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Management Services Forum

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MANAGEMENT SERVICES FORUM

Dear Sir:

The question of the "Make-or-Buy Decision" comes up quite often for certain manufactured parts. I would like to know how other companies are handling this type of "Make-or-Buy Decision."

We are on a Standard Cost System and manufacture finished parts from raw castings or raw material.

What costs should be used in comparing the outside quote? What other factors should be considered?

Any information you can supply would be appreciated.

The above query was received from a Midwestern manufacturing company and was answered by two members of our panel. Interestingly, each member, one representing a major national firm, one a medium-size local firm, stressed the importance of having make-or-buy decision groups as an ongoing, integral part of corporate functions.

Make-or-buy decisions are

among the most difficult with which manufacturers must deal. The decisions are quite complex; i.e., if all the factors of influence are taken into account they are numerous. Secondly, the decisions are sophisticated; i.e., there are many interactions among the factors. Consequently, there are no simple answers to the question of how make-buy decisions should be handled.

The proper approach to the making of such decisions will vary

PANEL OF ADVISORS:

Under the auspices of MANAGEMENT SERVICES, a panel of management services advisors from leading accounting firms have agreed to answer to the best of their ability questions about any area of management services with

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PHILIP L. BLUMENTHAL, *Geo. S. Olive & Co., Indianapolis, Ind.*

which readers would like help. Both questioners and advisors will remain anonymous. One or more of the following members of our panel are responsible for the answers published in this department:

ROY A. LINDBERG, *J. H. Cohn & Company, Newark, N. J.*
ARTHUR B. TOAN, JR., *Price Waterhouse & Co., New York*
H. G. TRENTIN, *Arthur Andersen & Co., New York*

from company to company and from product to product but will entail the gathering and inter-relating of a great deal of data from many sources and organizational units. Thus, there is always a problem of being sure to have all of the relevant information without being drowned in the volume of data and analysis required. Make-buy decisions should, therefore, be best made by groups with representation from various departments. It is also beneficial to use a standard format for a checklist and as insurance that the significant factors are dealt with.

Cost not sole criteria

If make-buy decisions could be reached simply on the basis of cost comparisons the matter would be relatively simple once an effective procedure had been developed. Unfortunately, this is seldom possible inasmuch as the reasons for buying or making are often thrust upon a company irrespective of what cost analysis shows. For example, the retention of highly skilled labor may depend upon retaining production that could be more cheaply acquired from the outside; the meeting of delivery schedules may demand procuring components on the outside that are required in-house to bring machine loading to economic levels; production of items that can be more cheaply bought outside on a unit basis often may be retained to keep expensive machinery engaged. Other factors involved are maintaining a second source of supply; providing a competitive cost to keep internal production on its toes; and, a minor point, measuring the administrative cost required in handling a production order as opposed to a purchase order.

In comparing costs, most companies use return on investment or return on assets managed. Since both of these techniques are well known, we will only state that the relevant costs are variable costs not fixed or sunk costs. Since your

standard cost system probably includes provision for recovery of fixed factory costs, the variable costs of manufacture must be segregated to determine the unit costs that should be attributed to those items you are subjecting to the make-buy analysis.

Use of return on investment or return on assets in relation to variable costs (or increased profit) is an important part of the analysis as the decision to make rather than buy generally involves a greater use of corporate assets.

If new facilities are purchased a nice analysis is required of the expected life to determine a reasonable payback. Most companies are properly extremely conservative in the life they apply to assets required for "make" decisions.

Depth of management and special skills required in production and raw material buying are additional intangibles which should be considered. Limiting factors may also enter into the decision. If production capacity is limited, the decision to buy certain elements may be made to free up the factory to produce more profitable items, resulting in an increase in sales and profit. It may also be possible to expand sales if the decision to make-buy results in sufficiently lower costs to decrease the selling price and expand total sales and profits.

Make-or-buy decision making, like value engineering, ought to be performed on an ongoing and regular basis. One of the great deficiencies in this area results from the reaching of make-or-buy decisions on a forced basis. Reaching make-or-buy decisions ought to be part of the production plan activity and should be regarded as a normal function in business.

Another view

The usual method employed in initiating the make-or-buy decision is for top management to prepare a checklist for evaluating the alternatives and to assign specific personnel with the responsibility for

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arriving at the ultimate decision. The management team may vary from company to company. For example, the team may cut across all lines of the organization, such as sales, production, accounting, purchasing, and engineering, or the team may be organized on a product line orientation. Whatever the make-up of the organization all the specialized knowledge and skills of the team are brought to bear on the decision.

Checklist essentials

The checklist used for evaluating the make-or-buy decision can be separated into two categories: *Non-cost* and *Cost* factors. Typically the make-or-buy decision is based on an analysis of comparative costs. However, other factors aside from product costs affect the make-or-buy analysis. Some of the non-cost factors to be considered are the following:

1. *Capacity*—analysis of existing facility capacity to determine whether manufacturing availability exists.
2. *Quality*—depending on the product certain tolerances and skills will be necessary that may or may not be available through manufacturing.
3. *Production Fluctuations*—to insure level production and avoid unnecessary delivery delays it may be necessary to manufacture even though a higher cost is incurred.
4. *Sales Expectations*—a certain level of sales may be necessary before internal manufacturing can be cost justified.
5. *Employee Welfare and Good Will*—even though the buy decision is obvious the need for maintaining community stability and retention of skilled labor may outweigh the purchase decision.
6. *Technological Innovation*—the higher the risk of technological obsolescence the more management will want to shift that risk to outside suppliers.

In analyzing the make-or-buy decision based on comparative cost factors, a worksheet is usually prepared that provides a comparison between vendor prices and manu-

facturing costs. The costs can be subdivided into four categories:

1. *Direct Variable Costs*—included in this cost category would be direct material, direct labor, and in the case of tight production capacity subcontract costs that may be incurred. It is generally assumed that these costs would be the same whether the product is purchased or manufactured; however, because of efficiencies and economies of scale these costs may differ.
2. *Direct Variable Overhead Costs*—included here are such costs as material handling, indirect labor, supervision, training, overtime premiums, fringe benefits, and set-up costs. These costs, however, are much more difficult to determine for any particular make-or-buy decision.
3. *Semi-Variable and Fixed Costs*—the inclusion of such costs as shift premiums, incentive pay, and purchasing department overhead costs in the make-or-buy analysis will depend on whether the decision is a short- or long-term proposal. Generally a short-term decision may not include such costs but in the long run these costs can change and should be a part of the analysis.
4. *Other Costs and Expenses*—purchasing, shipping, storage, division administration, and division engineering are several such costs. Usually these costs are included when substantial quantities are being considered.

Systematic procedure needed

This brief discussion of the make-or-buy analysis emphasizes the need for a careful and intelligent appraisal of the make-or-buy factors. Any one or all of these factors may influence the decision. Because the make-or-buy alternative is such a critical decision to management, a regular systematic analysis should be a part of the corporate procedures. Moreover, it may be necessary for the executives of the company to organize a specific committee to deal with this decision.

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