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INTRACOMPANY PRICING

By

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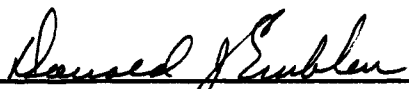
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1965

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION -- DECENTRALIZATION AND TRANSFER PRICING	1
II. AN OVERVIEW OF TRANSFER PRICING METHODS	10
III. TRANSFER PRICING AND EVALUATION OF PROFIT CENTERS	15
IV. THE SIGNIFICANCE OF TRANSFER PRICING IN DECISION MAKING	29
V. RECENT DEVELOPMENTS AND SUMMARY	47

CHAPTER I

INTRODUCTION

A Management Problem

The size and complexity of business enterprises have increased tremendously since the beginning of this century. To cope with this situation, the science of management has been developed extensively. Huge businesses such as Dupont, Sears Roebuck, General Electric, and General Motors have given considerable study to the field of management in order to find better ways of solving the problems of modern business. As a result of such study, these companies have modified much of their earlier thinking on the most effective use of management talent.

In many of these large firms more effective management has been achieved by a greater delegation of authority. This delegation is accomplished by decentralization. Decentralization is a philosophy of organization and management that goes beyond mere delegation of authority. It implies both selective dispersal and concentration of authority. Careful selection of what to place at lower levels in the organization structure and what to hold at the top, specific policy making to guide decision making, selection and training of personnel, and adequate controls are all prerequisites to successful decentralization.¹

Decentralization of authority is a relative situation. Absolute decentralization or centralization of authority is very unlikely. Absolute centralization

¹ Harold Koontz and Cyril O'Donnell, Principles of Management (New York: McGraw-Hill Book Co., 1964), p. 318.

could exist, but this would imply no subordinate managers or organization.

Absolute decentralization could not exist because, if the manager delegates all of his authority, he is no longer a manager; there would again be no organization.

Both decentralization and centralization, then, are degrees of delegation of authority.

The degree of decentralization is affected by many factors, not the least of which is the desires of the company's incumbent top management. If these executives dislike delegating their authority, decentralization will tend to be limited. However, there are a number of factors beyond the executives' control which affect the degree of decentralization. Two of the most important factors are the size of the firm and the desire for independence.

As the firm grows in size, more and more decisions have to be made. If all decisions are referred to top management, a backlog is likely to occur. Slow decisions are costly because they result in lost sales or missed opportunities. To minimize this cost, the decision level must be as close as possible to the transaction. This can be accomplished by decentralization.

The desire for some degree of independence and a sense of achievement is characteristic of individuals. Providing for independence can also be rewarding to the company because it tends to encourage initiative and improvement of management skills. Well-planned decentralization should allow people to achieve a feeling of independence and participation in the affairs of the company while retaining the efficiencies of centralized coordination and control.

Profit Centers

A technique that has been used to control decentralized authority is the profit center. Profit centers are operating units, divisions or departments, that are evaluated primarily in terms of profits earned. Top management delegates to the unit manager authority over most of the major determinants of the unit's profits. In theory, the unit manager then runs the operating unit as a separate business, subject only to policies and guides set down by top management. Joel Dean has suggested the following as essential characteristics of a profit center:²

1. Operational independence-- Each profit center must be an independent operating unit and its manager must have control over most, if not all, of the factors affecting profits. This would require that he have considerable discretion in determining the operating methods, production volume, product mix, and so forth, subject only to broad policies and standards set by top management.
2. Access to sources and markets-- The profit center manager should be free to buy and sell in alternative markets both inside and outside the company.
3. Separable costs and revenue-- A profit center must be able to split off its costs and find an economically realistic price for

²Joel Dean, "Decentralization and Intracompany Pricing," Harvard Business Review, XXXIII (July-August, 1955), p. 67.

~~its end products; otherwise, measurement of its profit performance is impossible.~~

4. Management intent-- Only if the basic intent of the operating unit is profits should it be treated as a profit center.

A basic assumption implied in the use of profit centers is that any increase in operating unit profits will increase the total company profits by a similar amount. The unit manager is encouraged to increase his unit's profits by any means at his disposal because his performance is measured, in large part, by these profits. The profitability of an operating unit will undoubtedly influence top management in allocating funds for capital additions or improvements. Thus, the operating unit's profits are used for evaluation and for decision making by both the division manager and by top management.

A reliable unit profit computation must be established if the resulting profit is to be relied on. Reliable divisional or departmental profit figures are difficult to achieve. The primary cause of this difficulty is the fact that the operating unit is not really independent. Because the operating unit is only semi-independent, the problems of pricing goods transferred between operating units (intra-company transfer pricing) and allocating central office and service unit costs to the operating units must be solved. In addition, if a return on investment in unit facilities is used, a problem arises in comparing facilities of different ages and operations that require different amounts of invested capital.

When the operating units participate in the processing and sale of the same product, intracompany transfer pricing is a significant factor in the

determination of unit profits. The revenue of the selling unit and the purchase costs of the buying unit are directly affected by the price placed on goods transferred. Determination of a price fair to both units is a must if the divisions or departments are to be evaluated as profit centers.

Allocation of the costs of the service units of the company (central office costs, research and development costs, and so forth) is important. These expenses as well as those of the operating units must be covered if the company is going to be profitable. However, allocation of these costs to the operating units tends to be arbitrary. For example, how much of the president's salary should be allocated to each unit? Probably the most practical solution to this problem is the use of a "stepped" divisional income statement. On a stepped income statement, allocated central office and service costs are deducted at the bottom of the statement from divisional profits before deduction of allocated costs.³ When the allocation of costs cannot be determined equitably, the division can be evaluated in terms of profits before deduction of allocated costs.

Form of Organization

The preceding comments have not indicated the form of organization required to implement decentralization. Because decentralization is essentially a process of delegation, it is possible to use a variety of organizational structures. The most commonly used structures appear to be the corporate division or department and the subsidiary. Their popularity is due to the need for a separation

³See Gordon Shillinglaw, "Guides to Internal Profit Measurement," Harvard Business Review, XXXV (March-April, 1957), pp. 82-94.

of operations to facilitate evaluation. The primary difference between divisions or departments and subsidiaries is that the division and the department are a part of the parent corporation while the subsidiary is a separate legal entity --a separate corporation. The division and the department differ only in name, though the term division seems to imply a larger, more autonomous unit. The division appears to be the most popular of the three forms of organizing profit centers.⁴

Decentralization and Profit Centers in Perspective

The use of profit centers in the framework of a decentralized management system appears to be workable if the problems of effective evaluation and decision-making are solved. Perhaps some insight into the solution of these problems can be gained by introducing the philosophy of management used by General Motors.

The General Motors Corporation is a dramatically successful company in a competitive and dynamic industry. This success is probably due to a number of things, but it seems certain that considerable contribution has been made by the company's management philosophy. Decentralization at General Motors means decentralized authority with coordinated control by top management.⁵

⁴ See Robert W. Murphy, "Corporate Divisions vs. Subsidiaries," Harvard Business Review, XXXIV (November-December, 1956), pp. 83-92.

⁵ Koontz and O'Donnell, p. 330.

Subject to broad corporate policy, each division -- such as Chevrolet, Allison, and Frigidaire -- operates much as an independent business.

Peter Drucker interviewed a number of the company's executives and summarized their views as to the advantages of decentralization as follows:⁶

1. Speed and lack of confusion in decision making.
2. Absence of conflict between top management and the divisions.
3. A sense of fairness in dealing with executives, confidence that a job well done would be appreciated, and a lack of politics in the organization.
4. Informality and democracy in management.
5. Absence of a gap between a few top managers and the many subordinate managers in the organization.
6. The availability of a large reservoir of promotable managerial manpower.
7. Ready visibility of weak managements through results of semi-independent and often competitive divisions.
8. An absence of "edit management" and the presence of thorough information and consideration of central management decisions.

How did General Motors solve the problems of evaluating its divisions?

General Motors' system of evaluation solves these problems by admitting they exist. The operating divisions are evaluated in terms of such long-term

⁶Koontz and O'Donnell, p. 330, citing P. F. Drucker, Concept of the Corporation, (New York: The John Day Company, Inc., 1946).

considerations as market penetration, personnel training, and product development in addition to profits measured by the rate of return earned on invested capital.⁷ The use of a number of evaluation standards in conjunction with knowledge of the effects of such problems as pricing intracompany transfers and allocating central office costs results in an analysis which minimizes the effect of these evaluation problems.

The General Electric Company also uses a variety of measurements in evaluating its decentralized divisions. In addition to divisional profits, the market position, productivity, product leadership, personnel development, employee attitudes, and the public responsibility of the divisions are considered significant.⁸ Evaluations based on a number of factors are less likely to be weakened by the deficiencies in measuring any one factor.

History of Decentralization

Some of the earliest examples of decentralization are found in the holding companies that developed in this country around the turn of the century. A holding company is a corporation that acquires control of a number of other corporations forming a loose association. The holding company did not carry on any operations of its own; it simply controlled its subsidiaries. The holding company's management of its subsidiaries was decentralized to an extreme in those

⁷ Alfred P. Sloane, "My Years With General Motors," Fortune, September, 1963, p. 147.

⁸ Ralph J. Cordiner, New Frontiers for Professional Managers (New York: McGraw-Hill Book Company, Inc., 1956), pp. 100-101.

cases where no attempt was made to coordinate the activities of the group.

The deficiencies of this form of organization can be illustrated by the troubles experienced by the General Motors Corporation in 1920 and 1921. At that time General Motors was a loosely controlled group of automobile and automobile accessory manufacturers put together by W. C. Durant. The lack of coordination and communication among the various subsidiaries and the parent corporation almost bankrupted the group during the economic decline of the early 1920s. Top management was hampered by the absence of an adequate reporting system to apprise them of actions taken by the operating executives.⁹ Because of this lack of information, no one was aware until it was too late that the company had entered the economic decline with excessive inventories and no plans for reducing production. The powerful financial influence of the Dupont family prevented the collapse of the company. This early experience of General Motors is a good illustration of the importance of adequate control and coordination by top management in a decentralized organization.

Since World War II, the rapid increase in the size of business firms has increased the pressure for more effective management tools. Many of these large firms have selected decentralization as the most promising answer to their management problems. A partial list of these businesses includes General Motors, General Electric, Sears Roebuck & Company, General Dynamics Corporation, Standard Oil Company of New Jersey, and Armour & Company.

⁹ Alfred P. Sloane, p. 141.

CHAPTER II

AN OVERVIEW OF TRANSFER PRICING METHODS

Divisional or departmental income figures are somewhat unreliable as standards for evaluation. This weakness in the profit center concept is caused by difficulties in determining accurate revenue and expense figures. An example of such a difficulty is the pricing of goods transferred within the company. This pricing is called intracompany pricing or transfer pricing.

In this chapter, the basic methods of pricing intracompany transfers will be described and discussed briefly. Their application to the problems of evaluating a profit center and providing reliable information for decision making will be deferred to Chapters III and IV respectively.

What is a Transfer Price?

A transfer price is the net value per unit of goods transferred between operating units of the same company.¹ An example would be the price of gasoline used to record the transfer of a tankcar of gasoline from the refining division to the marketing division of a decentralized oil company. The transfer price used to record the "sale" might be full cost, marginal cost, cost plus a fair return, market, or a negotiated price. Each of these methods of pricing intracompany transfers is currently being used by industry.

Full Cost

When cost is used as the transfer price of a product, it usually means full cost or standard cost. Full cost would include both the direct costs of

¹ Joel Dean, p. 66.

producing the transferred goods (materials, labor, and manufacturing overhead) and an allocated portion of any selling and administrative costs charged to the division by the central office of the company. The full cost price used for transfer pricing might be an estimate based on the historical costs of the prior period. On the other hand, it might be a standard cost -- a scientifically predetermined cost which provides a basis for measuring actual performance.²

The use of either standard or full cost as a transfer price precludes any evaluation of the operating unit as a profit center because transfer prices will equal cost. When transfer prices equal cost, there can be no profit for the operating unit. There are two situations where a cost transfer price may be useful -- when intracompany transfers are insignificant and when it is not practical to evaluate the operating unit as a profit center.

Intracompany transfers are usually insignificant in a company which is decentralized along product lines. This means that each division produces and sells a product without any contribution from other divisions. In the few instances where transfers do occur, cost is the simplest method of accounting for the transfer.

There are some business activities which are an integral part of the company operations that do not lend themselves to profit evaluations. An example might be a unit devoted to research and development. Because it is not practical to evaluate this type of activity in terms of profits, pricing transfers at cost may be appropriate.

² Morton Backer and Lyle E. Jacobsen, Cost Accounting: A Management Approach (New York: McGraw-Hill Book Company, 1964), p. 274.

Marginal Cost

Marginal cost is the additional cost of production resulting from the increase in output by one unit.³ Marginal cost would include only out-of-pocket costs such as direct labor, material, and any increase in overhead caused by the increase in output. Because intracompany transfers priced on a marginal cost basis would not cover full costs, the resulting net losses on divisional income statements would be meaningless as a basis for evaluating a division's performance.

Because marginal cost is difficult to determine in actual practice, an approximation of marginal cost is often used. This involves calculating the variable or direct cost of producing and selling. Variable costs are costs that vary directly with the number of units produced.⁴ They differ from marginal costs in that they are an average cost. Thus variable cost is an average increase in production costs per unit increase in production over a given output range.

Cost Plus a Fair Return

Cost plus a fair return differs from a transfer price based solely on cost in that an amount is added to cost to provide a profit on the merchandise transferred to another division. There are a number of variations of this system of transfer pricing. The cost base may be full cost or standard cost. The add-on may range from a very nominal amount up to a substantial markup that earns the division an impressive return on its investment.

³Myron H. Umbreit, Elgin F. Hunt, and Charles V. Kinter, Economics. (New York: McGraw-Hill Book Company, 1957), p. 293.

⁴Backer and Jacobsen, p. 118.

To illustrate, assume that a plywood manufacturer transfers veneer from the veneer division to the panel division at the veneer division's cost plus seven per cent. If the unit cost of a given type of veneer is forty cents per foot, the transfer price would be 42.8 cents per foot ($40 + 2.8$). The profit to the veneer division would be 2.8 cents per foot or seven per cent of the cost of each foot sold. Because the divisional profit is determined by the footage sold, volume is the only determinant of profits. Profits based on costs are not a satisfactory basis for evaluating divisional performance because there is no incentive for the division manager to reduce costs and increase efficiency. All costs incurred will be covered by the transfer price. In fact, the higher the division's costs, the greater its profits will be.

Market

An intracompany price obtained from published market prices of like or similar products is often suggested. A market-based transfer price appears, at first, to be an ideal solution to the transfer pricing problem. Divisional profits resulting from a market-based transfer price should be a good basis for evaluating the division's performance because the transfer price represents the price the division would receive if it sold its products outside the company. There are, however, a number of problems that arise when market-based transfer prices are used. These problems include the following:

1. There are a number of products which do not have quoted prices.
2. The quoted market may not be a real alternative, i.e., the products in the market are not acceptable to the purchasing division.

3. The purchasing or selling division may be able to influence the quoted price in a small market by entering the market as a buyer or a seller.
4. The quoted market price may be subject to wide fluctuations which may make it unacceptable for transfer pricing purposes.

These problems will be discussed in a subsequent chapter. Their introduction here serves to indicate that it is often extremely difficult to determine what market really is. The difficulty in determining what a market price might be for a given product supports the position that market-based transfer prices are not very effective.

Negotiated Prices

A negotiated transfer price is a price achieved by arms-length bargaining between the division managers or their delegates. If both parties to the negotiations are well informed as to current market prices, production costs, and other relevant data, they should be able to agree on a price that is fair to both parties. A negotiated price is an attempt to achieve the ideal of having these prices determined by the forces of supply and demand, i.e., to approximate a real market price. The fact that the negotiators are often more limited in their alternatives as bargainers than would be the case in a real market situation presents a problem. The purchasing division may have no choice but to buy from the selling division, and the selling division may be in a similar position. These limitations introduce the need for at least some central supervision of negotiated pricing. A system of appeal or mediation often satisfies this need by providing a release valve for deadlocked negotiations.

CHAPTER III

TRANSFER PRICING AND EVALUATION OF PROFIT CENTERS

Difficulties in Determining Useful Transfer Prices

When an operating unit is to be evaluated in terms of profits earned, all the factors affecting these profits should be the same as though the division were a completely independent company. Transfer prices are often an important determinant of divisional profits, and we have already observed that these prices are not determined in the same manner as prices between separate companies. Separate companies would determine prices by arms-length bargaining. Transfer prices are not market-determined prices, strictly speaking, and are ordinarily arrived at by taking into account 1) cost, 2) cost plus a markup, 3) marginal cost, 4) market, or 5) negotiated prices. Discussion of the difficulties of determining a useful transfer price follows.

In the first chapter it was stated that a basic objective of profit center decentralization is the delegation of responsibility for earning profits to the division managers. Ideally, the evaluation of the division managers would be based only on the profits their division earns.¹ Top management would not intervene in the internal affairs of the division unless profits are inadequate. Because divisional profits are affected by the transfer price, the pricing method used is important.

¹ Joel Dean, p. 67.

Cost

Evaluation of the division's performance in terms of profits is not possible when cost or cost-based transfer prices are used. The reasons for this assertion were discussed in Chapter II. However, a combination of cost and market-based transfer prices has merit.

Robert McLain has proposed a combination of cost plus a markup and market-based prices.² He suggests a transfer price computed by adding to cost a markup equal to that charged other companies. This computed price would then be held constant even though prices to other companies may fluctuate. Changes in this transfer price would be made only when it results in misleading profit evaluations. This would probably occur when the transfer price gets too far out of line with current market prices.

Unlike an ordinary cost system, McLain's proposal requires the selling division to absorb any changes in its costs. This gives the selling division manager incentive to cut costs and improve efficiency. This incentive is lacking in the ordinary cost-plus system because the profit is tied to costs. As costs increase, profits increase. By holding the transfer price constant, this problem is removed.

A stable transfer price is another advantage. Unstable or fluctuating transfer prices are undesirable because they tend to affect production levels. When transfer prices fluctuate, the purchasing division may be willing to curtail

²Robert K. McLain, "Transfer Pricing Can Contribute to Divisional Performance Evaluation," National Association of Accountants Bulletin, August, 1963, pp. 29-32.

production in anticipation of a drop in prices. This reduction in output may improve the purchasing division's profits, but at the expense of the selling division. When this speculation is carried to the extent of affecting sales, it may actually reduce company profits.

McLain's proposal may be a solution to the transfer pricing problem if it is the best method to meet a particular company's objectives. This may occur when quoted market prices are unacceptable. Discussion of quoted market prices follows.

Market-based Pricing

For purposes of evaluating an operating unit in terms of profits, a competitive market price should produce the best results. A competitive market exists when a market has many buyers and sellers handling the same product. The transactions of any one buyer or seller would not affect the market's price level. It is important that the market price be competitive so that neither division can affect the transfer price. When intracompany transfers are recorded at market, the buying and the selling divisions are in the same position as independent companies with regard to pricing of their products.

Market-based intracompany prices are derived from quoted market prices, the published result of current transactions in an existing market. The usefulness of market for pricing intracompany transfers is somewhat limited for many products. The situations which may limit the use of a market-based transfer price are discussed in the following paragraphs.

Products which have no quoted price

The first problem is that there are many products for which no price list exists. A product may have no quoted price when only a few firms deal in the market or when the product is so unique that the only buyer is the purchasing division. An example might be transmissions for John Deere tractors which can be used only for assembly or repair of these tractors.

A market-based transfer price is advantageous because the selling division receives the same price it would receive if the goods were sold outside the company and the buying division pays the same price it would have to pay to purchase the product outside the company. The price is fair to both divisions. If no market exists, it may be desirable to estimate a market price so that the transfer price will be fair to both divisions. There are two common methods of estimating a market price. They are negotiated pricing and asking for bids. Because of its importance, negotiated pricing will be discussed in detail in a following section of this chapter.

Asking for bids from outside companies as well as brother divisions is one means of estimating a market price. To be effective, the outside companies must have expectations of obtaining at least a portion of the buying division's business. If the outside companies do not expect to receive any orders, they can hardly be expected to take the bidding seriously. If they do not take the bidding seriously, these bids may not be what they think the product is worth, and the resulting transfer prices would then be somewhat unreliable. This means that even when the selling division is consistently the low bidder, some purchases will have to be placed with the outside bidders.

Market is not an alternative

The second problem involves products that are differentiated. This means that while the products are essentially the same, some differentiating characteristics exist. For example, the color, detergent additives and packing of motor oils are differentiating characteristics. The marketing division of an oil company would not use the motor oil produced by the refining division of another oil company because of specific differences in their motor oils. A quoted price for a specific quality of motor oil can be obtained, but this price should not be used for pricing intracompany transfers unless the economic value of the product differences are excluded from the market price. It would not be fair to the selling division to require costly differences not included in the market product and then price the transfer at market.

An "influenced" market

When a market is not perfectly competitive, a division may be able to influence price levels in the market used to price its intracompany transfers. By varying the volume of its transactions in the market, the division can change the level of supply or demand. A change in the level of supply or demand will cause prices to fluctuate. The ability of one division to manipulate transfer prices and thereby improve its profits at the expense of another division is undesirable. Profits resulting from manipulation of this sort will distort the evaluation of both divisions.

Unstable markets

An unstable market price is not a desirable transfer price. In the previous discussion of McLain's proposed combination of cost and market-based

transfer pricing, the undesirable effect of unstable transfer prices was brought out. An example would be the pricing of grain transferred from the elevator to the milling division of a flour company. Grain prices sometimes fluctuate widely and rapidly. The divisional profits may tend to reflect which division is best able to take advantage of this fluctuation. The selling division would try to make most of its deliveries when prices are high, and the purchasing division would try to do most of its buying when prices are low. Simultaneous achievement of these aims is impossible. The division which gains the upper hand in this conflict will tend to show better profits, but these profits will not necessarily indicate an increased contribution to the profits of the firm as a whole. When a division's net profits are increased at the expense of another division, there is no change in the profits of the firm as a whole.

Negotiated Pricing

The use of negotiated pricing to estimate a market price was noted in the discussion of market-based transfer pricing. Negotiation is defined as mutual discussion and arrangement of the terms of a transaction or agreement.³ A representative from each of the affected divisions would meet to agree on a price to value the transfers between their divisions. Because the cost of these conferences in terms of executive time would be high, it is important that the price agreed on should remain in effect for a reasonably long period of time.

³The American College Dictionary, ed. Clarence L. Barnhart (New York: Harper & Brothers Publishers, 1951), p. 813.

A negotiated transfer price differs from other types of transfer pricing in that it is determined by both affected divisions rather than one of the divisions or outside factors. The negotiations will be influenced by such factors as cost and market price, but the resulting transfer price is a result of their agreement rather than any objective factors.

In negotiating a transfer price, bargainers occasionally will be unable to reach an agreement. The possibility of a deadlock gives rise to the need for a method of reconciliation. Arbitration by top management is not satisfactory. A price set by higher authority is not likely to satisfy either division manager. This may result in ill-feeling and dissension. A solution to this problem is suggested in the following discussion of a transfer pricing method proposed by Joel Dean.

Joel Dean's proposal

Joel Dean has proposed a negotiated pricing system which he calls competitive pricing.⁴ Competitive pricing, as used by Dean, refers to prices achieved through unrestricted bargaining between division managers. Requirements for success of his competitive pricing system are good cost and market information, alternative sources of supply, and a well-planned implementation of the pricing system. Dean states that his pricing system has the following advantages:⁵

1. The disadvantages of published market prices, as previously discussed in this paper, are solved.

⁴ Joel Dean, pp. 65-74.

⁵ ibid., p. 68.

2. An "economically correct" transfer price will insure that decisions increasing divisional profits will increase profits of the company.
3. Negotiated transfer prices strengthen the independence of the operating divisions which makes profit evaluation more meaningful.
4. A negotiated transfer prevents hidden losses in misdirected capital investments and in friction and dissension among executives that can be caused by a bad transfer price.
5. Transfer prices negotiated by informed managers are sensitive to changes in supply and demand as reflected in competitive alternatives. The process of negotiation by trained executives, in itself, tends to avoid arbitrariness which could cause friction and ill-feeling.

Once in operation, "competitive pricing" would operate smoothly, according to Dean. Before the new method is installed, a careful study of the company's market environment and how the concept of negotiated relationships would best fit the economies of its operations should be completed. In addition, the qualifications of the personnel who will be negotiating transfer prices should be evaluated at this time. If there is a question as to their ability to arrive at satisfactory prices, some restrictions are needed. Restrictions listed by Dean are:⁶

1. Pricing guides.

⁶ ibid., p. 71.

2. Temporary price limits.
3. Limits on the volume of outside trading.

These limitations would be temporary; they would be lifted as the negotiators (division managers) become more experienced.

Top management should supervise the activities of the negotiators by use of a mediator. The mediator would aid negotiations by providing unbiased information and putting aside exaggerated or prejudiced information. Mediation is the most desirable means of breaking deadlocks because the final agreement is still in the hands of the negotiators.

Evaluation of negotiated pricing

As a method of estimating a market price, negotiated pricing appears to be reasonably satisfactory. The resulting transfer price is free from the defects common to market prices taken directly from imperfectly competitive markets, i.e., the price can not be affected by either division except over the bargaining table and the price is relatively stable. Disadvantages of negotiated pricing may include the drain on executive time caused by negotiations and the possibility of the negotiators reaching a deadlock that mediation will not break. When this occurs, top management will have to step in and resolve the conflict even though the results are not likely to satisfy either party to the negotiations.

An analysis of negotiated transfer pricing by Harold Bierman brings out another potential defect in negotiated pricing.⁷ This analysis indicates that

⁷ Harold Bierman, Jr., Topics in Cost Accounting and Decisions (New York: McGraw-Hill Book Company, Inc., 1963), pp. 76-102.

when either division gains control of the negotiations, it may tend to set production levels and prices at other than optimum levels for the firm as a whole.

To simplify the analysis, Bierman makes the following assumptions:⁸

1. A manufacturing division makes a product which has no intermediate market, i.e., it must be sold to the distribution division.
2. The price of the product sold by the distribution division is set by purely competitive forces and the company cannot influence the price. The average revenue or price line is horizontal, and the same line would also measure the company's marginal revenues.

Figure Number 1 shows the determination of optimum output for the firm. Curves MC_d and MC_m are marginal cost curves for the distribution and manufacturing divisions respectively. Adding the marginal costs of both divisions together results in the total marginal cost of the firm represented by curve $MC_d + MC_m$. The intersection of this total marginal cost curve with the price line, PP, determines the optimum output of the product.⁹ At that level of production, marginal cost equals marginal revenue, the amount earned by selling another unit of the firm's product.¹⁰ This optimum output is OQ or or PR. Profits are maximized at this point because production of few units would

⁸ ibid., p. 93.

⁹ ibid., p. 94.

¹⁰ Alfred W. Stonier and Douglas C. Hague, A Textbook of Economic Theory (London: Longmans, Green and Co., Ltd., 1961), p. 90.

Figure 1 -- Determining optimum output

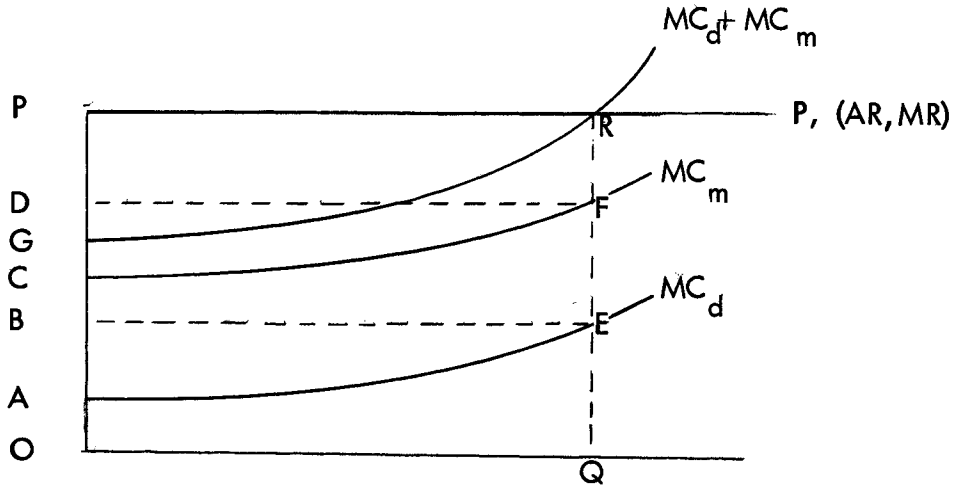


Figure 2 -- Distribution division as monopolistic buyer

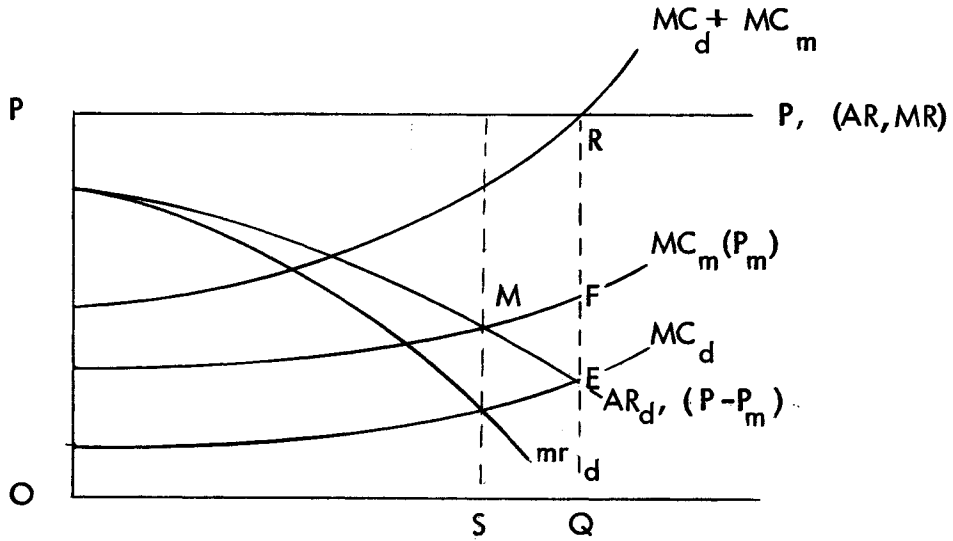
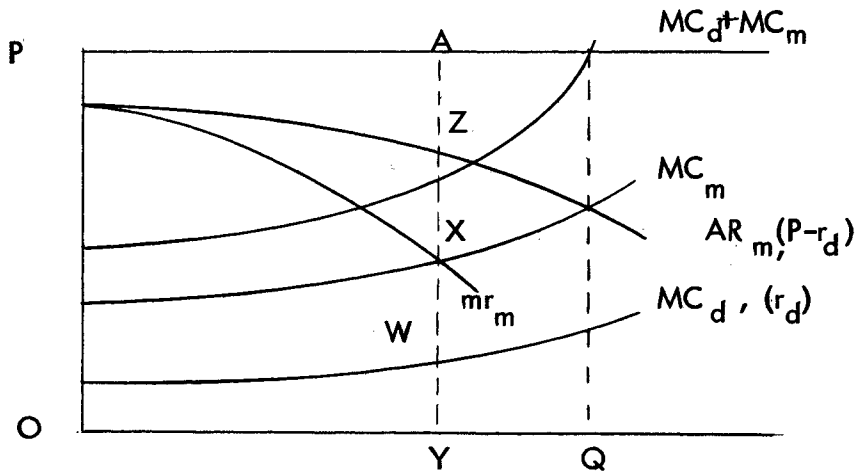


Figure 3 -- Manufacturing division as monopolistic seller



mean that profits could be increased by increasing output. Production of more than OQ units would result in the cost of each unit produced exceeding the revenues it brings in.

By limiting output and sales (acting as a monopolistic buyer), the distribution division could maximize its own profits at the expense of the manufacturing division and the firm as a whole. This situation is illustrated in Figure Number 2.

Curve AR_d represents the average net revenue curve of the distribution division, assuming that transfers between the manufacturing division and the distribution division are priced at the manufacturing division's marginal cost. This curve (AR_d) is the difference between the price of the end product (PP) and the price (MC_m or P_m) which would be paid to the manufacturing division.

Curve mr_d is the marginal revenue curve for the distribution division. To maximize its own profits, the distribution division will restrict sales to quantity OS since at this point its marginal revenue (mr_d) equals marginal cost (MC_d). Since OS is less than OQ, the profits of the firm will be decreased. The distribution division's profits are increased at the expense of the manufacturing division and the firm as a whole.

By acting as a monopolistic seller, the manufacturing division can also increase its profits at the expense of the rest of the firm. In Figure Number 3, curve MC_d , the marginal cost of the distribution division, is assumed to be the minimum revenue that the distribution division will require to increase its sale of the product. This curve then may be labeled r_d , the minimum net revenue

required by the distribution division.

We can now draw the average net revenue curve for the manufacturing division, AR_m . Curve AR_m is the difference between the price of the end product, pp , and the minimum revenue curve for the distribution division, r_d . Curve mr_m represents the marginal revenue curve of the manufacturing division. The manufacturing division can be expected to produce OY units because at this level of output its marginal revenue equals marginal cost. Again, the division has increased its own profits at the expense of the firm as a whole since OY units is less than the optimum level of output for the firm, OQ.

This analysis indicates that negotiations to determine transfer prices may result in output levels which may not be desirable in terms of maximizing the profits of the firm. This potential weakness in negotiated pricing is an additional argument for supervision when this system of pricing intracompany transfers is used.

Conclusion

Evaluation of a decentralized operating unit should be based primarily on profits earned. The effect of transfer pricing on divisional profits requires that careful consideration be given to choosing the best transfer pricing method. The best transfer pricing method for a particular company will depend on the economic environment in which it operates. The foregoing discussions of transfer pricing methods indicate that no one transfer pricing method is ideal in all possible business situations. Only by evaluating each transfer pricing method in terms of the objectives and environment of their company, can a company's management determine the best transfer pricing method for their use. Even then their

evaluation process will have to include consideration of the effectiveness of the transfer pricing method during the period under review.

CHAPTER IV

THE SIGNIFICANCE OF TRANSFER PRICING IN DECISION MAKING

One of the basic principles of profit center decentralization is that the operating units should be evaluated in terms of profits. For this evaluation to be effective, the division manager should control most of the major determinants of profits. As listed in Chapter I, the division manager should have considerable discretion in determining operating methods, production volume, and product mix. Two other decision areas that will affect divisional profits are pricing and capital budgeting.

The division manager's authority is often restricted in the areas of capital budgeting and pricing. Capital budgeting decisions of large size usually require major financing arrangements such as the issue of additional stock or the sale of bonds. In addition, this type of decision will, in large part, determine the profitability of the firm as a whole over a number of years. Because of their major affect on the firm's future, capital budgeting decisions are usually subject to limitations when delegated to the division management. These limitations sometimes take the form of dollar limits on projects originated by the division management.

Restrictions in the area of pricing occur for a number of reasons. It has already been pointed out that intracompany prices have a significant effect on divisional revenue and cost figures. The division manager, as a decision maker, will be influenced by his division's revenue and cost figures. An unsatisfactory transfer price could lead to incorrect decisions by distorting this divisional data. This may be particularly true in the case of capital-budgeting decisions. The

effect of transfer-pricing methods on decision making in the areas of capital budgeting, pricing goods to outsiders, and the effect of transfer pricing on middle management morale will be discussed in the following sections of this chapter.

Capital Budgeting Decisions

Capital budgeting is the systematic planning and the resultant decision making for acquisition or construction of capital assets. Capital assets may be defined as long-lived facilities used in the business, such as machinery or buildings. A business firm has limited resources to allocate to this activity and, for this reason, must evaluate alternative proposals and choose those that are most beneficial to the firm. The decision-making process is predicated upon estimates of the future.¹ Funds committed to a capital investment are recovered over a relatively long period of time. Consequently, capital investments are subject to an element of risk and uncertainty with regard to recovery of cost. With this unavoidable risk and uncertainty inherent in the basic projections, it is important that the firm establish a procedure for arranging the information in a logical pattern which will facilitate selection of the most desirable investment proposals.

When a division manager is given authority to make capital expenditures, he should develop and use certain basic information. This data should include the following:

1. An evaluation of the division's economic future -- Capital

¹Backer and Jacobsen, p. 543.

expenditures should be made in accordance with a plan. This plan should project an orderly progress toward certain objectives. These objectives would be determined by top management. The division manager should evaluate these objectives in the light of a projection of future economic activity for the division when making capital expenditure decisions.

2. The rate of obsolescence for the item to be acquired -- If the capital item to be acquired will be obsolete in a very short time, its earnings potential must be proportionately higher to justify the investment.
3. The future earnings increase resulting from the expenditures -- Investment in capital assets should result in increased earnings. An evaluation of the proposed capital expenditure's contribution to divisional profits throughout its life is a significant measure of its worth to the division.
4. The initial cost of the capital asset -- The initial cost includes purchase price, transportation costs, and any costs incurred in putting the capital asset into operating condition. This combination of costs reveals the immediate outlay of cash or debt necessary to receive the future increase in revenue estimated in Item 3 above.

A number of systems have been devised to formulate the analysis of the above information. The methods which provide the best results estimate the present value or current worth of the capital investment's future earnings. By comparing

this amount with the outlay necessary to acquire the capital asset, the return on the investment may be determined. Investment decisions based on the comparison of the returns the various proposals will earn on their required investment should result in the best capital investments.

Some of the methods that have been developed to estimate or evaluate the current worth of a capital investment's contributions to future earnings are:²

1. The discounted cash flow method -- An interest rate is calculated which will discount the expected future cash flow from the investment back to the present value of the investment. Comparison of the interest rate on different proposals will indicate which proposals are the most desirable.
2. The excess-present-value method -- Estimated cash income from the investment is discounted at an established interest rate. The interest rate will vary according to the risk involved, but should be higher than the cost of capital to the firm. The present value of the projected cash flows must exceed the present value of the proposed investment in order for the investment to be worth consideration. In evaluating alternative proposals, the investment with the largest excess of present value of future cash flows over present value of the investment would be considered the best investment.
3. The Terborgh, or MAPI, method -- By use of a prepared graph,

²Ibid., pp. 564-570.

the timing of replacements is evaluated under this method. The economic desirability of replacement is determined by comparing the cost of keeping the present facility with the cost of buying the new facility on a time-adjusted basis.

In all of the above methods, future projections play an important role. These projects are undoubtedly affected by historical revenue and cost data. Any distortion of divisional cost or revenue data by unfair or misleading transfer prices may result in erroneous projections and thereby cause incorrect capital budgeting decisions.

The transfer-pricing method used does not matter as long as the capital budgeting procedure takes into account the effect of the transfer pricing method in use on the projections used to evaluate capital investment proposals. A market-based transfer price will tend to put the division in the position of an independent company while a cost transfer price will tend to give a better picture of the costs of the firm as a whole.

If a market-based transfer price or a negotiated price is used, the capital-budgeting analysis will tend to indicate the most desirable investment for the division as an independent entity. Because of the imperfections in intracompany pricing methods noted in Chapter III, this may not be the most desirable investment for the firm as a whole. For example, if the transfer price is taken from an imperfectly competitive market without modification and the selling division is manipulating the supply of goods in the market to keep prices high, projections of revenues to be added by a proposed capital investment for the selling division may indicate

that an investment is desirable when it is really not so.

To reduce the possibility of undesirable capital investment decisions, it is necessary to restrict the division manager's authority in this area. In order to retain the maximum degree of decentralization, this restriction is often in the form of a dollar limit. Only when investment decisions become large enough to have a serious effect on the company as a whole is it necessary to restrict the delegation of authority to the division manager.

Return on investment

Capital assets (plant and equipment) also have a major effect on another aspect of decentralization. When the return earned on the company's investment in the division is used to evaluate the division's performance, decisions regarding methods of computing just what the company's investment in the division is, become very important.

The return-on-investment computation, an evaluation tool, is discussed here rather than in Chapter III because of its close relation to capital assets and capital budgeting decisions. Because of the current popularity of the return on investment as a method of evaluating profit centers, considerable effort will be made to point out its weaknesses as well as its advantages.

Return on investment is the net profit divided by the average investment.³ The net profit is subject to the effects of transfer pricing methods as discussed in Chapter III. If the profit figure is distorted by an unsatisfactory

³ ibid., p. 436.

transfer price, the return on investment will also be distorted. Evaluation based on the return on investment does not lessen the importance of a reliable transfer price.

The investment base in the computation presents an additional problem in this type of evaluation. Three determinations of significance are 1) which assets should be included in the investment base; 2) allocation of asset investment to plants, divisions, product lines, or other internal sectors; and 3) valuation of the investment base.

The assets included in the investment base for computation of the return on investment should be only those assets directly related to the production of income. Earnings from general business assets such as investments are not included in a division's profits, and these investments should be excluded from the division's investment base.

Allocation of indirect assets such as central office cash and research and development facilities should be apportioned on some logical basis such as the division's use of the asset or facility. As in the case of allocating the expenses of service units, it may be best to exclude such areas of the firm from the evaluation of the operating units.

Valuation of the investment base refers to the question of whether capital assets should be included in the investment base at acquisition cost, book value (acquisition cost less accumulated depreciation), or some approximation of current economic value. Current economic value is often computed by reducing the asset's replacement value by accumulated depreciation. The accumulated

depreciation would be determined by applying the asset's established depreciation rate to the replacement value for the number of years the asset has been in use.

John Deardon illustrates the importance of considering valuation bases when using return on investment to evaluate profit centers. He states that the combination of valuation methods and depreciation methods will determine the effectiveness of return on investment as a guide to decision making and evaluations regarding profit centers.⁴ A summary of his analysis of the four common combinations follows.

Gross book value and composite depreciation

The combination of gross book value and composite depreciation is the least desirable when the return on investment is to be used for investment decision making and evaluation. Gross book value is the acquisition cost of the facilities (plant and equipment) while composite depreciation is a method whereby fixed assets are grouped together and depreciation is taken by applying a rate based on an estimated average life for the whole group. An asset is assumed to be fully depreciated when it is retired under the composite method. The weakness of the combination can be shown by considering two investment situations.

First of all, the operating unit manager is encouraged to dispose of idle equipment regardless of its potential use. This is because idle facilities tend to reduce his return on investment. The cost of such assets are included in the investment base, and depreciation on this cost reduces the operating unit's net

⁴ John Deardon, "Problem in Decentralized Profit Responsibility," Harvard Business Review, XXXVIII (May-June, 1960), pp. 79-86.

profit. By disposing of the asset, the division manager can reduce his investment base and increase profits.

For example, if the idle facilities cost \$50,000 and are subject to a depreciation rate of 10%, the effect of their disposal can be illustrated as follows:

Decrease in investment base		
Total assets prior to retirement		\$250,000
Less cost of asset retired		<u>50,000</u>
Total assets after retirement		<u>\$200,000</u>
Increase in profits		
Net profit -- depreciation on idle facilities included		\$ 25,000
Add back depreciation on idle facilities		<u>5,000</u>
Net profit -- idle facilities retired		<u>\$ 30,000</u>
Return on investment		
Idle facilities not retired		
Net profit	<u>25,000</u>	= 10%
Total assets	250,000	
Idle facilities retired		
Net profit	<u>30,000</u>	= 15%
Total assets	200,000	

The increase in the return on investment available through the retirement of idle facilities makes no allowance for potential future use of the equipment and it may encourage retirement of potentially useful facilities.

Secondly, the combination of gross book value and composite depreciation may impair the timing of investments in more efficient facilities. The timing of investments of this type should be based on the cost of keeping the old asset as compared with the cost of acquiring the replacement.⁵ When gross book value is

⁵ Backer and Jacobsen, p. 545.

combined with composite depreciation, the division's investment base is changed only by the difference between the cost of the asset to be replaced and the cost of its more efficient replacement. This may lead the division manager to base his evaluation on the change in his investment base rather than the costs involved.

For example, assume that a machine costing \$120,000 can increase future earnings by approximately \$20,000 a year over a ten-year useful life. The machine it would replace has a similar useful life and cost \$100,000. The combination of gross book value and composite depreciation encourages the division manager to make an analysis similar to the following:

Increase in investment base		
Cost added (new machine)		\$120,000
Cost deducted (old machine)		<u>100,000</u>
		<u>\$ 20,000</u>
Increase in earnings		
Increase in earnings from new machine		\$ 20,000
Less: increase in depreciation		
Depreciation --		
new machine	\$ 12,000	
Depreciation --		
old machine	<u>\$ 10,000</u>	
		<u>2,000</u>
		<u>\$18, 000</u>
Return on investment		
	$\frac{18,000}{20,000} = 90\%$	

This relatively high rate of return might encourage the division manager to make the replacement. But what effect will the investment have on the return on investment earned by the company as a whole? The following analysis is the "accounting" method of evaluation investments in capital assets.

Cash outlay for new machine		<u>\$120,000</u>
Return		
Increase in earnings	\$ 20,000	
Less: annual		
depreciation	<u>12,000</u>	<u>\$ 8,000</u>
Return on investment		
$\frac{8,000}{120,000} = 6.7\%$		

This much lower result emphasizes how misleading the analysis encouraged by the combination of gross book value and composite depreciation can be.

Gross book value and unit depreciation

The combination of gross book value and unit depreciation is an improvement over the prior example. Depreciation computed separately on each facility is called unit depreciation. While the investment base for the return on investment computation is still valued at gross book value (cost), recording retirements under unit depreciation means a loss must be recognized when partially depreciated idle facilities are retired. As an example, suppose a machine costing \$100,000 with accumulated depreciation of \$50,000 is scrapped. Assuming that the cost of scrapping equals the machine's salvage value, composite depreciation would result in recognition of no gain or loss. The asset would be presumed to be fully depreciated and \$100,000 would be removed from both the group asset account and the accumulated depreciation for the group. If unit depreciation is used, the machine and its related accumulated depreciation are maintained in separate accounts. A loss of \$50,000 will be recognized on the disposal. When assets are retired, a loss will be recognized if it is not fully depreciated.

The incentive to dispose of idle facilities which exists under composite depreciation is removed by using unit depreciation. Any loss on retirement of idle facilities would have to be recognized. However, when facilities are almost fully depreciated, the problem arises again. The asset can then be retired with little recognized loss, and the investment base for the return-on-investment computation is reduced without adverse affect on profits.

Net book value and unit depreciation

A more satisfactory combination includes net book value and unit depreciation. Net book value is gross book value reduced by accumulated depreciation. The incentive to scrap idle facilities, fully depreciated or not, is removed. Because the investment base includes cost less accumulated depreciation, no reduction in investment results from the retirement of fully depreciated assets. The investment base can be reduced by retiring partially depreciated assets, but the incentive to do so is reduced by the fact that a loss equal to the reduction in investment base must be recognized because unit depreciation is used. As previously illustrated, unit depreciation requires separate recognition of gain or loss on disposal of a capital asset. The amount of the loss is the difference between the cost of the asset and the accumulated depreciation which equals the net book value.

In both of the last two combinations, consideration of book loss was a major factor in removing the incentive to retire idle facilities. However, book loss should not be considered when making investment decisions.⁶ The

⁶ ibid., p. 546

example of a simple rate of return analysis noted previously illustrates the importance of considering the future. Past expenditures are sunk costs. They cannot be recovered, and they should not affect the evaluation of future expenditures.⁷

Net book value and composite depreciation

Combining net book value with composite depreciation eliminates the disadvantages previously mentioned. Book losses no longer affect investment decisions because the assets are considered fully depreciated when retired. Retirement of an idle machine will reduce the group asset account and the accumulated depreciation by the same amount because it is assumed to be fully depreciated when composite depreciation is used. Because the asset account and the accumulated depreciation are reduced by the same amount, net book value (cost less accumulated depreciation for the group) is not changed.

The only remaining problem is the reduction in depreciation expense a retirement may offer. This problem can be solved by using declining balance depreciation. Declining-balance depreciation differs from other depreciation methods in that the depreciation rate is applied to the net book value rather than gross book value. A plant with an original cost of \$100,000 and accumulated depreciation of \$50,000, subject to a 10% depreciation rate, would have an annual depreciation of \$10,000 ($\$100,000 \times 10\%$) under ordinary (straight-line) depreciation methods. When declining-balance depreciation is used, the depreciation for the current year would be \$5,000 (original cost less

⁷W. Stanley Jevons, The Theory of Political Economy (London: MacMillan and Co., 1924), p. 164.

accumulated depreciation times the depreciation rate) No decrease in depreciation would result from a retirement because net book value (original cost less accumulated depreciation) is not changed by a retirement when composite depreciation is used. In the above example, the retirement of a \$10,000 idle machine would reduce depreciation to \$9,000 ($\$90,000 \times 10\%$) under ordinary methods but does not change the depreciation when declining-balance depreciation is used ($\$90,000 - \$40,000 = \$50,000$; $\$50,000 \times 10\% = \$5,000$).

The combination of net book value and composite-declining-balance depreciation appears to insure a community of interests between the division and the company for investment decisions. However, there is a disadvantage to the use of a return-on-investment evaluation we have not considered. A division with a relatively high proportion of plant and equipment purchased prior to 1945 will tend to have a high rate of return due to a low investment base rather than good performance. Because of the inflation that has occurred since World War II, the original cost of assets purchased before that time is often considerably below replacement cost. Their net book value will be low because of large amounts of accumulated depreciation.

Comparing a division with a high proportion of these low-valued assets to one that has a high proportion of new higher-valued assets would not be very meaningful. It would be very difficult to segregate the effect of asset ages from the effect of earnings and efficient performance. Also, a high rate of return on investment caused by low-valued assets will tend to discourage division management when considering replacements which would increase their investment base.

An example would occur when an asset which will earn the division a return of say 8% is turned down because the division's current rate of return is higher when this higher rate is due to a low investment base.

Deardon's proposal

Deardon has proposed a system which solves the problems described above by using a valuation procedure distinct and separate from book values for rate-of-return computations. The principal features of this system are as follows:⁸

1. The facilities assigned to a division are valued at their current economic (market) value.
2. Once established, the divisional investment is reduced periodically by depreciation on a composite basis using the declining-balance method.
3. Because composite-declining-balance depreciation is used, there is no reduction in either investment or depreciation expense when an asset is retired.
4. All additions to facilities, after the initial evaluations have been made, are valued at cost.
5. Asset values may be changed when conditions warrant, such as when price levels change significantly or when a new manager is assigned to the division and it is necessary to erase the mistakes of the prior manager.

⁸ Deardon, p. 84.

The advantages of Dearden's proposal over book value as an investment basis for a return-on-investment evaluation are given by him as follows:⁹

1. The investment base of the division will motivate division managers to act in the best interests of the company when replacing or retiring facilities.
2. Divisional rates of return on invested capital will not be distorted by abnormally low asset values.
3. The division is provided with a more realistic basis for pricing and costing its products.
4. Top management has a more useful tool for evaluating divisional management in that comparisons between divisions are more meaningful and the mistakes of a replaced manager can be erased by adjusting values, thus relieving the new manager from the burden of his predecessor's mistakes.

The separation of regular accounting records from data to be used for evaluation of a profit center has considerable merit. Many of the problems that arise in attempting to establish satisfactory controls over decentralized profit centers result from the failure of ordinary accounting data to establish a community of interests between the company and the profit center.

Dissension

Many companies compensate division managers on a profit-sharing basis. This is done to encourage their interest in the division's profits. The implication of such a profit-sharing plan is that the division manager controls

⁹ ibid., p. 85

the factors determining profits and will be motivated to increase profits if his personal income will be increased by his actions. However, arbitrarily imposed transfer prices and allocation of central office costs are factors affecting divisional profits determined by top management. If the division manager feels that these factors are unfair, dissension and ill-feeling can result.

The allocation of central office costs can be equitable if they are charged to the division as the services of the central office are actually used. However, it is often difficult to determine how much of a particular service the division uses. For example, the president of a company would probably spend most of his time supervising and planning for the company as a whole, and there is not likely to be any objective way of allocating his salary to the division. To avoid this problem, the profit figure used for evaluation of the division and for determining the division manager's compensation should be divisional profits before allocation of central office costs.

Internal dissension may be caused by an arbitrary transfer price. To avoid dissension, the division manager must feel that the transfer price is fair. A fair transfer price should approximate the price the division manager could receive outside the company. As indicated in Chapter III, market-based and negotiated transfer prices should approximate this goal.

Decentralization often represents a radical departure from prior management practice. Because decentralization is often a major change, it tends to unsettle division management. A certain amount of uneasiness can occur even when a satisfactory transfer pricing method is used and central office costs are excluded

from divisional profit statements. To minimize any resistance to decentralization, education and pre-selling of this philosophy is necessary. This will help prepare divisional management for the additional responsibilities decentralization places on them. These efforts may also smooth the transition to decentralization.

Pricing Products Sold Outside the Company

Information necessary to price products should be provided to divisions selling outside the company. The necessary information includes current levels of output, production capacity, marginal cost, total cost to produce, and market data. The transfer-pricing method used should provide cost data from other processing divisions. None of the transfer-pricing methods automatically provides all of the necessary cost information. The more desirable pricing methods for evaluating divisional performance, market-based and negotiated pricing, actually conceal all cost data from other divisions contributing to the product.

To provide the desired cost and production information, it must be accumulated and passed on by each division contributing to the product. This information can be accumulated by using a procedure suggested by Paul Cook. He suggests the use of a voucher to accompany intracompany transfers.¹⁰ This voucher would detail the transfer price, accumulated variable costs (to approximate marginal cost), and overhead added by preceding divisions. Cook's proposal does not include level of output and production capacity for each division, but this information could easily be added to the voucher.

¹⁰Paul Cook, "New Technique for Intracompany Pricing," Harvard Business Review, XXXV (July-August, 1957), p. 78.

CHAPTER V

RECENT DEVELOPMENTS AND SUMMARY

It has been suggested that the recent developments in information technology would reverse the trend toward decentralization that has existed since World War II.¹ The combination of high speed computers and sophisticated methods of quantitative analysis have greatly increased the quality of information available to top management. With this improved information available to top management, the need for decentralization to bring management decision levels closer to the transactions is reduced. A wealth of data relevant to a particular decision can now be made available to top management.

This opinion on the effects of information technological improvements ignores two factors. First, there are some types of decisions which are not subject to quantification. These are, in the words of John Burlingame, "...the decisions involving human beings and intangible subjective human values; the balancing of social, moral, and economic values; and the assessment of situations in which information needs cannot be adequately anticipated or adequately filled."² Secondly, the advantages of delegating profit responsibility, as noted in Chapter I, go beyond the lowering of the day-to-day decision-making level. Of particular importance is the development of the middle managers.

¹ John F. Burlingame, "Information Technology and Decentralization," Harvard Business Review, XXXIX (November-December, 1961,) p. 121.

² Ibid., p. 122.

Burlingame suggests that improvements in information technology will reinforce the trend to decentralization.³ One of the most significant problems in a decentralized firm is the need for quality information at the middle-management level. The problems in pricing products at the time they are sold outside the company is a good example of how important good information can be at the division-management level. Division managers need to have access to data that will clearly show the contribution of their division to the firm as a whole. This knowledge would be particularly significant if it increases understanding and reduces dissension between division managers and top management.

Summary

Importance of planning

The decentralization of a large going concern should not be taken lightly. The profound changes in management philosophy and individual responsibilities cannot help but cause a certain amount of uncertainty and unhappiness among existing management personnel. Every effort should be made to minimize these morale problems. Education of divisional management and planning to avoid unfair transfer pricing and allocation of costs to profit centers are important steps which will help reduce these morale problems. Division management education on decentralization should include a detailed description of how decentralization works, its philosophy, and what will be expected of them. Planning for decentralization essentially requires the development of a controlled delegation of authority.

³
ibid., p. 124.

When profit centers are used to control this delegation of authority, the company must be divided into operating units and an effective system of profit evaluation must be developed. This evaluation method must be fair to the personnel being evaluated as well as serving as an effective management tool.

Selection of a transfer pricing method

During the planning for decentralization, the transfer-pricing method should be determined. The method used should depend on the company's objectives in decentralization and the external data available. If intracompany transfers will be a significant determinant of operating unit profits, decentralization of profit responsibility will require the consideration of only two pricing methods. Negotiated prices and competitive market prices are the two alternatives that give prospect to satisfactory profit-based evaluations.

The advantages and disadvantages of both market and negotiated prices should be considered in the light of the company's particular situation. Where competitive intermediate markets exist, it is not to the firm's advantage to use anything but the market price.⁴ While prior discussion indicated that negotiated pricing is less desirable, it may be the best alternative if no perfectly competitive market price exists. Most firms will probably find themselves somewhere between these two extremes. The more advantageous method for them will depend on the factors mentioned in the respective discussions of negotiated and market-based transfer pricing applied to the firm's environment.

⁴Harold Bierman, Jr., Topics in Cost Accounting and Decisions (New York: McGraw-Hill Book Company, Inc., 1963), p. 90.

Conclusion

The importance of the transfer pricing problem lies in its effect on the profit evaluation of operating units in a decentralized company. The difficulties involved in adequately solving the transfer pricing problem place some qualifications on such profit evaluations. The following statement by Harold Bierman is particularly pertinent.⁵ "At its best, accounting information is raw material, which to be useful to management must be processed. Without analysis, any intracompany pricing scheme may lead to faulty information and decisions."

In addition, profit evaluation should not be relied on to the exclusion of other measures of performance. As noted in Chapter I, objectives other than short-term profits such as personnel development, planning activities, labor relations and civic responsibility should be considered. These other objectives are important determinants of long-run profitability which is the real goal of a profit-motivated business.

⁵ibid., p. 90.

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