TRANSFERRING INTERMEDIATE PRODUCTS

The existence of economies of scope across multiple divisions in a diversified firm often means that products or services produced in one division are used as inputs for products or services produced by a second division. Intermediate products or services can be transferred between any of the units in an M-form organization. This transfer is, perhaps, most important and problematic when it occurs between profit center divisions. The transfer of intermediate products or services among divisions is usually managed through a transfer-pricing system: One division “sells” its product or service to a second division for a transfer price.

SETTING OPTIMAL TRANSFER PRICES

From an economic point of view, the rule for establishing the optimal transfer price in a diversified firm is quite simple: The transfer price should be the value of the opportunities forgone when one division’s product or service is transferred to another division.
Consider the following example. Division A's marginal cost of production is $5 per unit, but Division A can sell all of its output to outside customers for $6 per unit. If Division A can sell all of its output to outside customers for $6 per unit, the value of the opportunity forgone of transferring a unit of production from Division A to Division B is $6—the amount of money that Division A forgoes by transferring its production to Division B instead of selling it to the market.

However, if Division A is selling all the units it can to external customers for $6 per unit but still has some excess manufacturing capacity, the value of the opportunity forgone in transferring the product from Division A to Division B is only $5 per unit—Division A's marginal cost of production. Because the external market cannot absorb any more of Division A's product at $6 per unit, the value of the opportunity forgone when Division A transfers units of production to Division B is not $6 per unit (Division A can't get that price) but only $5 per unit.47

When transfer prices are set equal to opportunity costs, selling divisions will produce output up to the point that the marginal cost of the last unit produced equals the transfer price. Moreover, buying divisions will buy units from other divisions in the firm as long as the net revenues from doing so just cover the transfer price. If there are no interdependencies between divisions, these transfer prices will lead profit-maximizing divisions to optimize the diversified firm's profits.

**Difficulties in Setting Optimal Transfer Prices**

Setting transfer prices equal to opportunity costs sounds simple enough, but it is very difficult to do in real diversified firms. Establishing optimal transfer prices requires information about the value of the opportunities forgone by the “selling” division. This, in turn, requires information about this division’s marginal costs, its manufacturing capacity, external demand for its products, and so forth. Much of this information is difficult to calculate. Moreover, it is rarely stable. As market conditions change, demand for a division’s products can change, marginal costs can change, and the value of opportunities forgone can change. Also, to the extent that a selling division customizes the products or services it transfers to other divisions in a diversified firm, the value of the opportunities forgone by this selling division become even more difficult to calculate.

Even if this information could be obtained and updated rapidly, division general managers in selling divisions have strong incentives to manipulate the information in ways that increase the perceived value of the opportunities forgone by their division. These division general managers can thus increase the transfer price for the products or services they sell to internal customers and thereby appropriate for themselves profits that should have been allocated to buying divisions.

**Setting Transfer Prices in Practice**

Because it is rarely possible for firms to establish an optimal transfer-pricing scheme, most diversified firms must adopt some form of transfer pricing that attempts to approximate optimal prices. Several of these transfer-pricing schemes are described in Table 13.3. However, no matter what particular schemes a firm uses, the transfer prices it generates will, at times, create inefficiencies and conflicts in a diversified firm. Some of these inefficiencies and conflicts are described in Table 13.4.48

The inefficiencies and conflicts created by transfer-pricing schemes that only approximate optimal transfer prices mean that few diversified firms are ever fully satisfied with how they set transfer prices. Indeed, one study found that as the level of resource
TABLE 13.3 Alternative Transfer-Pricing Schemes

| Exchange autonomy | * Buying and selling division general managers are free to negotiate transfer price without corporate involvement. |
| Mandated full cost | * Transfer price is set equal to the selling division’s price to external customers. |
| Mandated market based | * Transfer price is set equal to the selling division’s actual cost of production. |
| Dual pricing | * Transfer price is set equal to the selling division’s standard cost (that is, the cost of production if the selling division were operating at maximum efficiency). |
| | * Transfer price is set equal to the market price in the selling division’s market. |
| | * Transfer price for the buying division is set equal to the selling division’s actual or standard costs. |
| | * Transfer price for the selling division is set equal to the price to external customers or to the market price in the selling division’s market. |


TABLE 13.4 Weaknesses of Alternative Transfer-Pricing Schemes

1. Buying and selling divisions negotiate transfer price.
   - What about the negotiating and haggling costs?
   - The corporation risks not exploiting economies of scope if the right transfer price cannot be negotiated.

2. Transfer price is set equal to the selling division’s price to external customers.
   - Which customers? Different selling division customers may get different prices.
   - Shouldn’t the volume created by the buying division for a selling division be reflected in a lower transfer price?
   - The selling division doesn’t have marketing expenses when selling to another division. Shouldn’t that be reflected in a lower transfer price?

3. Transfer price is set equal to the selling division’s actual costs.
   - What are those actual costs, and who gets to determine them?
   - All the selling division’s costs, or only the costs relevant to the products being purchased by the buying division?

4. Transfer price is set equal to the selling division’s standard costs.
   - Standard costs are the costs the selling division would incur if it were running at maximum efficiency. This hypothetical capacity subsidizes the buying division.

5. Transfer price is set equal to the market price.
   - If the product in question is highly differentiated, there is no simple “market price.”
   - Shouldn’t the volume created by the buying division for a selling division be reflected in a lower transfer price?
   - The selling division doesn’t have marketing expenses when selling to a buying division. Shouldn’t that be reflected in a lower transfer price?

6. Transfer price is set equal to actual costs for the selling division and to market price for the buying division.
   - This combination of schemes simply combines that problems of setting transfer price.
sharing in a diversified firm increases (thereby increasing the importance of transfer-pricing mechanisms), the level of job satisfaction for division general managers decreases.\textsuperscript{59}

It is not unusual for a diversified firm to change its transfer-pricing mechanisms every few years in an attempt to find the “right” transfer-pricing mechanism. Economic theory tells us what the “right” transfer-pricing mechanism is: Transfer prices should equal opportunity cost. However, this “correct” transfer-price mechanism cannot be implemented in most firms. Firms that continually change their transfer-pricing mechanisms generally find that all these systems have some weaknesses. In choosing which system to use, a firm should be less concerned about finding the right transfer-pricing mechanism and more concerned about choosing a transfer-pricing policy that creates the fewest management problems—or at least the kinds of problems that the firm can manage effectively. Indeed, some scholars have suggested that the search for optimal transfer pricing should be abandoned in favor of treating transfer pricing as a conflict resolution process. Viewed in this way, transfer pricing highlights differences between divisions and thus makes it possible to begin to resolve those differences in a mutually beneficial way.\textsuperscript{59}