only. The fourth commission plan company paid direct operating expenses of automobile travel for their salesmen or reimbursed them for such expenses. The remaining fifty-six companies, which included a salary component in their compensation plans for outside salesmen, paid direct operating expenses of automobile travel for their salesmen or reimbursed them for such expenses.

About three out of five responding companies furnished company cars to all of their outside salesmen, i.e., paid the cost of vehicle replacement directly. Almost four out of five respondents furnished company cars to at least some of their outside salesmen, including one of the commission plan companies. The incidence of the practice

of furnishing company cars increased as the size of the responding company increased, as measured by annual net sales. Only one of eighteen companies that reported annual net sales of \$20 million or more did not furnish company cars to any of their outside salesmen.

Almost three out of four responding companies that furnished company cars to their outside salesmen leased the cars. Here, too, the incidence of the practice of leasing cars tended to increase as the size of the responding company increased. Only three of the seventeen responding companies which furnished company cars to their outside salesmen and reported annual net sales of \$20 million or more furnished only company owned cars.

Of the twenty-three respondents which reported that at least some of their outside salesmen drove their own cars, nineteen were companies which included a salary component in their compensation plans for these salesmen. Of these nineteen respondents, sixteen furnished sufficiently detailed information to permit calculation of the automobile expense reimbursement allowances that would be paid to their outside salesmen for selected business travel rates. These data are shown graphically in Figures 1-a, 1-b, and 1-c.

More than half of these reimbursement plans resulted in allowances that compensated the salesmen for estimated direct operating expenses plus at least two-thirds of the

estimated vehicle replacement cost. All but two of these reimbursement plans that qualified at the two-thirds or more defrayment level would also have qualified if the criterion had been three-quarters of the estimated vehicle replacement cost.

The general practice among the respondents which reported furnishing company cars to their outside salesmen was to allow personal use of the car, but to require reimbursement to the company for this personal use to some extent. This reimbursement requirement varied from nominal "honor systems" requiring the reporting of and payment for such use in an informal manner to formal plans requiring the payment of probably 15% to 25% of the replacement or leasing cost of the vehicle.

If it is recognized that sufficiently liberal reimbursement plans for the use of salesman-owned cars produce the same financial result to the salesman as furnishing him with a company car, it is possible to estimate that the salesmen of probably four out of five of the responding companies drove cars for personal travel for which they paid a relatively nominal amount of the replacement cost. Some of the salesmen of nine out of ten of the responding companies probably drove cars for which this was true.

It is unlikely that practices among the companies in this industry with regard to travel expenses for outside salesmen differed in effectiveness during the period of this study enough to provide the differential advantage

that might operate to attract a disproportionate number of the more proficient salesmen to a particular company.

Other Travel Expenses.--With the exception of the two commission plan companies which did not reimburse their outside salesmen for travel expenses which they incurred, all of the responding companies reported that all other travel expenses such as railroad and airplane fares, lodging, meals, tips, laundry charges, etc. were paid by the company. However, these expenses were incurred infrequently by these salesmen.

Customer Good Will Expenses

Entertainment Expenses.--Expenses incurred by outside salesmen in the metals service center industry for lunches, dinners, and incidental entertainment were found to be subjected to close scrutiny and control by management, but the large majority of the responding companies reported that such scrutiny and control was ex post facto.

Of the responding companies, 72% (43 of 60) reported that entertainment expenditures were reviewed, usually on a monthly basis, by management after they had been made. The appropriateness of an expenditure was judged and the salesmen was advised to modify his practices of customer entertainment, if such action seemed to management to be desirable. Sometimes general rules were laid down, such as: "lunches, no restriction; dinner and evening entertainment, prior approval" or "prior approval required for expenditures over \$25."

Budgets for entertainment expenses at the salesman or territorial level were reported by only 25% (15 of 60) of the responding companies. Flat dollar amount budgets were reported by eleven of these fifteen respondents, two respondents reported that the budget was expressed as a percentage of dollar sales volume generated in each territory, and two respondents reported that the budget was expressed as a percentage of gross profit generated in each territory.

Two of the four commission plan respondents reported that their outside salesmen paid their own entertainment expenses and were not reimbursed. The remaining two commission plan respondents paid for entertainment expenses incurred by their outside salesmen or reimbursed them for such expenditures. One of these companies was included in the group of responding companies which exercised only ex post facto control over such expenditures. The other was included among those respondents that expressed the budget for entertainment expenses as a percentage of dollar sales volume.

One respondent that compensated its outside salesmen on a salary plus commission plus bonus basis and assigned each salesman a flat dollar amount budget reported that, when a salesman's expenditures for entertainment exceeded the budget for these expenses allowed him, the excess was deducted from his commission.

Fixed Compensation

Salary Component Plans

Of the responding companies, 93% (56 of 60) included a salary component in their compensation plans for their outside salesmen. Only 12% (7 of 60) of the respondents compensated their outside salesmen entirely by salary. No significant difference in this practice among companies in the different size categories was apparent (see Table 6). The remaining 81% (49 of 60) of the responding companies reported using a salary component in their compensation plans for these salesmen, but also included a bonus component, a commission component, or both in their plans. These plans are analyzed under Incentive Compensation later in this chapter.

Draw Accounts

Of the four responding companies that did not include a salary component in their compensation plans for their outside salesmen, two reported that they allowed these salesmen to draw against future commissions up to stipulated monthly amounts. However, both of these respondents also reported that any debit balance that existed at the close of a fiscal year, i.e., an overdraft against commissions, was "forgiven." In such cases the term "draw account" is a synonym for "salary." Both of these respondents reported that occasions for "forgiveness" were very infrequent. The other two commission plan respondents compensated their

outside salesmen with "straight commission" plans and did not allow these salesmen to draw against future commissions.

Incentive Compensation

Of the responding companies, 88% (53 of 60) reported an incentive component in their compensation plans for outside salesmen, including the four commission plan respondents.

The incentive components that these respondents used were classified as either commission plans or bonus plans. Compensation plans using both commission and bonus components were reported by 20% (12 of 60) of the responding companies.

The primary characteristic that was the basis for the categorization was the directness with which the incentive was associated with an objective measure of the performance of an outside salesman. These measures of performance were dollar or unit sales volume and dollar profit, as variously defined by the individual company, that resulted from that sales volume. The several profit measures that were used will be discussed under Commission Plans. Incentive components of these outside salesman compensation plans which were classified as commission plans were more directly associated with these objective measures of performance than were those that were classified as bonus plans. Many of the latter plans were predicated upon performance criteria for the salesmen that required subjective management

evaluation. This characteristic was almost entirely absent from the commission plans.

An incentive component of a compensation plan was classified as a commission plan if the incentive:

1. was determined by applying a percentage rate (or a proportion), or a schedule thereof, directly to an objective measure of the salesman's performance, such as dollar sales volume or dollar profit volume, or
2. was determined by assigning a money value to "points" accumulated according to a schedule of point values designed to differentiate among products or product groups, usually as to their relative profitability, or
3. was determined by applying a percentage rate (or a proportion), or a schedule thereof, to a calculated measure of performance arrived at by differentially weighting actual sales, usually as to their relative profitability, or
4. was determined by applying a schedule of dollar incentive unit values to sales expressed in physical units, such as tons.

An incentive component of a compensation plan was classified as a bonus plan if the incentive payment:

1. was determined by allocating to the individual salesman a share of a pool, the size of which was

set by a formula for sharing profit (either income statement net profit or gross profit) with the outside salesmen as a group, or by management fiat, or

2. was determined by applying a percentage rate, or a schedule of rates, to the individual salesman's salary or commissions according to a schedule of stipulated levels of attainment of a gross profit quota, or
3. was determined by applying a percentage rate, or a schedule of rates, to the individual salesman's salary or commissions according to the number of individual product or product group quotas attained, i.e., a product-mix criterion.

Most classification schemes are subject to the same general criticism--that many of the specific item assignments to a particular category are more or less arbitrary. This classification scheme is no exception. The classification of some plans were borderline decisions.

Both the point system and the dollar sales weighting system introduced an element of flexibility into commission incentives that will be discussed later. In general, this element of flexibility enabled company management to depart from the rigorous framework that the use of the actual differential profitability factors of products or product groups imposed upon the incentive plan.

The incidence of the use of the different kinds of compensation plans for outside salesmen is summarized in Table 6.

In general, where commission plans were used in this industry to provide incentive in the compensation plans for outside salesmen, the incentive payment, expressed as a proportion of total cash compensation, was higher than where bonus plans were used.

Bonus Plans

The most commonly used compensation plan for outside salesmen among the responding companies was the salary plus bonus plan. Of the respondents, 35% (21 of 60) reported using this plan.

The incidence of salary plus bonus compensation plans decreased as company size increased, as measured by annual net sales.

Of the responding companies which had annual net sales of \$20 million or more, only 22% (4 of 18) of the respondents reported using salary plus bonus plans to compensate outside salesmen. However, among the responding companies which had annual net sales of less than \$5 million, 52% (11 of 21) of the respondents reported using this plan (Table 6).

Of the responding companies, 55% (33 of 60) used a bonus component in their compensation plans for outside salesmen, when those respondents which reported using both

TABLE 6.--Compensation methods in the Metal Service Center Industry, 1964 (Outside Salesmen).

1964 Annual Net Sales							
All Responding Companies				Less Than \$5 Million		\$5 Million But Not \$20 Million	
Cos.	%	Cos.	%	Cos.	%	Cos.	%
				\$20 Million Or More			
Cos.	%	Cos.	%	Cos.	%	Cos.	%
Salary Only	7	12	5	3	14	3	17
Salary-Bonus	21	35	52	6	29	4	22
Salary-Commission	16	27	14	5	24	8	44
Salary-Both	12	20	24	4	19	3	17
Commission Only	4	7	5	3	14	0	0
Total	60	101	100	21	100	18	100
Commission Components:							
On \$ or Units	22	69	67	9	75	7	64
On Profit Measure	10	31	33	3	25	4	36
Total	32	100	100	12	100	11	100
Profit-Oriented							
Commission on First	19	59	67	6	50	7	64
\$ Sales or Profit	17	53	55	5	67	4	36
Bonus Components:							
Profit Sharing	11	33	37	3	30	2	29
Management Flat	18	55	63	5	50	3	43
Other	4	12	0	2	20	2	29
Total	33	100	100	10	100	7	101
Profit-Oriented Plans							
Total	17	52	56	4	40	4	57
	30	50	53	10	48	9	50

NOTE: Totals may not add to 100% because of rounding.

a bonus component and a commission component in their plans were included.

It has been pointed out that the bonus plans were less directly associated with objective measures of the salesman's performance than were the commission plans. These bonus plans could be further classified according to the methods used to determine the individual salesman's bonus.

Almost nine out of ten (29 of 33) of these respondents first determined a group bonus--the total amount to be paid to all of the outside salesmen. The individual salesman's bonus was then determined by one of several allocation methods.

Of the respondents that reported bonus plans, 33% (11 of 33) determined the group bonus according to a profit sharing formula. In some cases this bonus was part of a formal profit-sharing pension plan--part of the profit share for the outside salesmen was paid into the pension trust fund and part into this bonus pool. In other cases the pool was created by an informal allocation of a portion of either total company gross profit or income statement net profit before taxes.

Another 55% (18 of 33) of these respondents determined the group bonus pool by management fiat.

The remaining 12% (4 of 33) of these respondents did not use the pool arrangement. Two of them applied a schedule of percentage rates to the salesman's salary according

to a schedule of stipulated levels of attainment of a gross profit quota to determine the individual salesman's bonus. The other two used product-mix formulae to determine the individual salesman's bonus.

Of the twenty-nine respondents that used a pool arrangement in their bonus plans, nine of them allocated to the individual salesman a share of the pool according to formulae based on employment factors--principally salary and/or years of service, ten of them allocated shares of the pool according to a subjective management evaluation of the salesman's performance, and seven of them used a combination of these methods to allocate individual shares. The remaining three of these respondents allocated shares to individuals according to the profitability of their territories. Gross profit was used in two cases and gross profit less territorial sales expenses in the other case.

Of the thirty-three bonus incentive plans reported by the responding companies, seventeen were related in some way to a profitability measure. However, of the eleven profit-sharing plans, only one was allocated on the basis of a profitability measure. Two of the management fiat plans were allocated on the basis of a profitability measure. Of the four plans which provided for direct determination of the individual salesman's bonus, two were based on gross profit but the incentive was expressed as a percentage of salary. The remaining two, although gross profit was

involved, determined the bonus on the basis of attainment of several product or product group quotas, i.e., product-mix.

Commission Plans

Of the responding companies, 27% (16 of 60) reported the use of a salary plus commission plan for compensating their outside salesmen.

The incidence of these plans increased as company size increased, as measured by annual net sales (Table 6).

Of the respondents which had annual net sales of \$20 million or more, 44% (8 of 18) reported the use of this kind of plan for compensating their outside salesmen. However, among the respondents which had annual net sales of less than \$5 million, only 14% (3 of 21) reported the use of this kind of plan.

If the 20% (12 of 60) of the responding companies which reported the use of a salary plus commission plus bonus plan and the 7% (4 of 60) commission only companies are included, 53% (32 of 60) of the respondents reported the use of a commission component in their compensation plans for their outside salesmen.

The incidence of a commission component in compensation plans for outside salesmen did not change significantly with change in company size, as measured by annual net sales. The smaller companies used salary plus commission plus bonus plans somewhat more frequently than

the larger companies did and this tendency offset the reported tendency for larger companies to use salary plus commission plans. As was noted in the previous section on Bonus Plans, the smaller companies were significantly more likely to include a bonus component in their compensation plans for these salesmen than were the larger companies.

Of the thirty-two responding companies that reported a commission component in their compensation plans for these salesmen, two out of three (22 of 32) reported that the commission component of their plans was based on dollar or unit sales. However, nine of these twenty-two plans included in the determination of the incentives payment in some manner a differential product or product group profitability factor.

The simplest approach used to introduce differential product or product group profitability into the plan was to vary the commission rate to reflect comparative profitability. Of these twenty-two respondents which reported dollar or unit sales based commission plans, twelve used varying commission rates. Seven of them reported that the variation was based on differential product or product group profitability. The remaining five did not identify the basis for the variation in commission rate.

A similar approach assigned different "point" values to different product or product groups on the basis of comparative profitability. The incentive payment made to the individual salesman was then calculated by assigning

a money value to his accumulated point total at a uniform rate per point.

A third approach used a uniform commission rate but applied this rate to a hypothetical sales volume. This hypothetical measure of performance was calculated by differentially weighting the actual dollar sales in accordance with a schedule of weights, for example from 0.8 to 1.2, depending on the profitability level of the product or product group category sold.

Ten of the thirty-two respondents that reported using commission components in their compensation plans for outside salesmen based their commission incentive directly upon some measure of profitability. The most commonly used measure was either gross margin (expressed in dollars) of a product or product group; or gross profit, which was defined as price (gross revenue) minus cost of material including freight-in. Although some of these respondents reported that their plans were based on product or product group profitability, the procedure used to arrive at the individual salesman's incentive payment involved the summation of the profit generated by all of the individual sales made in his territory and the application of a percentage rate, or a proportion, or a schedule thereof, to this total. This kind of incentive plan probably should be described as a territorial profitability plan. Involved in the operation of this kind of plan were the concepts of product profitability, order size profitability, and

customer profitability. Two of these respondents reported that the plans they used were of this kind, but the profitability measure used was net profitability. The net profitability measure involved allocating fixed expenses either to territories or to products or to product groups.

The incidence of the use of a profitability measure directly in commission incentive plans did not appear to vary significantly with variation in company size, as measured by annual net sales.

The respondents which reported the use of a commission component in their compensation plans for outside salesmen were about equally divided in their preference for paying commission beginning with the first dollar of sales or profit versus paying commission only on the excess above a dollar sales or profit quota. Seventeen of these respondents reported the former practice and fifteen reported the latter, respectively. The largest responding companies appeared to show a tendency to use quotas more frequently than the smaller ones did, but the sub-sample sizes were very small and the significance of this tendency is subject to considerable doubt.

Where quotas were used in these commission incentive plans the interviews held with company executives disclosed that the quotas frequently turned out to be the level of sales or profit that would generate, when the proper commission rate was applied, an amount of commission equal to the salesman's salary. Sometimes this characteristic of

the plan was clearly indicated in the written description of the plan that was given to the salesman, and sometimes it was not.

Of the thirty-two commission incentive plans reported by the responding companies, 59% (19 of 32) were more or less directly based on comparative product or product group profitability. The incidence of this characteristic of these plans did not appear to vary with variation in company size, as measured by annual net sales.

Summary of Incentive Compensation

Only 12% (7 of 60) of the responding companies used straight salary to compensate their outside salesmen. Thus, nearly nine out of ten of the respondents used an incentive component (commission, bonus, or both) in their compensation plans for these salesmen.

The smaller companies were significantly more likely to use salary plus bonus plans as incentives than were the larger companies.

The larger companies tended to use salary plus commission plans as incentives more frequently than did the smaller companies.

Although various approaches to incentive compensation were used by these respondents, the commission plans used were more directly related to objective measures of salesman performance, such as dollar sales and dollar profit generated by sales, than were the bonus plans.

One-half of the respondent companies reported outside salesman compensation plans that were profit-oriented to some degree. Incidence of this characteristic did not vary significantly with company size.

CHAPTER 4

PATTERNS OF COMPENSATION OF INSIDE SALESMEN IN THE STEEL SERVICE CENTER INDUSTRY

In this industry the primary demand creating force is the outside salesman. He seeks out potential buyers, negotiates the sale, and services the customer after the purchase is delivered. The inside (or telephone) salesman usually accepts the actual order, arranges for procuring the necessary material to fill the order, and follows the order through the warehouse until it is delivered to the customer.

In theory the inside salesman and the outside salesman work as a team. The interviews that were held with executives of the companies which comprised the sample¹ for this study revealed an obstacle which prevented the attainment of this theoretically desirable cooperation.

Only three of the responding companies reported that inside salesmen were assigned territories coinciding with those serviced by one or more outside salesman. A great many telephone calls are handled by the inside salesman

¹Executives from fifty-three of the sixty companies which comprised the sample were interviewed.

and most of the executives interviewed were skeptical of the practicality of any system designed to channel these calls to specific inside salesmen on a territorial basis. Many reported trials of such systems and subsequent abandonment as unworkable.

Because of the difficulty, if not impossibility, of assigning territorial responsibility to inside salesmen, individual incentive compensation for these salesmen was difficult to design so that it would be equitable. It is not surprising, then, to find the great majority of incentive plans for inside salesmen in this industry were pooling arrangements of commission or bonus from which the individual was allotted a share on some relatively subjective basis or by means of a formula based on factors of employment such as salary and/or years of service.

Fringe Benefits

All sixty responding companies reported that inside salesmen were offered the same insurance and pension benefits as outside salesmen. Because these benefits were usually related to income, the level of benefits for inside salesmen was not necessarily the same as for outside salesmen. However, company participation in the cost of these benefits followed the same practice as that for outside salesmen in the same company.

Expenses

In-person contact with customers was the responsibility of the outside salesmen of a company in this industry. Consequently, the outside salesmen incurred travel and customer good will expenses, such as entertainment expense, while inside salesmen customarily did not. If and when an inside salesman did incur these expenses they were paid by his company.

Incentive Components

The great majority of the responding companies which reported the use of incentive components in their compensation plans for inside salesmen used bonus plans.

Of the responding companies, 53% (32 of 60) reported the use of a bonus component in their compensation plans for these salesmen, including two companies that reported salary plus commission plus bonus arrangements. A bonus plan for incentive compensation for these salesmen was reported more frequently by the smaller companies than by the larger ones (Table 7).

Of those respondents which had annual net sales of \$20 million or more, 33% (6 of 18) reported using a bonus component in their compensation plans for inside salesmen.

Of those respondents which had annual net sales of at least \$5 million but less than \$20 million, 48% (10 of 21) reported using a bonus component in their compensation plans for these salesmen.

TABLE 7.--Compensation methods in the Metal Service Center Industry, 1964 (Inside Salesmen).

	1964 Annual Net Sales							
	All		Less Than		\$5 Million		\$20 Million	
	Cos.	%	Cos.	%	Cos.	%	Cos.	%
Salary Only	22	37	3	14	9	43	10	56 ^a
Salary-Bonus	30	50	16	76	9	43	5	28
Salary-Commission	6	10	2	10	2	10	2	11
Salary-Both	2	3	NONE	NONE	1	5	1	6
Commission Only	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Total	60	100	21	100	21	101	18	101
Commission Components:								
Pool Arrangement								
On \$ or Units	3		1	NONE	1		1	
On Gross Profit	3			NONE	1		2	
New Customer Sale	1			NONE	1		NONE	
Individual								
Territory Profit ^b	1		1	NONE	NONE		NONE	
Total	8		2		3		3	
Bonus Components:								
Pool Arrangement								
Profit Sharing	13	41	9	56	2	20	2	33
Management Fiat	13	41	7	44	4	40	2	33
\$ Sales Quota	2	6	NONE	NONE	1	10	1	17
OS Incentive	2	6	NONE	NONE	2	20	NONE	
Individual								
GP above Salary	1	3	NONE	NONE	NONE		1	17
Number Lines	1	3	NONE	NONE	1	10	NONE	
Total	32	100	16	100	10	100	6	100

^aOne company--salary only 16 salesmen, salary-bonus 12 salesmen.^bCombination of factors--Lines, \$ Volume, and Net Profitability.^cTotals may not add to 100% because of rounding.

Of those respondents which had annual net sales of less than \$5 million, 76% (16 of 21) reported a bonus component in their compensation plans for these salesmen.

The greater popularity of the bonus incentive among the smallest companies suggests that they found the details of operating such a plan less onerous than the larger companies did. The median number of inside salesmen employed by the respondents that reported annual net sales of less than \$5 million was six as against twenty-four and forty-five, respectively, for the other two size categories in order of ascending size. However, the three respondents which reported the use of assigned territories for inside salesmen occurred one in each of the three size categories.

Only 13% (8 of 60) of the responding companies reported using a commission component in their compensation plans for all of their inside salesmen, including two respondents that used both a commission component and a bonus component. One company reported a dual practice--some of their inside salesmen were compensated by salary only and some by salary plus commission.

Bonus Plans

Of the thirty-two respondents which reported the use of bonus components in their compensation plans for inside salesmen, including two companies that used salary plus commission plus bonus plans, all but two first determined the total bonus to be paid, i.e., the pool, by one of several

methods. Subsequently, the individual was allocated a share of this pool in some fashion that frequently involved a subjective evaluation of the individual salesman's performance.

It was reported by 42% (13 of 30) of these respondents that the pool was created by means of a profit sharing formula applied to total company profit. Ten respondents reported that their formulae were based on gross profit (price minus cost of material and freight-in) and three reported that their formulae were based on income statement net profit before taxes.

It was reported by 42% (13 of 30) of these respondents that the pool was created by management decision, not necessarily related closely to the profitability of the company in that fiscal period.

Of the remaining four respondents which reported pool arrangements, two reported using net sales or net sales plus product mix to determine the size of the pool, and two reported using the incentive payments to outside salesmen as the base with which to determine the size of the pool for inside salesmen.

The two respondents that determined the amount of the individual inside salesman's bonus from some direct measure of his individual performance used the number of lines written and gross territorial profit, respectively.

All of the thirty respondents that used a pool type bonus incentive plan reported that the allocation of the

individual salesman's share of the bonus pool was accomplished in one of two ways. One method was the use of a formula involving employment factors such as salary and/or years of service. The other method was subjective management judgment of the individual's contribution to the objectives of the firm. Some respondents reported using a combination of both methods.

Specifically, of these respondents, 30% (9 of 30) reported using formulae based on employment factors, the majority of which were based on the ratio of the individual's salary to total salaries paid to inside salesmen; 53% (16 of 30) reported that the individual's bonus was allocated by management judgment of the individual's performance; and 17% (5 of 30) reported using a combination of both methods. Of the sixteen respondents that reported allocation by management judgment of individual performance, four simply divided the pool equally among the participants.

Commission Plans

Of the eight respondents which reported the use of commission components in their compensation plans for inside salesmen (including two companies that used salary plus commission plus bonus plans), all but one used a pool arrangement similar to the pool described under Bonus Plans, except that the pool was determined by applying a percentage commission rate, or a proportion, to the total company sales or gross profit (price minus cost of material and freight in)

or used the total outside salesmen's incentives paid. One respondent used an individual commission determination plan based on lines written, dollar sales volume, and net profit for an assigned territory for which the individual inside salesman was responsible in team with an outside salesman. One respondent paid inside salesmen as a group a commission on new customer sales, i.e., a pool.

Of the seven respondents that used the commission pool arrangement, three determined the size of the commission pool by means of a percentage factor applied to total company sales for the fiscal period. In some cases a quota was deducted prior to calculation. Three respondents determined the size of the pool by applying a percentage factor to the total gross profit generated by total company sales for the fiscal period, sometimes after a gross profit quota was deducted. The remaining respondent applied a percentage factor to the dollar sales volume of new customer orders (first three orders from a new customer) for the fiscal period to determine the size of the commission pool.

Of the seven respondents that used the commission pool arrangement, four simply divided the pool equally among the participants. One respondent used a formula based on the ratio of the individual's salary to total salaries paid to inside salesmen to allocate to the individual salesman a share of the pool. The remaining respondents used a similar salary formula plus a factor of management judgment of individual performance to make the allocation.

Summary--Inside Salesmen
Compensation

Fringe benefits for these salesmen were the same benefits as those enjoyed by the outside salesmen of a specific company as reported by all of the responding companies. The level of benefits, which were often related to income, was not always the same.

Expenses were a minor factor in the compensation of inside salesmen. These salesmen did not incur, customarily, the expenses related to travel and entertainment that outside salesmen did.

About one out of three responding companies reported that they compensated their inside salesmen with salary only. The incidence of salary only plans increased as company size, as measured by annual net sales, increased.

All but three of the thirty-eight responding companies that reported the use of bonus components or commission components, or both, in their compensation plans for these salesmen first created a pool in some fashion from which the individual salesman's bonus was allocated by means of a formula involving employment factors such as salary and/or years of service, or by subjective management judgment of the contribution the individual salesman made to the objectives of the firm, or a combination of both of these methods. Perhaps it is a commentary on the difficulty of making a subjective evaluation of the individual inside salesman's contribution to the objectives of the firm that,

of the twenty companies that reported plans that used management judgment to allocate the individual shares of the bonus or commission pool, eight simply provided for equal division.

The three respondents that did not use a pool arrangement assigned territories to inside salesmen and determined individual bonus or commission incentive payments according to some objective measure of performance of the territory--number of lines written; territorial gross profit; combination of lines written, dollar sales volume, and net profit of the territory, respectively.

CHAPTER 5

PROFITABILITY AND SALESMAN COMPENSATION

Profitability Measurement

Selecting a Profitability Criterion

Each year the Steel Service Center Institute conducts a survey among its member companies from which it prepares a report on "Company Operations and Operating Ratios." From cooperating members it collects statistical data on the common operating ratios that are used to describe the operating results of a firm. Such operating ratios are often used by analysts in comparative studies within an industry or to compare one industry with another. A copy of the questionnaire used by the SSCI to collect this information appears in Appendix C.

Certain ratios included in the SSCI survey were of particular interest because they represented potential criteria with which to measure profitability of the firm for the purposes of this study. Such potential criteria ratios included:

"Gross Profit, after freight and delivery expense"
(hereafter called Gross Profit)

"Gross Operating Profit" (hereafter GOP)

"Net Profit Before Taxes" (hereafter NP/BT)

"Return Before Income Taxes on Invested Capital"
(hereafter RIC)

"Return Before Taxes on Total Invested Funds"
(based on the DuPont Formula, hereafter RIF)

These terms and accounting procedures for determining these ratios are defined and explained in the SSCI questionnaire (Appendix C) and will not be repeated here.

Because companies in this industry which were members of SSCI were to comprise the sample for this study, it was decided that the measure of profitability selected should be one of the measures referred to above with which these companies were already familiar. In the majority of cases these data would be available through the SSCI office and, where for an individual company these data were not so available, it was felt that the choice of a familiar measure would make it easier for a company to furnish the information and so increase the probability that it would be furnished.

General Defects of Ratio Analysis.--The problems connected with using accounting data in general, and ratios in particular, in comparative studies are well known and are discussed in most principles texts on financial analysis. However, they will be discussed briefly here.

There are two major defects in such data. First, when accounting data are used to compare the operations of

two companies, the different accounting treatment the companies may give to the same expense item, i.e., how expenses are classified, make it difficult to get really comparable data. In this study the profitability data were taken from the SSCI reports on "Company Operations and Operating Ratios" for 1964 and 1965. The SSCI questionnaire, with which these data are gathered, outlines the categorization of expenses in some detail. This requested treatment is in accordance with a distribution cost analysis program developed for its member companies in 1956 by the SSCI.

Because these data have been collected in this format from these Institute members for a number of years now, it is believed that errors due to classification of expenses in the data used in this study were minimal and did not seriously affect the validity of the data.

Second, ratios are defective as analytic tools simply because they are ratios. That is, they are expressions of a numerator quantity and a denominator quantity. A change in a ratio may be the result of a change in either quantity, or both. Inferences that properly may be drawn from the change will depend upon how the change came about. In this study the ratios used in the profitability analysis were return on investment ratios, i.e., the denominator was some measure of invested capital which normally does not change markedly in one year's time. Furthermore, the average of

these values for 1964 and 1965 was used to minimize the possibility of error from this source even more.

Fewer companies reported the RIF (DuPont Formula) ratio than reported the RIC ratio. Therefore, the latter ratio, in a modified form, was selected for use in the profitability analysis in this study. However, as a precaution, the findings were checked using the RIF measure and no significant differences in profitability ranking were apparent.

Special Data Problems.--Certain problems with the data particular to these data and to the operating characteristics of this industry were encountered.

In the SSCI survey, Gross Profit and GOP are expressed as a percentage of annual net sales (revenue) as are various expense factors. In actual practice the Gross Profit figure is sometimes calculated as gross margin less freight in only. In a few areas of the country delivery expense is customarily charged as an extra but in most areas it is included in the quoted cost of the goods. Therefore, it is believed that this discrepancy in practices did not seriously affect the usefulness of this measure for the purposes of this study. However, it would be a source of error if this measure were used.

Of those cooperating companies which included a profitability factor in their compensation plans for outside salesmen, the great majority used the Gross Profit

measure calculated for each product or product line (or for territories) as a base for the profitability incentive payment to their salesmen. A few companies used a product, or product line, net profitability concept (in which fixed and other non-direct costs were allocated to products, product lines, or territories). The Gross Profit measure as it applies to the total operations of a particular company can be thought of as the weighted average of the product, or product line, gross profit measures. The weights are the respective proportionate net sales of each product, or product line, to total annual net sales of all products, or product lines.

The Gross Profit measure was found to be unsuitable for the purposes of this study but it was used as a starting point in analyzing the profitability of the reporting companies. Perhaps the most serious defect of this measure for profitability classification purposes in this study was its sensitivity to the proportion of direct mill sales which a particular company made. The usual gross margin (with no freight or delivery expense) available on direct mill sales is on the order of 5% to 15% of sales as compared with a usual gross margin (before freight and delivery expense) on the order of 20% to 35%, or even higher, on shipments made from the company's warehouse stocks. Some of these companies shipped as little as 30% to 40% of their annual net sales from warehouse stocks. Consequently, the Gross Profit figure calculated as a percentage of

annual net sales was distorted for such companies. In any ranking procedure based on Gross Profit, such companies would be categorized as low profitability companies when in fact they were not when evaluated on other measures, e.g., RIC or RIF.

To the extent that a service center makes direct mill sales it is operating as a drop shipper, a sales agent for the producer, and this is a different kind of business than that of a full service wholesaler. The latter is the basic business of a metals service center. Because of the different cost relationships, financial ratios based on annual net sales that reflect the operation of these two kinds of businesses reported as one are distorted to the degree that direct mill sales occur. Such ratios really are not comparable to ratios reported by service centers which ship nearly all of their orders from stock. Furthermore, direct mill sales often reflect a specialization to some degree in tubing, stainless, etc.

The same defect is present in all of the expense and profit measures in the SSCI Operating Ratios Survey that are based on annual net sales. The Gross Operating Profit measure from the survey was also discarded as a useful profitability measure for this study because of this defect, although it was used collaterally in the analysis of the data.

Because RIC as reported to the SSCI included "Other Income" and "Other Expenses" (see Appendix C for details) which were not directly connected with operations and thus

were not germane to this study, this measure was adjusted by multiplying RIC by the ratio of GOP divided by NP/BT. The resulting ratio will be referred to as "Return From Operations on Invested Capital" (hereafter ROIC). This ratio, actually the average ROIC for 1964 and 1965, was selected as the profitability measure with which to make company comparisons in this study.

Example of the Adjustment Calculation.--

GOP = 4.50% of Net Sales Other Income = 0.20%

Other Expenses = 1.60% NP/BT = 3.10%

RIC = 19.20% of Invested Capital

ROIC = .192 x $\frac{.045}{.031}$

= .279 or 27.9% of Invested Capital

In this example values for an actual respondent were chosen deliberately to result in a substantial difference between RIC and ROIC. More typically a much smaller difference was observed.

The ratio ROIC as a measure of profitability reflects the same factors of operation as GOP in the numerator. However, in the denominator it reflects a factor, or factors, expressing management's utilization of capital in terms of inventory practices, machinery and equipment acquisition practices, etc. In this sense it is a more "ultimate" measure of the operation of a service center than is GOP and introduces factors not in GOP that are not within even

partial control of the salesman. Consequently, if method of compensating outside salesmen is a factor in company profitability, GOP should be a more responsive measure than ROIC for use in an investigation of the effect on profitability of method of compensating outside salesmen. Unfortunately, the sensitivity of GOP to the proportion of direct mill sales made by the company rendered this measure of profitability unsuitable for the purposes of this study. The measure ROIC, although it contained defects from the point of view of the study, represented the best available choice, especially since it was much less sensitive to the proportion of direct mill sales than was GOP.

The Limitations of the Profitability Data

One of the major objectives of this study was to investigate the relationship between the various kinds of compensation plans for outside salesmen used in this industry and the relative profitability of the companies which used each kind of compensation plan.

The information that was obtained on the profitability of the cooperating companies was very much less complete than the information those companies furnished on the kinds of compensation plans they used for their outside salesmen. Of the sixty cooperating companies, only twenty-eight furnished complete profitability data for the years 1964

and 1965. In addition, sixteen companies furnished partial data (for either 1964 or 1965). Sixteen companies which completed the remainder of the questionnaire furnished no profitability data for either year (Table 8).

As the size of the respondent company, as measured by 1964 annual net sales, increased the profitability data furnished became more fragmentary. Of the forty-two respondent companies with 1964 annual net sales of less than \$20 million, twenty-one furnished complete profitability data for both 1964 and 1965 and fifteen furnished such data for either 1964 or 1965. Only six respondent companies in this group furnished no profitability data for either year. Of the eighteen respondent companies that had 1964 annual net sales of \$20 million or more, only seven furnished complete profitability data for both 1964 and 1965. Additionally, one of this group of respondent companies furnished profitability data for 1964. Ten respondents in this group furnished no profitability data for either year. Consequently, analysis of the data furnished by the group of respondents with 1964 annual net sales of "less than \$5 million" and of "at least \$5 million but less than \$20 million," respectively, was undertaken to investigate the relationship between profitability and the characteristics of the compensation plans these companies used for their outside salesmen. The data furnished by those respondents which had 1964 annual net sales of "\$20 million or more" were

TABLE 8.--The distribution of respondents that furnished profitability data by size categories.

Profitability Data	1964 Annual Net Sales									
	Total		Less Than \$5 Million		\$5 Million But Not \$20 Million		\$20 Million Or More			
	P.O.	Not P.O.	P.O.	Not P.O.	P.O.	Not P.O.	P.O.	Not P.O.	P.O.	Not P.O.
	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.
Complete	20	8	9	3	7	2	4	3		
1964 Only	7	4	1	1	5	3	1	0		
1965 Only	4	1	3	1	1	0	0	0		
No Data	<u>6</u>	<u>10</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>3</u>	<u>6</u>	<u>4</u>		
Total	37	23	13	8	13	8	11	7		
Data Used in Analysis	26	10	13	5	13	5		None		

NOTE: P. O. Cos. = Companies with compensation plans that were profit-oriented.

Not P. O. Cos. = Companies with compensation plans that were not profit-oriented.

not analyzed because the number of such companies that furnished data was simply not adequate to be representative of this size category.

Of the twenty-one respondent companies for which ROIC was available for both 1964 and 1965, all but four had a higher ROIC in 1965 than in 1964. Of the remaining four such respondents, three had a lower ROIC in 1965 than in 1964, and one had the same ROIC in both years. While the measure used to compare companies in terms of profitability was average ROIC for 1964 and 1965, where only one year's value of ROIC was available this value was used in place of the average. Ten such respondents in this size class reported data for 1964 which permitted calculation of ROIC and five reported such data for 1965. Where ROIC for 1964 was used in place of the average ROIC, the profitability of that respondent was probably understated. Where ROIC for 1965 was used in place of the average ROIC, the profitability of that respondent was probably overstated. However, it is believed that no significant ranking errors were introduced by this practice.

Analysis of the Data

For the purposes of analysis the respondents in any group under examination were first ranked according to average ROIC and identified in terms of the compensation plan characteristic under study. The characteristics of compensation plans examined for correlation with average

ROIC were: profit-oriented plans versus plans not profit-oriented; type of plan, i.e., salary only, salary plus commission, salary plus bonus, etc.; and the level of total cash compensation measured in relationship to Gross Profit.

In general, two profitability criteria were used. In one procedure the companies in a size category were classified (see Table 9) into four groups: Group I was composed of respondent companies with average ROIC values of 30% to 39.9%; Group II 20% to 29.9%; Group III 10% to 19.9%; and Group IV less than 10%. Except for one respondent in Group IV which showed a loss of 1%, average ROIC values for these respondents ranged from approximately 1% to approximately 40%. In the other procedure the respondent companies were grouped into profitability quartiles for comparison purposes (Table 10).

Profit Oriented Compensation Plans

In Chapter 2 it was pointed out that a company's compensation plan for its outside salesmen is a communication system--telling the salesman management's wishes as to how he should spend his time by describing the kind of results which will maximize his rewards. It was assumed that he wanted to maximize his rewards, at least up to a point, given the potential of his territory and the degree of control which he could exercise over his results.

TABLE 9.--Distribution of respondents according to type of outside salesman compensation plan and profitability group.^a

Type of Plan	Group I		Group II		Group III		Group IV		Total	
	Not ^b		Not		Not		Not		Not	
	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.	P.O. Cos.
Commission Only	0	0	2	0	1	1	0	0	3	1
Salary-Commission	0	0	1	0	1	1	2	1	4	2
Salary-Commission- Bonus	2	0	2	0	1	0	3	1	8	1
Total Commission	2	0	5	0	3	2	5	2	15	4
Salary-Bonus	2	0	1	1	6	0	2	1	11	2
Salary	0	0	0	0	0	2	0	2	0	4
Total--All Plans	4	0	6	1	9	4	7	5	26	10

^aGroup I-30% to 39.9% average ROIC; Group II-20% to 29.9%; Group III-10% to 19.9%; Group IV-1% (loss) to 9.9%.

^bP.O. - Profit-oriented compensation plan
Not P.O. - Not Profit-oriented compensation plan.

TABLE 10.--Distribution of respondents according to type of outside salesman compensation plan and profitability by quartile.^a

Type of Plan	Upper Quartile		Upper Middle Quartile		Lower Middle Quartile		Lower Quartile		Total	
	Not ^b		Not		Not		Not		Not	
	P.O.	P.O.	P.O.	P.O.	P.O.	P.O.	P.O.	P.O.	P.O.	P.O.
	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.
Commission Only	2	0	1	0	0	1	0	0	3	1
Salary-Commission	1	0	0	1	2	1	1	0	4	2
Salary-Commission-Bonus	3	0	2	0	0	0	3	1	8	1
Total Commission	6	0	3	1	2	2	4	1	15	4
Salary-Bonus	3	0	3	1	3	0	2	1	11	2
Salary	0	0	0	1	0	2	0	1	0	4
Total	9	0	6	3	5	4	6	3	26	10

^aUpper Quartile - Average ROIC = 22.0% to 39.8%; Upper Middle Quartile - Average ROIC = 15.7% to 21.6%; Lower Middle Quartile - Average ROIC = 8.7% to 14.6%; Lower Quartile - Average ROIC = 1% (loss) to 8.7%.

^bP.O. - Profit-oriented compensation plan.

Not P.O. - Not profit-oriented compensation plan.

The outside salesman compensation plans of the reporting companies were categorized as "profit-oriented" or "not profit-oriented." The profit-oriented category of plans included all plans where a commission or a bonus, or both, were based upon product, product line, or territorial profitability. Also included were the plans where district or company profits were shared with the salesman in some organized fashion, of which the salesman was aware before the fact. The not profit-oriented category of plans included salary only plans and commission and bonus plans which were based upon factors other than profitability. These included most dollar sales based commission plans and bonus plans based upon factors such as product-mix and new customer activity. Some dollar sales based commission and bonus plans had a profitability weighting factor incorporated into them. These were included in the profit-oriented category.

It was unfortunate that all six of the companies in the "under \$20 million" 1964 annual net sales size class that did not report data which would permit calculation of ROIC compensated their outside salesmen with not profit-oriented plans. The result was a disproportionate reduction in the "not profit-oriented plan" cell (see Table 8). Thus, only ten of the thirty-six respondents in this size class for which ROIC data was available used not profit-oriented plans to compensate their outside salesmen. The very small entry

in this cell reduced the reliability of any apparent pattern of difference in profitability that might appear.

Only four of the thirty-six (11%) reporting companies in this size class had average ROIC that fell into the Group I category (see Table 9). All four used profit-oriented compensation plans for their outside salesmen.

Seven (19%) of these respondents reached Group II profitability as measured by average ROIC. To compensate their outside salesmen, six of these respondents used profit-oriented plans and one used a plan that was not profit-oriented.

Thus only one of the ten respondent companies that compensated their outside salesmen with a plan that was not profit-oriented reached a profitability level as measured by average ROIC of 20% or more. Average ROIC for this company was 20.7% and it showed a very substantial increase in ROIC for 1965 over 1964 (14.3% to 27.1%). This company used a salary bonus plan where the bonus pool was determined by management decision and allotted to each salesman on the basis of management judgment. This company reported a typical ratio of cash incentive compensation to total cash compensation for those companies using salary-bonus plans (16%) but the ratio of total cash compensation to net sales was the second highest of the salary-bonus plans (3.28%). This company had 1964 annual net sales of less than \$5 million.

Thirteen (36%) of these respondents fell into Group III profitability as measured by average ROIC. Nine of them used profit-oriented plans and four used plans not profit-oriented to compensate their outside salesmen.

Twelve (33%) of these respondents fell into Group IV profitability as measured by average ROIC. Seven of them used profit-oriented plans and five used plans not profit-oriented to compensate their outside salesmen.

There was a company size effect apparent in the profitability data. Of the eighteen reporting companies with 1964 annual net sales of "at least \$5 million but less than \$20 million," none reached Group I profitability as measured by average ROIC and only three (17%) reached Group II profitability. Thus fifteen (83%) of the reporting companies in this size category were below 20% average ROIC as compared with only ten of the eighteen (56%) reporting companies with 1964 annual net sales of "less than \$5 million." Four (22%) of the eighteen reporting companies in the latter size category reached Group I profitability and four (22%) reached Group II profitability. Only one of the four in the latter company size category that reached Group II profitability used a plan to compensate their outside salesmen that was not profit-oriented. None of the three in the former company size category that reached Group II profitability used such a plan to compensate their outside salesmen.

The thirty-six companies with 1964 annual net sales of "less than \$20 million" that reported sufficient data to calculate ROIC were divided into quartiles and analyzed to determine use or non-use of a profit-oriented plan to compensate outside salesmen as related to their quartile position (see Table 10). Of the nine companies in the upper quartile (average ROIC 22.0% to 39.8%), none used a not profit-oriented compensation plan. Of the nine companies in the upper-middle quartile (average ROIC 15.7% to 21.6%), three used not profit-oriented compensation plans. Of the remaining seven reporting companies in this company size category that used compensation plans not profit-oriented, four were in the lower-middle quartile (average ROIC 8.7% to 14.6%) and three were in the lower quartile (average ROIC loss 1% to plus 8.7%). Thus, only three of the ten companies using compensation plans not profit-oriented were above the median profitability (the average of the average ROIC values for the 18th and 19th ranked companies--15.2%) of all the reporting companies in this company size category.

Finally, the median profitability as measured by average 1964-1965 ROIC of the twenty-six reporting companies which had 1964 annual net sales of "less than \$20 million" and used profit-oriented plans to compensate their outside salesmen was 16.9%. The median profitability (based on the same measure of profitability) of the ten companies which had 1964 annual net sales of "less than \$20 million" and

used compensation plans that were not profit-oriented was 10.8%. The company size effect in the profitability data was again apparent when the data of the eighteen reporting companies with 1964 annual net sales of "less than \$5 million" and of the eighteen reporting companies with 1964 annual net sales of "at least \$5 million but less than \$20 million" were analyzed separately. The comparable median average ROIC value for the thirteen in the former size category that used profit-oriented compensation plans was 20.1% as compared with a median average ROIC value for the five that did not of 12.3%. In the latter size category the median average ROIC values were 13.9% and 8.7% respectively.

Profitability Related to Type of Compensation Plan

The profitability data for those reporting companies that had 1964 annual net sales of "less than \$20 million" were analyzed to investigate the relationship between the type of compensation plan a company used and its relative profitability (as measured by average ROIC for 1964 and 1965) when compared with companies using other types of compensation plans for outside salesmen.

Commission Plans.---Nineteen of the thirty-six reporting companies in this size category used a commission component in their outside salesman compensation plans. Of these nineteen companies, ten were above the median profitability level of the reporting companies in this size

category as measured by average ROIC and nine were below that median. The median profitability level as measured by average ROIC of the nineteen reporting companies in this size category that used commission component plans was 16.3% as compared with the median average ROIC value for all of the reporting companies in this size category of 15.2%. This was not a significant difference.

The distribution of these nineteen companies among the profitability groups, Group I through Group IV as defined earlier in this chapter, was not significantly different from the distribution of all the reporting companies in this size category (see Table 11).

Responding companies were asked to provide data from which the ratio of cash incentive compensation to total cash compensation paid to all their outside salesmen in the year 1964 could be calculated. Of the nineteen reporting companies in this size category that used outside salesman compensation plans that included a commission component, eighteen furnished such data. Of these eighteen, four reported this ratio to be 100% (commission only plans), seven reported this ratio to be in the range 40% to 70%, four reported this ratio to be in the range 20% to 30%, and three reported this ratio to be less than 10%.

Three of the four commission plan companies had average ROIC values above the median for all reporting companies in this size category. All three used profit-oriented compensation plans. One of the four commission

TABLE 11.--The distribution among profitability groups^a of respondent companies classified by type of compensation plan for outside salesmen.

Type of Plan	Group I		Group II		Group III		Group IV		Total	
	Cos.	%	Cos.	%	Cos.	%	Cos.	%	Cos.	%
Commission Only	0	0	2	50	2	50	0	0	4	100
Salary Plus Commission	0	0	1	17	2	33	3	50	6	100
Salary Plus Commission Plus Bonus	2	22	2	22	1	11	4	44	9	99
Total-Commission Plans	2	11	5	26	5	26	7	37	19	100
Salary Plus Bonus	2	15	2	15	6	46	3	23	13	99
Salary Only	0	0	0	0	2	50	2	50	4	100
All Plans ^b	4	11	7	19	13	36	12	33	36	100

^aGroup I - 30% to 39.9% average ROIC; Group II - 20% to 29.9%; Group III - 10% to 19.9%; Group IV - 1% (Less) to 9.9%.

^bOf companies in size category 1964 annual net sales of less than \$20 million that reported their data.

Percentages may not total to 100% because of rounding.

plan companies had an average ROIC value below the median. This company used a compensation plan that was not profit-oriented.

Five of the seven companies that reported this ratio to be in the range 40% to 70% had average ROIC values above the median for all reporting companies in this size category. Of these five, four used compensation plans that were profit-oriented. The other company did not use a profit-oriented plan in 1964 but did in 1965. The remaining two companies that reported this ratio to be in the range 40% to 70% had average ROIC values below the median and both used profit-oriented compensation plans.

All four of the companies that reported this ratio to be in the range 20% to 30% had average ROIC values below the median for all reporting companies in this size category. Three of them used profit-oriented compensation plans and one did not.

All three of the companies that reported this ratio to be below 10% used profit-oriented compensation plans and two of them had average ROIC values above the median for all reporting companies in this size category. The third company had an average ROIC value below the median. All three of these companies used salary plus commission plus bonus plans to compensate their outside salesmen and it seems unusual that commission and bonus would amount to only 5% to 7% of total cash compensation as was reported

by all three of these companies. The word "incentive" was used in the question that elicited this information and this word is used in some of the literature dealing with compensation to mean "bonus." It is possible that this figure reflects only the bonus compensation.

Bonus Plans.--Thirteen of the thirty-six reporting companies in this size category used salary plus bonus plans to compensate their outside salesman. Of these thirteen companies, seven were above the median profitability level of the reporting companies in this size category as measured by average ROIC and six were below that median. The median profitability level of these thirteen companies as measured by average ROIC was 15.7% as compared with the median average ROIC value for all of the reporting companies in this size category of 15.2%. This was not a significant difference.

The distribution of these thirteen companies among the profitability groups, Group I through Group IV as defined earlier in this chapter, was not significantly different from the distribution of all the reporting companies in this size category (see Table 11).

Of the thirteen reporting companies in this size category that used salary plus bonus plans to compensate their outside salesmen, twelve furnished data that allowed the calculation of the ratio of cash incentive compensation to total cash compensation paid to all their outside

salesmen in the year 1964. The values of this ratio as reported by these twelve companies ranged from zero (two companies reported using salary plus bonus plans but, in fact, paid no bonuses in 1964) to 33%. However, eight of the twelve ratios reported fell between 8% and 19%.

The company that reported this ratio to be 33% was the company that had the median average ROIC value of 15.7% for the thirteen reporting companies in this size category that used salary plus bonus plans. Thus, it was only slightly above the median average ROIC value of 15.2% for all reporting companies in this size category. Of the eight companies that reported this ratio to be between 8% and 19%, six were above the median average ROIC for all reporting companies in this size category and two were below that median. There was no apparent pattern of profitability versus incentive ratio within this group of eight companies. One of the two companies that fell below median profitability reported the incentive ratio to be 8.5%, the other 16%. Of the three remaining companies, one reported this ratio to be 4% and the other two actually paid no bonuses in 1964 and so reported this ratio to be zero. All three were below the median average ROIC for all reporting companies.

Of the twelve companies in this size category that used salary plus bonus plans to compensate their outside salesmen, and furnished data that made it possible to calculate the incentive ratio, only two used compensation plans that were not profit-oriented. One reported the

incentive ratio to be 16% and was above the median average ROIC of all reporting companies. The other reported paying no bonuses in 1964 and was below that median.

Salary Only Plans.--There were only four respondent companies that used salary only plans to compensate their outside salesmen and had 1964 annual net sales of "less than \$20 million." Of the four, one was above the median profitability level of the reporting companies in this size category as measured by average ROIC and three were below that median.

The distribution of these four companies among the profitability groups, Group I through Group IV as defined earlier in this chapter, was different from the distribution of all reporting companies in this size category (see Table 11). However, with so few cases in this sub-sample the fact that none of them reached Group II, or higher profitability, does not justify any inference of association between the relatively low profitability of these companies and the use of salary only plans to compensate outside salesmen.

The ratio of cash incentive compensation to total cash compensation paid to all their outside salesmen in the year 1964 for each of these companies would be zero so no comparison among companies on this basis was possible.

Profitability Related to
Level of Compensation

No data on the absolute dollar level of compensation of outside salesmen in this industry were collected in this study. However, data were collected on outside salesman cash incentive compensation and total cash compensation for 1964 expressed as a percent of net sales for the year 1964.

The concensus expressed in conversations with executives of the respondent companies was that the level of compensation was set competitively, and that variations in level of compensation were associated primarily with the experience levels of the salesmen. Possibly level of compensation was also associated with geographic area in which the company operated. As was reported earlier in this chapter, in the plans used by the respondents in this study, the salary component of the total compensation paid to outside salesmen was found to be substantial. Although straight salary plans represented a minor proportion of the plans studied (7 of 60), the salary portion of the salary plus bonus plans reported typically represented 80% or more of the total compensation paid under these plans. Even among those plans that contained a commission component, salary usually represented 50% or more of the total compensation paid under these plans, and often represented 60% or more. Only four respondents of the sixty that completed questionnaires reported the use of commission only plans. These findings are compatible with the concensus expressed by the

executives of the respondent companies because it would seem that a high proportion of salary would be a necessary requirement for the compensation of these salesmen to be set competitively, and for variations to be associated primarily with the experience levels of the salesmen. Salaries are set directly by management whereas commissions, for example, depend on the skill of the salesman and the potential of his territory. Commission rates are often set competitively in an industry but the amount of commission earned is only indirectly controlled by management.

In early 1960 the Steel Service Center Institute conducted a survey of compensation of outside and inside salesmen among member companies of the Institute which covered compensation paid in the first six months of 1959.¹ The findings of this SSCI survey were in agreement with the consensus expressed by the metals service center executives interviewed. Excerpts from the SSCI survey data appear in Appendix D.

Total cash compensation expressed as a percent of net sales was subject to the same defect, where direct mill sales were made, as the other measures of performance discussed earlier in this chapter under "Selecting a Profitability Criterion." Consequently, the compensation level

¹Steel Service Center Institute, "SSCI Survey of Salesmen's Compensation, First Half 1959," Cleveland Ohio. Memorandum to member companies, 1960.

measure used here for comparison with profitability among the respondent companies was the ratio of total cash compensation to Gross Profit.

All Plans.--Of the forty-two responding companies with 1964 annual net sales of "less than \$20 million," thirty-six reported sufficient data on their profitability so that ROIC could be calculated for at least one of the years 1964-65. Thirty-one of these respondents also reported sufficient data on outside salesman compensation so that the ratio of cash compensation to Gross Profit could be calculated.

Among these thirty-one respondents the reported values for 1964 of this compensation ratio ranged from 4.9% of Gross Profit to 23.0% of Gross Profit. The median value was 9.5% and the average value was 10.4%. Thus, on the average, these companies paid about one dollar of total cash compensation to their outside salesmen of each nine and one-half dollars of Gross Profit earned. However, this rate of compensation to Gross Profit varied from a low of about one dollar of total cash compensation of every twenty dollars of Gross Profit earned to a high of about one dollar of total cash compensation of every four and one-half dollars of Gross Profit earned.

The median average 1964-1965 ROIC for the thirty-six respondents in this size category that reported profitability data was 15.2%. Thirty-one of these respondents

furnished cash compensation data. Of the sixteen of these respondents that reported 1964 compensation ratio values that were at or above the median value for the group (9.5% of Gross Profit) nine reported ROIC values above the median ROIC value (15.2%) and seven reported ROIC values that were below this median. Of the fifteen of these respondents that reported 1964 compensation ratio values that were below the median value for the group (9.5% of Gross Profit), seven reported ROIC values above the median ROIC value (15.2%) and eight reported ROIC values below this median ROIC value. Among these respondents there was no significant evidence that the compensation ratio as defined above was associated either directly or inversely with company profitability as measured by ROIC.

Plans Using a Commission Component.--Of the forty-two responding companies with 1964 annual net sales of less than \$20 million, twenty-one reported outside salesmen compensation plans containing a commission component. Such plans included those that were commission only plans (4), salary plus commission plans (8), and salary plus commission plus bonus plans (9). Nineteen of these twenty-one respondents reported sufficient data on their profitability so that ROIC values could be calculated for at least one of the years 1964-1965. Seventeen of these respondents reported sufficient data on outside salesman compensation so that their ratios of total cash compensation to Gross Profit for 1964 could be calculated.

Among these seventeen respondents the reported values for 1964 of this compensation ratio ranged from 6.7% of Gross Profit to 23% of Gross Profit. The median value was 11.1% and the average value was 11.9% of Gross Profit. Thus, on the average, these respondents in 1964 paid approximately one dollar of total cash compensation to their outside salesmen for every eight and one-half dollars of Gross Profit earned. However, this rate of compensation varied from a low of about one dollar of total cash compensation of every fifteen dollars of Gross Profit to a high of about one dollar of total cash compensation of every four and one-half dollars of Gross Profit earned.

The median average 1964-1965 ROIC for the nineteen companies in this size category that used commission components in their outside salesmen compensation plans and reported profitability data was 16.3%, compared with a median value of 15.2% for all reporting companies in this size category. Seventeen of these respondents furnished total cash compensation data and nine of them reported compensation ratio values that were at or above the median value for this group (11.1% of Gross Profit). Of these nine respondents, five reported average ROIC values above the group median value (16.3%) and four reported average ROIC values below this median value. Eight respondents reported compensation ratio values below the median value for this group (11.1% of Gross Profit). Of these eight respondents, four reported

average ROIC values above the group median ROIC value (16.3%) and four reported values below this median value. Among these responding companies that used a commission component in their outside salesman compensation plans there was no significant evidence that the compensation ratio expressed as a percent of Gross Profit was correlated with company profitability as measured by average ROIC.

Salary Plus Bonus Plans.--Of the forty-two responding companies with 1964 annual net sales of less than \$20 million, seventeen reported outside salesmen compensation plans that were classified as salary plus bonus plans. Thirteen of these seventeen companies reported sufficient data on their profitability so that ROIC could be calculated for at least one of the years 1964-1965. Eleven of these seventeen companies reported sufficient data on 1964 outside salesman compensation so that the ratio of cash compensation to Gross Profit could be calculated.

Among the eleven such respondents the reported 1964 values of this compensation ratio ranged from 4.9% of Gross Profit to 12.5% of Gross Profit. The median value was 7.5% and the average value was 7.6% of Gross Profit. Thus, on the average, these respondents paid approximately one dollar of total cash compensation to their outside salesmen of every thirteen dollars of Gross Profit earned. It should be noted that this payment ratio is substantially below

that paid by companies using commission components in their outside salesmen compensation plans. This rate of compensation to Gross Profit varied from a low of about one dollar of cash compensation of every twenty dollars of Gross Profit earned to a high of about one dollar of cash compensation to every eight dollars of Gross Profit earned.

The median average ROIC for the thirteen companies in this size category that used salary plus bonus plans to compensate their outside salesmen and reported profitability data was 15.7% as compared with 15.2% for all reporting companies in this size category. Eleven of these companies furnished cash compensation data and six of them reported compensation ratio values that were at or above the median value (7.5% of Gross Profit) of the group. Of these six, three reported average ROIC values above the group median value (15.7%) and three reported average ROIC values below this median value. Of the remaining five of these respondents that reported compensation ratio values below the median value for the group (7.5% of Gross Profit), three reported average ROIC values above the group median value (15.7%) and two reported average ROIC values below this median value. Among these companies there was no significant evidence that the compensation ratio expressed as a percent of Gross Profit was correlated with company profitability as measured by average ROIC.

Control

During the interviews that were held with executives of responding companies (executives of 53 of the 60 respondent companies were interviewed), the concept of "control" as a factor in the decision to use or not to use an incentive compensation plan for outside salesmen often was discussed.

There were two major areas of concern expressed with regard to "control" and incentive compensation. The first concern was that the use of an incentive plan would result in the loss of management control over the activities of the salesman. This is a classic objection which is so frequently mentioned in the literature on sales management as to need no citation. It presumes a continuum relationship, with straight salary and a high degree of control at one end of the continuum and straight commission and a low degree of control at the other end. It further assumes that management control over the salesman's activities assures control over his results, i.e., the product-service mix he produces from his territory. Finally, in effect, it assigns the control function of the salesman's performance to supervision alone. Such a control system depends for its success on: (1) explicitly defined objectives which describe the performance expected from the salesman which flow from the firm's basic objectives and strategies, and (2) continuously updated management knowledge of the

salesman's capabilities and the potential of his territory, including the current competitive situation.

When responsibility for part of this control function is transferred to the compensation plan, the need for explicitly defined objectives is not reduced, in fact it may even become more critical. Some part of the responsibility for assessing the salesman's capabilities as they relate to the potential of his territory (including the current competitive situation) is transferred to the salesman, and here is the crux of this objection to the use of incentive compensation plans. It should be remembered, however, that this transfer of responsibility takes place within the framework of the incentive plan, subject to its provisions and the assumption that the salesman will attempt to maximize his rewards. If the incentive plan is properly designed so that it reflects the objectives of the firm and the weights management wishes to assign to individual objectives, it is difficult to understand how a real loss of management control of the salesman can occur.

In general, the company executives that were interviewed, where an incentive compensation plan for outside salesmen was used that was specifically designed to fit clearly defined objectives of the firm, tended to minimize this control objection to incentive compensation plans. Where there were indications that the objectives of the firm were not so clearly defined and the incentive plan,

consequently, was not a plan specifically tailored to the firm's needs, this control objection was more likely to be raised.

Farley suggests that "a compensation plan paying commissions as a fixed proportion of gross margin on each item in a salesman's line is optimal under quite general conditions,"¹ and points out that "the salesman may be, in fact, the best person in the organization to make control decisions."² It is understood, of course, that the salesman is making these control decisions within the framework of the incentive plan, under the assumptions that the firm wishes to maximize (gross) profit, and that the salesman is acting to maximize his rewards.

The second area of concern was that the salesman did not, in fact, have complete control over his product-service mix results. Therefore, he might be over-rewarded or under-rewarded in proportion to his "efforts." For example, because of the low potential of his territory, or the necessity for "missionary" work, he might expend effort that could not result in "reward" in the short-run. The proponents of incentive compensation plans pointed out that the salesman did have a large measure of control over his results, providing artificial restraints which, in effect,

¹John U. Farley, "An Optimal Plan for Salesmen's Compensation," Journal of Marketing Research, May, 1964, p. 43.

²Ibid., p. 42.

negated the incentive plan were not superimposed upon the plan--for example, management insistence that certain customers be serviced despite a history of low profitability to the company and to the salesman. These executives suggested that "inequities" could be adjusted within the framework of an incentive plan by means of special bonuses of, if necessary, the use of straight salary compensation where the situation required straight salary. They were reiterating a basic concept of incentive compensation--it is a tool for supervision and control of the salesman's activity by management, not a substitute for generally sound policies and practices for selecting, training, supervising, and controlling salesmen.

Furthermore, these executives were convinced that the controlling factor in the success of a compensation plan was its compatibility with the corporate objectives of the firm. The lack of clearly understood objectives, and inherent incompatibility between objectives and the incentive factors, were the basic sources of control trouble in an incentive compensation plan--according to these executives.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Interrelationships

The compensation of outside salesmen in the metal service center industry has been studied in some depth using several different definitional frameworks as conceptual tools.

Money Versus Non-Money Components of Compensation

First, compensation was defined as being made up of money rewards and non-money (psychological) rewards. Only a small minority of the respondent companies reported the use of non-money rewards as a regular part of their compensation plans for outside salesmen. Special achievement by a salesmen was recognized by awarding him an honorary title such as "Salesman of the Year," by allowing him to use a prestige model car at company expense, or awarding him a membership in a country club at company expense, to name only a few of these ego-recognition techniques.

About one out of three respondents reported the use of contests as an incentive technique. However, these contests were often used only to clear out unwanted inventory, e.g., obsolete or slow moving items. The prizes offered in such

contests were about equally divided between money awards and merchandise awards, such as a new suit.

The consensus of management in this industry as revealed in interviews with executives of the respondent companies was that money was the most useful incentive force in the management of the activities of their outside salesmen. It is not surprising then that the compensation plans studied were found to be oriented toward money incentives--cash for recognizing achievement.

Managers who reported the use of contests to accomplish limited goals such as clearing out unwanted inventory were virtually unanimous in acclaiming the value of such contests. One of the most serious objections to contests raised during the interviews with respondent company executives was that contests just "moved normal sales volume around in time," i.e., "borrowed" sales from time periods earlier or later than the contest period and did not, in fact, increase total sales. This is a familiar criticism of contests and probably has some validity in terms of general contests. However, the success of contests with limited goals, such as moving unwanted inventory, suggests that they might be useful in other situations where short-range objectives are involved, e.g., new product introduction or short-term balancing "pushes" on high profitability items in the product-service mix.

Components of Money
Compensation

Second, money compensation was considered as being made up of four elements: fringe benefits, reimbursed expenses, fixed compensation (salary), and incentive compensation (bonus and commissions). Compensation of outside salesmen in this industry was examined to determine patterns of usage of these components in the plans reported by respondent companies.

Fringe Benefits.--Four insurance coverages and retirement plans (fixed contribution pensions and profit-sharing plans) were examined in this study. Virtually all of the respondent companies offered life insurance and hospitalization to their outside salesmen, two-thirds of them offered sickness and accident indemnity, and over one-half of them offered disability income protection. Of the respondent companies reporting annual net sales of \$5 million or more, virtually all (38 of 39) offered either a fixed contribution pension plan, a profit-sharing retirement plan, or both to their outside salesmen. Two-thirds of the smallest companies (annual net sales of less than \$5 million) reported offering these plans to their salesmen.

The intra-industry offering of fringe benefits to these salesmen was characterized by the uniformity of such offerings by the respondent companies rather than disparity. It was found from a study of such offerings in other industries that used industrial salesmen that, on an

inter-industry basis, the metal service center industry compared in a favorable way with these other industries that compete for such salesmen as to the degree to which these usual fringe benefits were offered. Thus, this industry should not be at a disadvantage, with respect to fringe benefits offered, in its attempts to attract capable salesmen. However, no one has defined the level of prevalence at which a fringe benefit offering ceases to have some positive effect in a company's attempt to attract and retain good salesmen. Certainly, though, there is such a point at which the fringe benefit becomes just an expected part of the employment offer. In this industry where the offering of the fringe benefits studied was found to be widespread among the respondent companies, it would be expected that the offering of these fringe benefits would be an accepted part of the employment package. Thus it would probably be a rather neutral factor in attracting, retaining, or motivating salesmen to a particular company.

Reimbursed Expenses.--These salesmen normally incur only two kinds of expense in connection with their sales activities--automobile travel expense and customer entertainment expense. Practices among the respondent companies with regard to automobile expense varied somewhat in detail. However, nine out of ten respondents either furnished a company car (sometimes as an option which only

some of their outside salesmen elected) for which the company paid all business operating expense; or paid a reimbursement allowance for the use of the salesman's car the accomplished the same end result. Thus, in this industry, treatment of automobile expenses incurred by a salesman was characterized more by basic uniformity of practice than by basic disparity. A salesman in this industry could expect that all automobile expenses connected with his sales activity would be directly paid or reimbursed to him and that his personal use of a company car or the personal use of his own car would cost him only a relatively nominal amount of money.

The salesman in this industry typically is reimbursed for any customer entertainment expense he incurs. Even two of the four commission only plan respondent companies in the study paid these expenses for their salesmen. In general, much of the responsibility for deciding whether or not to make such an expenditure is left to the salesman, with only ex post facto review control exercised by management. Approximately one-fourth of the respondents reported the use of budgetary control of such expenses, but only four respondents expressed this budget as a percentage of sales or of gross profit (equally divided between the two measures). All others that reported budgetary control used flat dollar amount budgets assigned to each territory by a process of negotiation between salesman and management or by management fiat. It became clear during the

interviews with respondent company executives that the consensus among managers in this industry was that budgetary control was too rigid for the conditions under which their salesmen operated. There was no evidence that discrepancies in practices among companies in this industry with regard to these expenses would offer a specific company a differential advantage in attracting, retaining, or motivating salesmen.

Fixed Compensation (Salary).--Nine out of ten respondents reported using a salary component in their compensation plans for outside salesmen, although only slightly more than one out of ten reported using salary only plans. Just under one out of ten respondents reported using commission only plans.

If the reported plan was a salary-bonus plan, the salary portion typically amounted to about 80% of the total cash compensation paid. If the reported plan was a salary-commission or salary-commission-bonus plan, the salary portion typically amounted to 50% to 60% of the total cash compensation paid.

Because the smallest companies (annual net sales of less than \$5 million in 1964) used salary-bonus plans significantly more frequently than did those companies with annual net sales of \$5 million or more, and because an estimated 60% of the companies in this industry had 1964 annual net sales of less than \$5 million (Appendix A), probably at least one-half of the companies in this

industry in 1964 used compensation plans where typically salary amounted to 80% or more of the total cash compensation paid to outside salesmen. Furthermore, probably more than nine out of ten companies in this industry in 1964 used compensation plans where typically salary amounted to 50% or more of the total cash compensation paid to outside salesmen.

A recent survey of industrial salesmen previously cited found that one-half of them thought that salary should amount to at least 75% of total compensation and nine out of ten of them thought it should amount to 50% or more of total compensation. Only slightly less than 20% wanted to operate on a straight commission basis. It appears that the metal service center industry is offering pretty much the kind of compensation plans that today's industrial salesmen are asking for--a substantial security base plus incentive.

Incentive Compensation (Bonuses and Commissions).--Conceptually one of the characteristics of incentive compensation is the manner in which the level of the salesman's reward is determined. Under a salary only plan management sets his reward directly while under an incentive plan, in theory at least, the salesman is given a measure of control over the level of his reward as he chooses the differential emphasis he will place on the various alternative courses of action open to him in performing the sales function assigned to him. Because bonus incentives usually represent a lesser portion of total compensation than do

commission incentives, it would be expected that the salesman's degree of control over the size of his total reward under a bonus plan would be less than under a commission incentive plan. This was found to be the case in the bonus plans examined in this study. However, the degree of control reserved to management in these plans approached that of a straight salary plan.

Of the thirty-three bonus incentive plans reported by respondents, twenty-nine first set a group or pool bonus. Only four used an arrangement that set individual bonuses directly. Two of these plans used a territorial profit quota arrangement and two used a product-mix quota arrangement. Of the twenty-nine pool bonus plans approximately one-third of the plans allocated individual bonuses on the basis of employment factors (length of service and relative salary level), another approximately one-third of these plans allocated the individual bonuses by management fiat, i.e., subjective management judgment of performance, and the remaining third of these plans used a combination of these two systems. Thus, only three of these thirty-three bonus plans (or about 10%) used an objective criterion of performance for bonus allocation. All three used territorial profitability as the basis for the bonus allocation formula.

There is nothing intrinsically wrong with the pool arrangement used to set the total bonus management wishes

to pay for a specific time period. Approximately one-third of these plans set the amount of the pool according to a pre-set profit sharing formula, and two-thirds by management fiat. However, the allocation process used to set individual shares of the pool, after the gross amount of the pool had been determined, was merely an extension of the salary setting criteria in the overwhelming majority of the bonus plans studied. The criteria used for setting individual bonuses had no direct connection with an objective measure of performance--one of the accepted maxims of incentive compensation. There was evidence of a definite disinclination to use objective criteria of performance apparent in the mechanics of the bonus determination procedure of the great majority of the bonus plans studied.

Because the smallest category of metal service center companies tended to use the bonus method of paying incentive compensation more than the larger companies did, it is a great temptation to infer an association between this disinclination to use objective measures of performance in setting individual bonuses and some assumed characteristic of smaller company management, e.g., reluctance to relinquish power. However, this characteristic of the bonus plans used in this industry was an unexpected development in the study, although during the interviews that were held with these company executives there was a hint of this reluctance to substitute objective measures of performance

for management judgment of performance of their salesmen. Consequently no provision was made in the data collection procedure to test such an hypothesis and the investigation of the causes of this disinclination to use objective measures of performance must be left to a future study.

There was no statistically significant evidence in the data of an association between the use of salary-bonus plans to compensate outside salesmen in this industry and company profitability as measured by ROIC.

As would be expected, the commission incentive plans reported by the respondents were more directly based on objective measures of the outside salesmen's performance than were the bonus plans. Just under one-third of these plans were based directly upon a profitability measure of performance--predominantly gross profit. Just over two-thirds of these plans were based upon dollar volume or unit volume sales. However, as further evidence of a distinct trend towards profitability based incentive compensation for outside salesmen plans in this industry, approximately two out of five of these dollar volume or unit sales based commission plans incorporated differential product or product line profitability into their commission scales.

Management in this industry was approximately equally divided as to whether commissions should be paid only after a quota of dollar sales or profit was reached by the salesman (15 plans) or from the first dollar of sales or profit (17 plans). Where quotas were used, almost

without exception, the quota was the break-even point covering the salary paid to the salesman (sometimes salary plus certain territorial sales expenses) calculated according to the commission scale used.

In theory, an incentive that works "full time," i.e., from the first dollar of sales or profit, should be more effective than one that begins to work only when salary for that period has been defrayed. Unfortunately, the data here were so sparse, i.e., cell populations so small, that no statistically significant evidence that verified or disproved this hypothesis was developed. However, there was evidence that tended to support this hypothesis and the hypothesis merits definitive testing in a future study.

There was no statistically significant evidence in the data of an association between the use of commission component plans to compensate outside salesmen in this industry and company profitability as measured by ROIC.

An Overview Conceptual Framework

The compensation plan that a company uses for its salesforce is but one part of the total recruiting, selection, training, and supervision system under which its salesforce operates. Each of these functional subsystems contributes to the final result in terms of objective accomplishment.

For the sake of simplicity the compensation plan will be described as: (1) a communication system, (2) a control

system, and (3) a reward system. However, it must be remembered that the compensation plan can be assigned only portions of the total managerial functions of communications with the salesforce, controlling the salesforce, and rewarding the salesforce.

As a Communication System.--Before any meaningful communication can occur between management and the salesman, the corporate objectives of management must have been formulated in concise, unequivocal terms. From these objectives, the sub-objectives which will guide the activities of the salesforce will flow. Normally at this point the corporate objectives of the firm have been translated into a specific product-service mix quota that is desired from each territory. Inherent in these translated corporate objectives are the concepts of market penetration (market-share) and differential product-service profitability. Seldom are the objectives of market penetration and profitability compatible. Ordinarily one objective is attained only at some sacrifice of the other. Product or product line profitability, customer profitability, and order size profitability are closely interrelated rather than being separate concepts. Now the compensation plan can assume part of the communication function so that the salesman understands what is expected of him.

Throughout this study it has been assumed that the firms in this industry were in fact pursuing some kind of profitability goal. The recent history of this industry

being one of rather low return on investment relative to other comparable industries, coupled with a gradual improvement in this characteristic supports such an assumption. Where the firm's compensation plan for outside salesmen contained a profitability based incentive, certainly such an assumption was valid. Furthermore, such an assumption would appear to be valid for the smaller and middle-sized companies in the industry, though it might be less valid when applied to the largest companies (often producer-owned) where some at least, may be pursuing market-share goals with diminished concern for specified profitability goals.

The data was such that this hypothesis of an association between the formal communication of a profitability goal to the firm's salesforce and the firm's relative profitability could be tested only for firms with 1964 annual net sales of less than \$20 million.

A statistically significant association between an outside salesmen compensation plan containing a profitability-oriented component and the relatively high profitability of a firm's operation was found. Those firms that communicated to their salesforce the desire to emphasize differential product or product line profitability did, in fact, tend to be the more profitable firms.

As a Control System.--This aspect of compensation plans was not a main concern of this study. However, in

the interviews held with executives of the respondent companies in this industry, it was noted that, where the company's outside salesman compensation plan had been thoroughly planned with concise corporate objectives in mind, there appeared to be little concern with the supposed loss of control of the salesman's activity when incentive compensation was a part of the compensation plan. These executives were more concerned that objectives and incentive plan be compatible, than with any presumed loss of control of the salesman's activities with the introduction of an incentive component into the compensation plan. One might argue with their expressed goals for the firm, but they were unanimous in acclaiming their incentive plan as helping them attain those goals.

As a Reward System.--No direct data on the dollar level of compensation of outside salesmen was collected in this study. A previously cited study by the SSCI in 1960 suggested that compensation levels were primarily related to experience in the industry (see Appendix D). The conclusions discussed under "fixed compensation (salary)" and "incentive compensation (bonuses and commission)" above tended to support such a conclusion. It was, however, possible with the data collected in this study to test the hypothesis that a high level of total cash compensation of outside salesmen expressed as a percentage of Gross Profit was associated with high profitability of a company in this industry.

There was no significant evidence in the data of an association between level of compensation as measured by the proportion of total cash compensation (without regard to manner of payment) to gross profit and company profitability as measured by ROIC.

In conclusion it should be emphasized that the only statistically significant association that was found between characteristics of the outside salesman compensation plan and company profitability in this industry was that those companies with outside salesman compensation plans that communicated, before the fact, the desire of management to emphasize profitable territorial operation were, in general, the more profitable companies in this industry.

APPENDICES

APPENDIX A

THE SAMPLE

The data presented in this thesis were obtained, unless otherwise noted in the text, from questionnaires returned by sixty member companies of the Steel Service Center Institute. Sixty-six members selected in the manner described later in this Appendix were asked to complete the questionnaire (see Appendix B for a copy of the questionnaire) and 91% of them returned the questionnaire. Not all of the questionnaires were completed in full as is discussed in appropriate places in the text. The omission of information, for the most part, occurred in the data requested on page 9 of the questionnaire which concerned certain financial details of the company's operation. In some cases this information was reserved as being confidential and in others because the amount of work involved in developing the information in the form requested was thought by the respondent to be prohibitive.

In addition to the data developed through the questionnaires, information was obtained through personal interviews with executives of 53 of the 60 respondent companies and with the executives of 2 of the 6 member companies of the Institute which were selected for the sample but did not return questionnaires. These interviews were conducted during the period from September, 1965 through March, 1966 using the questionnaire as the format for the interview. In a number of cases the questionnaire was completed by

the writer during the interview, except for the financial data on page 9 of the questionnaire.

The questionnaire was pre-tested in personal interviews with executives of two Institute member service centers in Lansing, Michigan and in personal interviews with executives of five Institute member companies who were in East Lansing to attend a management seminar sponsored by the Steel Service Center Institute and conducted by Michigan State University. No evidence of reluctance or inability to furnish the information asked for in the questionnaire was detected in the pre-test. The questionnaires were mailed to the selected Institute members with a covering letter over the signature of Mr. Robert G. Welch, president of the Institute, from the office of the Institute in Cleveland in September, 1965. The questionnaire mailing was followed-up by the personal calls mentioned above and telephone calls when necessary to remind respondents to send promised data.

The Scope of the Sample

The sixty respondent companies operate 279 service centers of the 781 establishments operated by the member companies of the Institute (exclusive of Canadian companies and their branches) as listed on the Roster. These listed figures also exclude associate members, which are metal producers. Where information in the questionnaire indicated two or more listed companies were operated and

reported as one company, the additional company name listings were not counted in the totals. Because the larger companies were heavily sampled most of such duplication in listing was removed. However, ignorance of interrelationships between and among listed companies that were not sampled probably resulted in some duplication of listings in the total count on companies. Reading in the current industry literature especially Metal Center News¹ helped reduce this residual duplication. It is believed that the duplication finally remaining in the count of companies was small and did not affect the findings of the study significantly.

In the Steel Service Center Institute 1965-1966 Roster the statement is made that

Industrial steel service centers, most of whom belong to this Institute, handle two-thirds of the total distribution tonnage, with merchant products distributors and oil country jobbers each handling about one-sixth of the total, which amounted to 15.5 million tons of receipts in 1964. . . . Steel Service Centers ship on the average of 18 to 20 percent of all finished steel products.²

The universe from which the sample was selected was "member companies in the United States of the Steel Service Center Institute" but it is believed to be representative of the larger universe "metal service centers in the United

¹Metal/Center News, American Metal Market Co., New York, New York, published monthly.

²1965-1966 Roster (Cleveland, Ohio: Steel Service Center Institute, 1965), p. 5.

States." A metal industry publication, Iron Age, completed a census and survey of the metal service centers in 1965. Starting with a basic list of 2300 warehouses compiled from the various sources available to these researchers, a final list of 1862 service centers was established. A questionnaire mailing, follow-up mailing, and telephone follow-up procedure was used that resulted in 98% of the centers supplying the requested information.¹ The final total of 1862 service centers counted resulted from eliminating the following types of establishments: (1) those carrying only a narrow line of finished products such as wire and cable, (2) those that merely rent warehousing facilities, (3) brokers who do not have any warehousing operation, and (4) very small (one or two man) operations.² In Table A-1 a comparison is made of the geographic distributions of centers in: (1) the Iron Age census, (2) the membership roster of the Steel Service Center Institute, and (3) the sample used in this study.

The publication of a census and survey such as the Iron Age Census of Metals Service Centers--1966 makes possible an evaluation of the sample used in the study upon which this thesis is based.

¹"Census of Metal Service Centers," Iron Age (Philadelphia, Pa.: Chilton Company, 1966), p. 8.

²Ibid., p. 5.

TABLE A-1.--Geographic distribution of metal service centers, 1965.

	S. S. C. I. Regions ¹					Total
	A. S. Region	G. L. S. Region	C. S. Region	S. S. Region	R. M. Region	P. S. Region
<u>Iron Age</u> ²						
Centers	432	321	482	305	48	274
Percent	23.2	16.2	26.8	16.4	2.6	14.7
S.S.C.I. ³						
Centers	153	146	159	156	34	149
Percent	19.6	16.6	20.2	20.0	4.4	19.1
Sample						
Centers	41	49	55	58	13	63
Percent	14.7	17.6	19.7	20.8	4.7	22.6

155

¹These geographic regions are those used by the SSCI in all of its statistical work (see map at the end of this appendix). A. S. Region - Atlantic States Region; G. L. S. Region - Great Lakes States Region; C. S. Region - Central States Region; S. S. Region - Southern States Region; R. M. Region - Rocky Mountain States Region; P. S. Region - Pacific States Region.

²The Iron Age data are from "Census of Metals Service Centers," Iron Age, 1966, p. 15. These data were reworked from center distribution by state data.

³The S. S. C. I. data are from "Steel Service Center Institute 1964-1965 Roster."

The percentages may total to slightly more than or slightly less than 100% due to rounding.

In the Iron Age Census 54% (1004 of 1862 establishments) of the centers were centers operated by single establishment companies.¹ It is clear that the SSCI membership from which the sample for this study was drawn underrepresents this category of centers.

However, 36% (634 centers of the 1744 reporting size) of the centers in the Iron Age Census operated warehouses of less than 20,000 square feet of floor space. This size warehouse is very small, employing only an average of 2.5 outside salesmen.² Data from the sample used in the study upon which this thesis is based indicate that the average dollar volume annual sales produced by a salesman employed by a company that reported 1964 annual net sales of less than \$5 million was approximately \$400,000.³ It is likely then that these establishments with less than 20,000 square feet of warehouse floor space had an average 1964 annual net sales volume of approximately \$1 million and, accumulatively, the 634 establishments accounted for probably \$600 to \$650 million in sales in 1964. Of the 634 centers reporting the operation of warehouses in this size category, 400 were single establishment companies--probably employing about 1000 outside salesmen and producing about \$400 million in net sales in 1964. The Iron Age data indicate that 613

¹Ibid., p. 48.

²Ibid.

³Annual dollar volume per salesman rose as company size increased, reaching approximately \$1 million for the largest size category of companies.

centers operating warehouses with less than 20,000 square feet of floor space employed 1522 outside salesmen, thus 2/3 of 1500 is 1000 outside salesmen or approximately 12% of the 8145 outside salesmen employed by the 1666 centers that reported employment by job classification.¹

If these 400 very small (less than 20,000 square feet of warehouse floor space) single establishment company centers are eliminated from consideration, the resulting percentage proportion of single establishment company centers with 20,000 square feet of warehouse floor space or more to total centers in the Iron Age Census with such warehouse floor space becomes 41% (604 of 1462). This compares reasonably well with the 37% single establishment company centers in the SSCI membership. The sample of SSCI membership taken for this study offers further confirmation. Twenty companies in the sample reported 1964 annual net sales of at least \$1 million but less than \$5 million. These companies operated 33 centers and employed 137 outside salesmen or 4.2 outside salesmen per center. In the Iron Age Census those centers with warehouse floor space of at least 20,000 square feet but less than 50,000 square feet employed an average of 4.2 outside salesmen. Furthermore, the average number of outside salesmen employed per center by the 1644 centers with 20,000 or more square feet of warehouse floor space in the Iron Age Census was 6.0. In the sample the 279 centers

¹Iron Age, op. cit., p. 48.

represented employed 2067 outside salesmen or an average of 7.9 outside salesmen per center.

The SSCI membership and the sample for this study which was drawn from this membership does not represent the 400 very small single establishment company centers. The 1666 Iron Age Census centers that reported employment by job classification employed 8145 outside salesmen. A reasonable correction for the 196 (1862 total centers--1666 reported employment by job classification) non-reporting centers results in an estimate of total employment of outside salesmen in this industry of slightly more than 9000. The approximately 1000 salesmen employed by the 400 very small single establishment company centers represent only 10% or 11% of this total and probably somewhat less of the annual dollar sales volume in this industry because annual dollar sales per salesman rose as company size increased.

It is suggested that the lack of representation of the very small single establishment company in the sample used in this study is not a serious defect and that the findings of the study can safely be assumed to reflect compensation practices of the metal service centers industry.

The Method Used to Select the Sample

It became apparent early in the preliminary study of this industry prior to drawing a sample of companies for study that the industry was composed of a relatively large

number of relatively small companies and a relatively small number of relatively large companies. Although this was a judgment based at that time on a study of the available literature on the industry and discussions with knowledgeable people in the industry, e.g., Mr. Robert G. Welch, president of the Institute, it was later confirmed by analysis of the sample data. In fact, analysis of the sample data would lead to an estimate that the SSCI active membership is composed of 320 companies with 1964 annual net sales of less than \$10 million and 75 companies with 1964 annual net sales of \$10 million or more--an approximately 80%-20% split. Furthermore, the data would indicate that the SSCI active membership was composed of 240 companies with 1964 annual net sales of less than \$5 million, 110 companies with 1964 annual net sales of at least \$5 million but less than \$20 million, and 45 companies with 1964 annual net sales of \$20 million or more--an approximately 60%-30%-10% split. It is probable that the four largest companies in the industry employ 1000 outside salesmen and had 1964 annual net sales of nearly \$1 billion.

Even without the more specific information disclosed by the sample it was clear that a simple random sample would have to be rather large--possibly one-half of the SSCI active membership of approximately 400 company listings--in order to be reasonably sure to have sufficient items in any large company sub-sample to make possible statistically significant comparisons.

A stratified sample by company size would be a more efficient sample, but no information was available which would make it possible to categorize the company listings in the 1964-1965 SSCI Roster by size measured by 1964 annual net sales. However, the Roster did provide a listing of the number of establishments operated by the listed companies. It was believed that a reasonably good stratification by size measured by annual net sales could be obtained by stratifying by number of establishments operated. Furthermore, because addresses of the branches were listed it would be possible to select a sample that was balanced geographically (see Table A-1).

Using the geographic regions that are used by the SSCI in all its statistical work (see map at the end of this Appendix A) the companies making up the SSCI active membership were categorized as: national, multi-regional, bi-regional (contiguous), bi-regional (non-contiguous), intra-regional, and finally intra-state in terms of locations of the establishments each company operated. From this categorized list of the SSCI active membership 66 companies operating approximately 300 establishments were selected that would result in the inclusion of from 30% to 40% of the member installations in each of the six SSCI geographic regions of the United States. Of these 66 companies, 60 returned questionnaires and the executives of 55 of the 66 companies were interviewed. The sample that resulted represented 15% of the SSCI active member companies

(60 of 395), 36% of the establishments operated by the active member companies (279 of 781), and a distribution by company size of: 9% (21 of 240) of the SSCI member companies with 1964 annual net sales of less than \$5 million, 19% (21 of 110) of the SSCI member companies with 1964 annual net sales of at least \$5 million but less than \$20 million, and 40% (18 of 45) of the SSCI member companies with 1964 annual net sales of \$20 million or more. Table A-2 summarizes the stratification of the respondent company sample by number of establishments and size as measured by 1964 annual net sales.

The actual selection process chose the larger companies first because of their representation in several geographic regions. It then progressed toward the final category of single establishment companies, i.e., intra-state operation. While strict simple random sampling within strata was not adhered to, no judgmental factors other than geographic convenience for interviewing was used in selecting companies. Only the company name and the geographic location of its establishments was known. Therefore, it is believed that the characteristics of a stratified random sample were preserved in essence. If this assumption is a valid one, the following formulae for statistical purposes are appropriate:

TABLE A-2.--The distribution of sample companies and SSCI member companies by establishments operated and annual net sales.

Establishments	Less Than \$5 Million	At Least \$5 Million Less Than \$20 Million	\$20 Million or More	Sample Total	Population
1,2	18 (232)	6 (77)	1 (13)	25	322
3,4,5,	3 (8)	9 (25)	5 (14)	17	47
6,7,8,9,	0	6 (9)	6 (9)	12	18
10 - 22	0	0	6 (8)	6	8
	21 (240)	21 (111)	18 (44)	60	395

NOTE: The numbers in parentheses are the SSCI member companies calculated from the sample proportions.

$$\bar{X}_{sr} = W_1 \bar{X}_1 + W_2 \bar{X}_2$$

where \bar{X}_{sr} = estimated mean based on stratified random sampling and

W_1 = .8 (80% of the SSCI member companies with 1964 annual net sales of less than \$10 million)

W_2 = .2 (20% of the SSCI member companies with 1964 annual net sales of \$10 million or more).

or

$$\bar{X}_{sr} = W_1 \bar{X}_1 + W_2 \bar{X}_2 + W_3 \bar{X}_3$$

where \bar{X}_{sr} = same meaning as above and

W_1 = .6 (60% of the SSCI member companies with 1964 annual net sales of less than \$5 million).

W_2 = .3 (30% of the SSCI member companies with 1964 annual net sales of at least \$5 million but less than \$20 million).

W_3 = .1 (10% of the SSCI member companies with 1964 annual net sales of \$20 million or more).

and

$$S^2 \bar{X}_{sr} = \frac{W_1^2 S_1^2}{n_1} + \frac{W_2^2 S_2^2}{n_2} + \dots + \frac{W_k^2 S_k^2}{n_k}$$

where $S^2 \bar{X}_{sr}$ = variance of the stratified sample

S_1^2 = variance of strata 1, etc.

N_1 = sample size in strata 1, etc.

The standard error of the mean of the stratified sample is the square root of the variance of the stratified sample--
 $\sqrt{S^2 \bar{X}_{sr}}$.

Where appropriate, the finite population correction should be applied to appropriate terms in the expression given for $S^2 \bar{X}_{sr}$. Normally this is applied where the sample size within a stratum exceeds 10 percent of the population in that stratum, although some writers suggest its use where the sample size within a stratum exceeds 5 percent of the population in that stratum. For use with formulae for variance the proper correction factor is $\frac{N - n}{N}$. For use with formulae for standard error it is the square root of this expression. In this correction factor: N = number of items in the sub-population and n = number of items in the sub-sample.

APPENDIX B

THE QUESTIONNAIRE

STEEL SERVICE CENTER INSTITUTE
540 TERMINAL TOWER · (216) 241-3468 · CLEVELAND, OHIO 44113

ROBERT G. WELCH, President

September 27, 1965


Enclosed is a questionnaire prepared by Leonard Orr, the third Steel Service Center Institute Graduate Fellow, who is working for his Doctor's degree at the Graduate School of Business Administration, Michigan State University. He is making a study of the relationship between company profitability and the methods used to compensate outside salesmen in the metal service center industry.

The attached questionnaire is being sent to approximately fifty of our members who have been carefully selected to give us a representative sample of the industry. This group, including your company, constitutes the initial sample to be studied; therefore, it is very important to the validity of the data collected that a complete response is obtained.

We are hopeful that this study will provide guidelines for evaluating various types of metal service center compensation plans against company objectives and goals. He is endeavoring to find answers to such questions as: What relationship exists between profitability and specific elements of sales expense such as fixed compensation, incentives, fringe benefits, and sales promotion expense?

All replies will remain confidential and will be used in the doctoral dissertation in an anonymous summary. A summary of the results of this survey will be available to you upon the completion of the doctoral dissertation.

The questionnaire has been designed so that the classification data on your compensation plan can be completed by you in about 20 minutes. We will greatly appreciate your assisting us on this project.


Robert G. Welch

rt
Enclosures 2

P.S.--For your convenience in replying, we are enclosing a return envelope addressed to Mr. Orr.

SEQUENCE NUMBER

(DO NOT FILL IN)

FIELD SALESMEN'S

COMPENSATION PLAN

CLASSIFIER

CONFIDENTIAL

THIS INFORMATION WILL BE HELD IN STRICT CONFIDENCE
NO COMPANY NAMES WILL BE USED IN ANY MANNER

On the first page of the CLASSIFIER the four major components of the compensation plans used for salesmen are shown schematically:

FRINGE BENEFITS, FIXED COMPENSATION, INCENTIVES, AND EXPENSES

On that page the "fixed compensation" component is expanded in line diagram form so that you can indicate by check mark the particular detailed form this component takes in your plan.

On the following pages the other components are also expanded in line diagrams. Please indicate the detailed form these components take in your plan by placing check marks in the appropriate boxes.

If a particular component does not appear in your plan, this is made clear by the fact that you did not check it.

Please use the backs of the pages to explain "other" features of your plan and to give as much detail as you wish of your plan which you may feel is not covered adequately in the CLASSIFIER. If you wish to send descriptive material on your plan, please do so.

IT WILL BE HELPFUL TO READ THE CLASSIFIER

COMPLETELY BEFORE BEGINNING TO COMPLETE IT.

Identification Will Be Detached When Sequence Number Is Assigned

Company Name _____
and _____
Address _____

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10/11/1919

10/11/1919

10/11/1919

10/11/1919

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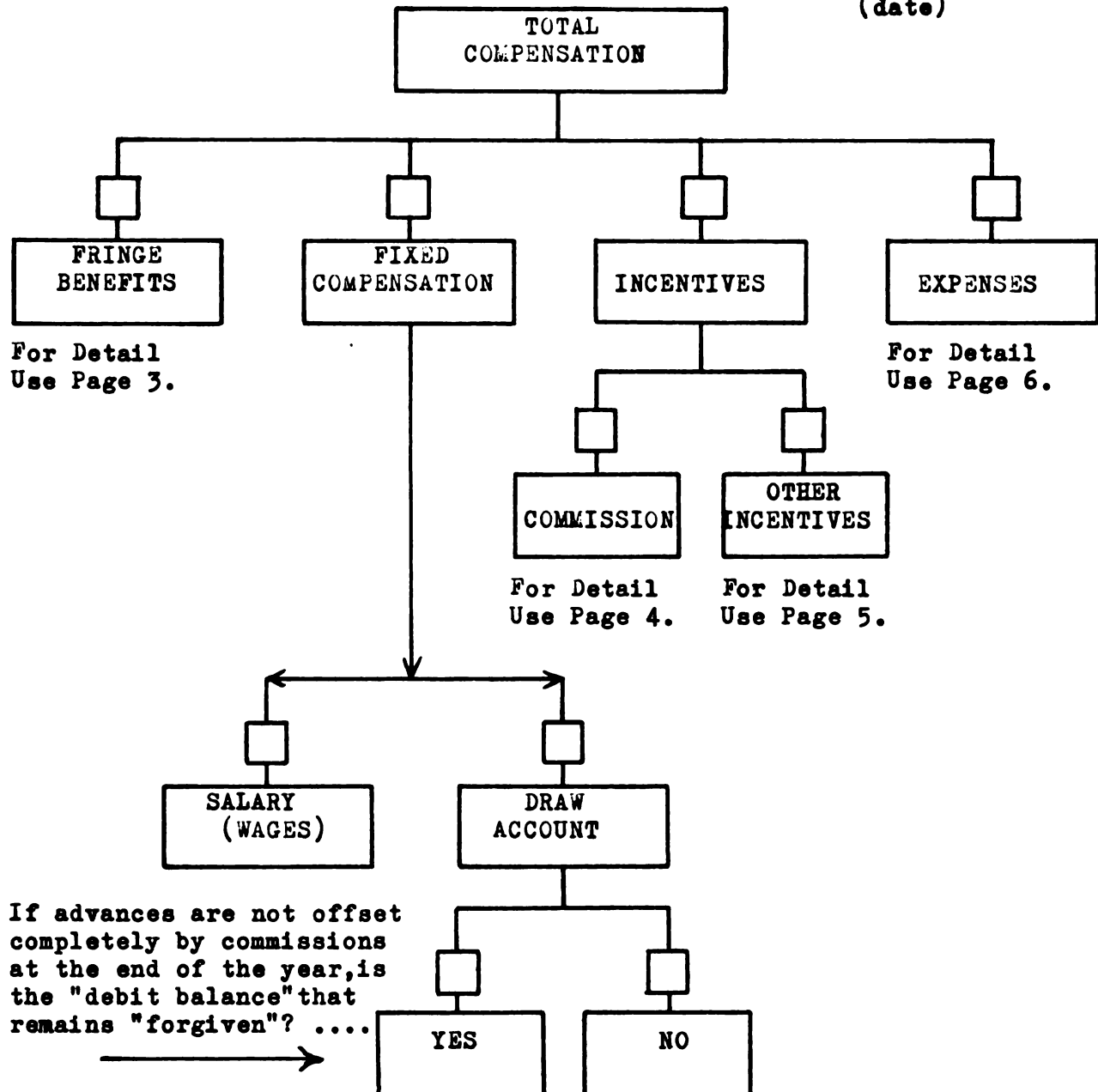
10/11/1919

10/11/1919

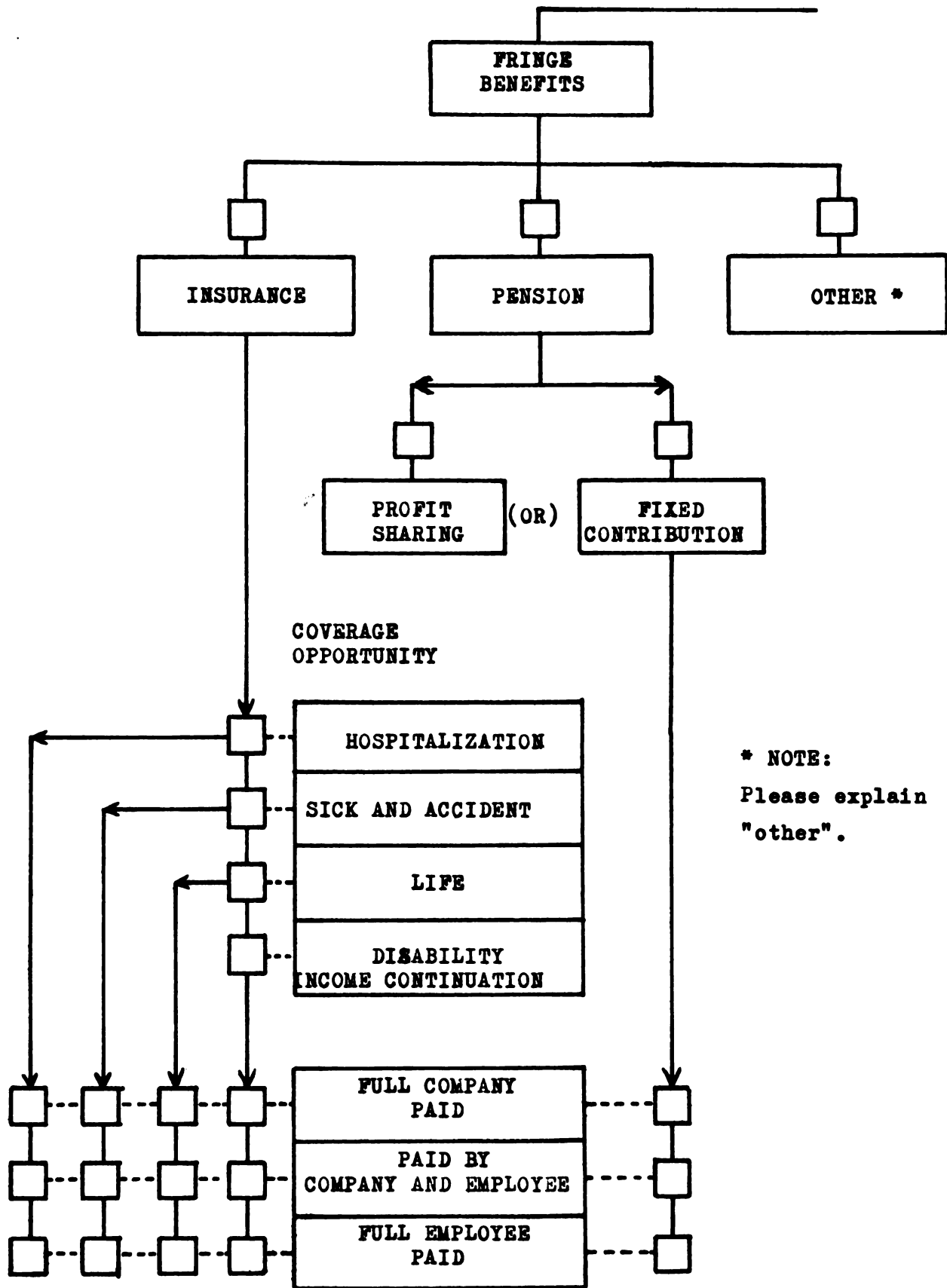
**MAJOR COMPONENTS
of
Field Salesmen's Compensation Plan**

The described Compensation Plan was installed : _____
(date)

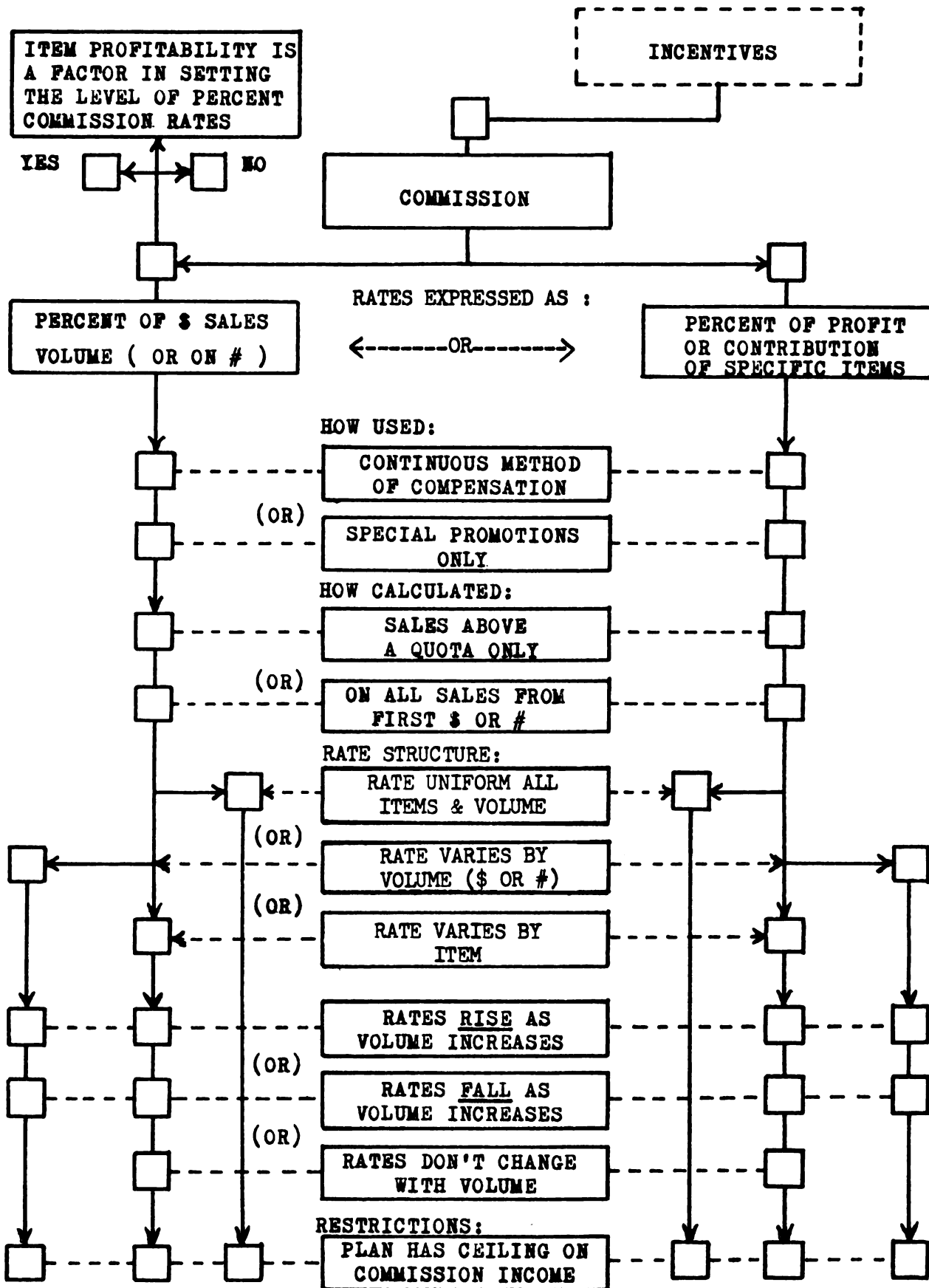
The last major revision of the plan effective : _____
(date)



Please Check Those Components That Are In Your Plan



Please Check The Details That Describe Your Plan Best



Please Check The Details That Describe Your Plan Best

INCENTIVES

☐

OTHER
INCENTIVES

☐

BONUSES

☐

CONTEST
PRIZES

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OTHER *

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PROFIT
SHARING

(OR)
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* NOTE:
Please explain "other".

ELIGIBILITY REQUIREMENTS
BASED ON :

INDIVIDUAL PERFORMANCE

(OR)

GROUP PERFORMANCE

ALLOCATION OF PAYOFF
BASED ON :

EMPLOYMENT FACTORS
(SENIORITY, INCOME, ETC)

(OR)

DIRECT CONTRIBUTION
TO PROFIT

(OR)

OTHER FACTORS *

PAYMENT IS IN :

CASH

STOCK

OTHER *

Please Check Those Components That Are In Your Plan

PAGE 5

EXPENSES			
<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div>	
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1. Description of compensation plan for INSIDE SALESMEN:

(Please check one of the choices below which describes your plan or explain under "other".)

a. Salary or wages only _____

b. Salary plus commission _____

(1) on sales volume _____

(2) on item profitability _____

c. Salary plus bonus _____

Briefly describe basis on
which bonus is awarded:

d. Other (please explain)

e. If FRINGE BENEFITS for inside salesmen
differ from those described in the
CLASSIFIER for field salesmen, please
describe those available to inside men:

2. Number of service centers (locations) company operates _____

3. Number of field (outside) salesmen company employs _____

4. Number of telephone (inside) salesmen company employs _____

5. Number of field (outside) salesmen included under the
compensation plan described in the CLASSIFIER _____

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6. If number in answer #5 is smaller than number in answer #3, please check reason(s) for exclusion of some salesmen from described plan:

- a. Supervisory Duties _____
- b. Insufficient Experience _____
- c. Territory Considerations _____
- d. Other (please explain) _____

7. Some companies operate subsidiaries that are service centers with a separate corporate name. Please indicate all company names that are included in your answers above. This will avoid duplication.

8. If you indicated on Page 4 of the CLASSIFIER that item profitability was used in setting commission rates, please explain briefly how profit (or contribution to overhead and profit) is calculated and applied in setting commission rates.

9. Total Company Sales of All Products in 1964. (Please check the category below into which your company falls.)

- a. Less than \$1 million _____
- b. At least \$1 million, but less than \$5 million _____
- c. At least \$5 million, but less than \$10 million _____
- d. At least \$10 million, but less than \$20 million _____
- e. \$20 million or more _____

10. Computed as a percentage of TOTAL COMPANY SALES in 1964 (TOTAL COMPANY SALES considered as 100.00%) and reported to the nearest 100th of 1 percent.

Total SELLING EXPENSE was ____%

(See top of next page for expenses to be included in SELLING EXPENSE)

1. 2014 年 12 月 31 日，甲企业“应收账款”科目借方余额为 5000 元，
 “坏账准备”科目贷方余额为 200 元。2015 年 1 月 1 日，甲企业根据

[illegible]

$\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{4}$

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

SELLING EXPENSE

for

Calendar Year 1964

(or Fiscal Year ending _____)

Please compute each component of SELLING EXPENSE below as a percentage of the Total SELLING EXPENSE your company incurred during 1964 or your fiscal year (considering Total SELLING EXPENSE AS 100.00%) and report to the nearest 100th of 1 percent. If you must estimate the figures because of lack of exact information, please do so to the nearest whole percent and mark figures as being an estimate.

SELLING EXPENSE includes all expenses of your sales and order departments; all fixed compensation paid to inside and outside personnel of these departments, including sales executives; all sales commissions and bonuses, prizes, etc.; all advertising expense; and all district sales office expense.

FOR FIELD SALESMEN ONLY

1. Total Fixed Compensation (salary, wages, etc. - see Page 2 of Classifier) paid to Field Salesmen was _____. %
2. Total expense to company for Fringe Benefits (see Page 3 of Classifier) for Field Salesmen was _____. %
3. Total Incentive Income (see Pages 4 & 5 of Classifier) paid to Field Salesmen was _____. %

This was composed of:

- a. Commission Income (Page 4) _____. %
- b. Other Incentive Income (Page 5) _____. %
4. Total Expenses (Page 6 of Classifier), paid as an allowance to salesmen or in reimbursement to them for out-of-pocket expense incurred by them, was _____. %

This was composed of:

- a. Automobile Expense (*) _____. %
- b. Entertainment and Other Expense(+) _____. %

NOTE:

(*) Include depreciation if you furnish car or reimburse salesman directly for the use of his car.

(+) Include only out-of-pocket expense a salesman incurs for which you give him an allowance or reimbursement.

GENERAL INSTRUCTIONS

1.

2. The following instructions

3. The following instructions

4. The following instructions

5. The following instructions

6. The following instructions

7. The following instructions

8. The following instructions

9. The following instructions

10. The following instructions

11. The following instructions

12. The following instructions

13. The following instructions

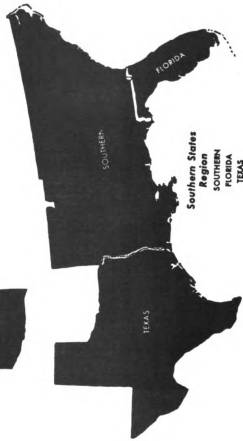
14. The following instructions

Great Lakes States Region
 BUFFALO — CINCINNATI — DETROIT
 NORTH OHIO — PITTSBURGH

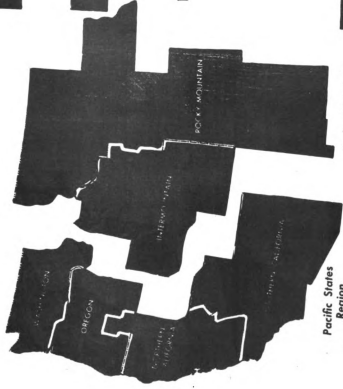
Central States Region
 CENTRAL STATES — MISSOURI-KANSAS-OKLAHOMA
 MID STATES — NORTHWEST — ST. LOUIS — WISCONSIN



Atlantic States Region
 NEW ENGLAND
 CONNECTICUT
 NEW YORK
 PHILADELPHIA
 BALTIMORE



Pacific States Region
 ROCKY MOUNTAIN
 ROCKY MOUNTAIN
 INTERMOUNTAIN



REGIONS AND CHAPTERS
 OF
 THE

STEEL SERVICE CENTER INSTITUTE

The Regions shown on map are those used by the Institute in all of its statistical reports.

APPENDIX C

SSCI REPORT OF OPERATIONS AND
OPERATING RATIOS QUESTIONNAIRE

CONFIDENTIAL

Return This Copy to SSCI

YEAR
1964

REPORT OF OPERATIONS
AND OPERATING RATIOS

YEAR
1964

No company names will appear in tabulations distributed to members. Your report will be destroyed. Information will be classified by like businesses.

CLASSIFICATION DATA

(If actual percentages are not readily available, give best estimate. Report to nearest whole percent.)

Our Total Company Dollar Sales in 1964 (or for fiscal year ended _____) were distributed as follows:

A—Industrial Steel Products (see list on Page 4).....	_____ %
B—Fabricating (other than cutting, burning, etc.).....	_____ %
C—Mill Supplies and Wholesale Hardware, including Merchant Steel Products.....	_____ %
D—Aluminum.....	_____ %
E—Other Non-ferrous Metals.....	_____ %
F—Miscellaneous (all other).....	_____ %
(Sum of lines A to F inclusive—Total Net Sales of your business).....	<u>100</u> %

Item A above (Industrial Steel Products) was distributed on a dollar sales basis as follows:

1. Carbon Plates, Shapes, and Hot Rolled Bars.....	<div>{</div> <div>Please</div> <div>Estimate</div> <div>if exact</div> <div>figures</div> <div>are</div> <div>not</div> <div>available</div> <div>}</div>	_____ %	<div>Report</div> <div>to</div> <div>nearest</div> <div>whole</div> <div>percent</div>
2. Cold Finished Carbon Bars.....		_____ %	
3. Hot Rolled and Cold Finished Carbon Sheets and Strip.....		_____ %	
4. Galvanized and Coated Sheets.....		_____ %	
5. Carbon Tubular Products.....		_____ %	
6. Hot Rolled and Cold Finished Alloys and Tool Steel.....		_____ %	
7. Stainless Steel Products.....		_____ %	
8. Miscellaneous Industrial Steel Products.....		_____ %	
Total Sales of Industrial Steel Products.....		<u>100</u> %	

Group the products you handle to conform to this list as closely as possible. See Page 4 for a complete list of Industrial Steel Products as defined by the Institute.

What per cent of your sales of Industrial Steel Products (Item A above) was processed in some form? (Sawed, burned, slit, sheared, levelled, etc.) 0-25% _____, 26-50% _____, 51-75% _____, 76% and over _____.

Our Total Company Sales for All Products and Services Were: { Under \$500,000 _____, over \$500,000 to \$1,000,000 _____,
over \$1,000,000 to \$5,000,000 _____, over \$5,000,000 _____.

COMPANY

BRANCH

PLEASE MAKE A SEPARATE REPORT FOR EACH OF YOUR SERVICE CENTERS.

STEEL SERVICE CENTER INSTITUTE

540 TERMINAL TOWER



CLEVELAND, OHIO 44113

IMPORTANT! PLEASE CHECK ONE OF THE TWO CATEGORIES BELOW.

1. The figures shown here and on page 3 cover the entire operations of our company. _____
2. The figures shown here and on page 3 cover our steel service center sales only. _____

REPORT OF COMPANY OPERATIONS

Calendar year 1964 or Fiscal Year Ended _____

(Compute each item as a percentage of TOTAL NET SALES, considering
TOTAL NET SALES as 100.00%, and report to the nearest 100th of 1 percent)

See FOOTNOTES below

Line		
1	Total Net Sales (after deducting sales returns, sales allowances and cash discounts).....	1 0 0.0 0 %
2	Cost of Sales (after deducting discounts received).....	. %
3	Gross Profit on Total Net Sales (Line 1 minus 2).....	. %
4	Prepaid Freight and Local Delivery Expense.....	. %
5	Gross Profit after Freight and Delivery Expense (Line 3 minus 4).....	. %
6	Selling Expense %
7	Plant Expense.....	. %
8	General and Administrative Expense.....	. %
9	Bonuses, Profit Sharing, etc.....	. %
10	(Sum of Lines 6, 7, 8 and 9).....	. %
11	Gross Operating Profit (Line 5 minus 10).....	. %
12	Other Income.....	. %
13	(Line 11 plus 12).....	. %
14	Other Expenses.....	. %
15	Net Profit Before Taxes (Line 13 minus 14).....	. %
16	All Taxes on Income.....	. %
17	Net Profit (Line 15 minus 16).....	. %

FOOTNOTES

To assure accurate comparisons between companies, it is important that all members include the same information when computing the percentage for each of the above captions. Therefore, in addition to including that information which is evident from each caption title, please carefully observe the following:

Line 1—Total Net Sales—Include total net sales of your business, whether shipped direct from your supplier to your customers or from your service center to your customers, and sales of services in processing and handling customers' materials.

Line 2—Cost of Sales—This should include only the cost of the materials and the cost of the services reported as Total Net Sales on Line 1. Deduct discounts received in arriving at this item.

Line 4—Prepaid Freight and Local Delivery Expense—Include here freight which you prepaid on shipments to your customers and all costs of operating your own trucks such as wages, fuel, repairs, depreciation, etc. or amounts paid to contract haulers, as the case may be.

Line 6—Selling Expense—Include all expenses of your sales and order departments; all compensation (other than that included on Line 9) paid to inside and outside personnel thereof, including sales executives; sales commissions; advertising expense; district sales office expense.

Line 7—Plant Expense—Include all expenses of your warehouse plant and traffic department; depreciation of plant and equipment, or rent, as the case may be; compensation (other than that included on Line 9) paid to your plant superintendent and traffic manager; repairs and maintenance; fuel and power; plant supplies.

Line 8—General and Administrative Expense—Include all expenses not reported elsewhere.

Line 9—Bonuses, Profit Sharing, etc.—Include any such compensation, other than sales commissions, which was paid because of profits earned during the year and which either would not have been paid or would have been paid in a lesser amount if less satisfactory profits had been earned. Such compensation is listed separately on this Line as it is not considered a part of fixed overhead.

Line 10—(Sum of Lines 6, 7, 8 and 9)—If you are unable to show separately the percentage for each of Lines 6, 7, 8 and 9, then show on this Line the percentage applicable to the total of those four expense items.

Line 12—Other Income—Include investment income, profit or loss from sale of fixed assets, net income from rentals, commissions received

Line 14—Other Expenses—Include interest paid and bad debts.

Line 16—All Taxes on Income—Include federal income and excess profit taxes; state and local income taxes; and any other taxes on

Miscellaneous—Exclude from all these entries all extraordinary adjustments not applicable to the year reported.

COMPANY OPERATING RATIOS

Inventory Turnover

Divide Cost of Materials Shipped from Stock for the entire year by average inventory value during the year. Important — in computing average inventory value, be sure to include value of consigned stocks as well as inventory owned outright. The result is the number of times inventory turned over during the year. - - - - -

_____ Times

Percentage that Shipments from Stock are of Total Net Sales

Divide the net sales value of Shipments from Stock by Total Net Sales. - - - - -

_____ %

Gross Margin on Shipments from Stock

Divide the Gross Margin on Shipments from Stock (difference between the net sales value and the cost of the goods sold) by the net sales value of such Shipments from Stock. -

_____ %

Gross Margin on Direct Shipments

Divide the Gross Margin on Direct Shipments (difference between the net sales value and the cost of the goods sold) by the net sales value of such Direct Shipments. - - - - -

_____ %

Percentage that Total of Returns and Allowances is of Net Sales

Divide the sum of Sales Returns and Allowances by Total Net Sales. - - - - -

_____ %

Percentage that actual Bad Debts expense for year is of Net Sales

Divide the actual (only those specific accounts charged off during the year before any recovery through credit insurance) Bad Debt expense by Total Net Sales. - - - - -

_____ %

Percentage that Advertising Expense is of Net Sales

Divide Advertising Expense (include only the cost of publication advertising, telephone directory listings, stock lists and other mailing pieces, giveaway novelties, and advertising agency) by Total Net Sales. - - - - -

_____ %

Number of Days Sales in Accounts Receivables at December 31, 1964

Divide Total Net Sales for the month of December, 1964 by 30. Then divide the result (one day's sales) into the amount of Trade Accounts Receivable (before Reserve for Bad Debts) as of December 31, 1964. - - - - -

_____ Days

Average Number of Days Sales in Accounts Receivable

Find your average monthly Total Net Sales and average monthly Trade Accounts Receivable (before Reserve for Bad Debts) for the year 1964. Divide average monthly Total Net Sales by 30. Then divide the result (average one day's sales) into average monthly Trade Accounts Receivable. - - - - -

_____ Days

Return Before Income Taxes on Invested Capital

Divide Net Profit before Income Taxes by average monthly Net Worth. For corporations include in Net Worth the sum of Paid-in Capital, Paid-in Surplus, Earned Surplus, and Subordinated Debt. - - - - -

_____ %

Return After Income Taxes on Invested Capital

Divide Net Profit after Income Taxes by average monthly Net Worth. For corporations include in Net Worth the sum of Paid-in Capital, Paid-in Surplus, Earned Surplus, and Subordinated Debt. - - - - -

_____ %

Return Before Taxes on Total Invested Funds

(See Instructions on page 4)

_____ %

These are Industrial Steel Products (carbon, alloy, and stainless):

Semi-finished, Billets, Skelp	All other Coated Sheets and Strip (including organic or metallic coatings)	Wire Rods
Structurals, including Hollow Structurals	Roofing Terne	Grating
Plates, U.M. and Sheared, and Floor Plates	Electrical Sheets and Strip	Drawn Wire
Reinforcing Bars (non-formed)	Enameling Sheets	Tool Steel, including Drill Rod
Hot-Rolled and Forged, Plain, or Galvanized Bars and Bar Shapes	Tin Plate and Tin Mill Black Plate (prime or secondary quality, sheets or coils)	Cold Rolled Flat Wire
Cold Finished Bars	Mechanical Tubing	Rails and Accessories
Hot and Cold Rolled Sheets and Strip, (prime or secondary quality) including coils	Pressure Tubing	Patterned Steel (including embossed)
Hot Dipped and Electrolytic Galvanized Sheets and Strip (prime or secondary quality) includ- ing Corrugated, Mansard Siding and Coils	Stainless Pipe	Expanded Steel
	Spring Steel	Perforated Steel

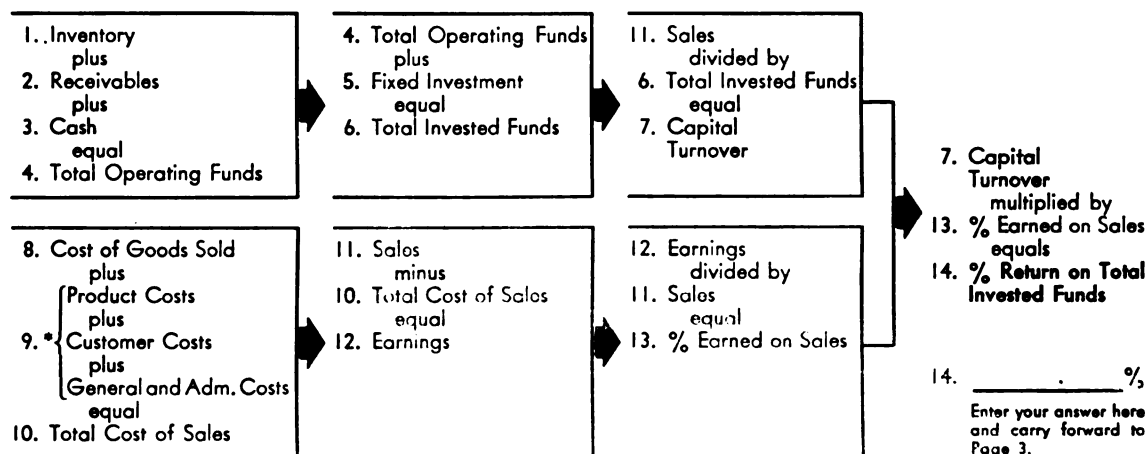
FORMULA FOR DETERMINING RETURN ON INVESTED FUNDS

The formula which has been decided upon is popularly known as "the Dupont formula" and is used by many corporations throughout the United States.

For the purposes of any individual industry, however, it is necessary to define exactly each factor in the formula. Toward this end, it was considered desirable to establish rules which would be easy to follow by the greatest number of anticipated participants and which would give us maximum uniformity.

Admittedly, some of the rules established are controversial. It should be remembered, however, that the formula is not intended as a guide for the preparation of a financial statement; rather it is intended to make possible a more realistic evaluation of management's use of capital. Each of the factors is readily available from traditional accounting records, as well as from Distribution Cost Analysis records if this accounting method is used. Calculations should be based upon the entire operations of your company, and should be taken from fiscal year-end statements.

Each factor in the formula is numbered and each is explained below in detail:



*Total Operating Costs

1. INVENTORY: This is to be valued according to whatever system an individual company is now using . . . LIFO, FIFO, average costs, etc. Consigned inventory is to be included.

2. RECEIVABLES: Should be gross receivables, reserves are not to be deducted.

3. CASH: All cash in commercial bank accounts should be included. Cash in investment accounts should not be included.

4. TOTAL OPERATING FUNDS: The total of all owned and consigned inventory, gross receivables and cash. The figures to be used are those which apply at the beginning of the fiscal year, whatever the date may be.

5. FIXED INVESTMENT: This includes buildings and equipment, which should be valued at original cost. Do not use depreciated cost or book value.

6. TOTAL INVESTED FUNDS: The sum of total operating funds plus fixed investment.

7. CAPITAL TURNOVER: Divide Sales (11) by Total Invested Funds plus Fixed Investment.

8. COST OF GOODS SOLD: Use the same system of valuation used in computing the value of Inventory (1).

9. TOTAL OPERATING COSTS: To those companies which are participating in Distribution Cost Analysis, this would be the sum of the following: Product Costs, Customer Costs, and General and Administrative Costs. Otherwise, it is simply the sum of all operating costs.

10. TOTAL COST OF SALES: The sum of the cost of goods sold (8) and total operating costs (9).

11. SALES: This should be total company sales, less miscellaneous income arising from investments in subsidiaries not directly related to metal distribution and/or from investments not directly related to the operation of this business. For example, the following should not be included: a) income from government bonds; b) income from common stocks other than those of directly related subsidiary companies; c) income from realties.

12. EARNINGS: The difference between Sales (11) and Total Cost of Sales (10).

13. % EARNED ON SALES: Earnings (12) divided by Sales (11).

14. % RETURN ON TOTAL INVESTED FUNDS: Capital Turnover (7) multiplied by % Earned on Sales (13).

APPENDIX D

EXCERPTS FROM THE SSCI SURVEY
OF SALESMEN'S COMPENSATION--1959

SSCI SURVEY OF SALESMEN'S COMPENSATION
First Half, 1960

Compensation of Outside Salesmen

Reporting companies were asked to provide average monthly total compensation, including bonuses and commissions, but excluding Christmas or year-end bonuses, for outside salesmen for the first half of 1959.

Outside salesmen were divided into three categories: Trainee, Least Experienced Salesman, and Most Experienced Salesman. Average compensation figures for all outside salesmen were also requested.

Table No. 1 below lists the total average monthly compensation below which one quarter of the replies fell (lower quartile), the mean figure (half way down the range of replies), and the salaries above which one quarter of the replies fell (upper quartile). The average of all replies was also computed.

Table No. 1 Average Monthly Total Compensation
Outside Salesmen -- First Half, 1959

	<u>Trainee</u>	<u>Least Experienced</u>	<u>Average Salesman</u>	<u>Most Experienced</u>
Lower Quartile	\$400	\$500	\$600	\$748
Mean	450	525	654	950
Upper Quartile	495	650	750	1050
Average of all Replies	452	557	695	990

All but two companies responding indicated that their compensation plan, upon which these figures are based, included salary plus either a commission or bonus. One company reported payments on a straight salary basis, while one other company reported that its outside salesmen are paid on a straight commission basis, from which they must pay all their own expenses.

Compensation of Inside Salesmen

The same general questions were asked concerning total compensation for inside salesmen. The summary of these replies is as follows:

Table No. 2 Average Monthly Total Compensation
Inside Salesmen -- First Half, 1959

	<u>Trainee</u>	<u>Least Experienced</u>	<u>Average Salesman</u>	<u>Most Experienced</u>
Lower Quartile	\$300	\$350	\$415	\$550
Mean	385	415	500	585
Upper Quartile	425	450	550	650
Average of all Replies	385	416	494	578

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BIBLIOGRAPHY

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