

Topic 3. Standard and direct costing

- 1. Introduction to standard costs**
- 2. Benefits of standard costs**
- 3. Limitations of standard costing**
- 4. Use of direct costing system**
- 5. Benefits of direct costing**
- 6. Limitations of direct costing**
- 7. Process costing method**
- 8. Job order costing method**

1. Introduction to standard costs

Standard costs are carefully predetermined costs that are used as performance targets for an efficient manufacturing operation. They are analogous to performance targets used as a basis for measuring the level of achievement in other aspects of our lives.

In order to plan and control a manufacturing cost performance with acceptable profit results, managers need to know not only what costs have been but also what they should be before products are produced.

The basic objective with standard costing is to establish a standard cost for each unit of product (output) by predetermining the cost per unit of the direct materials, direct labor, and manufacturing overhead (inputs) required to produce it, Thus, standard costing is often referred to as input/output analysis.

2. Benefits of standard costs

The most important benefits of standard costs are:

1. *Planning in budgeting.* Standard costs provide reliable estimates for the planning phase of budgeting. Accurate projections for direct materials, direct labor, and manufacturing overhead are necessary to perform effective budgeting. Since standard costs are carefully predetermined, they provide the best basis for estimating future cost performance. Consequently, when standard costs are available, they contribute significantly to the planning function of management.

2. *Performance evaluation.* Standard costs serve as targets in the application of management by exception to evaluate performance and to control manufacturing costs. The standard costs represent measures of what costs should be, so any variances between them and the actual costs incurred can be investigated for potential corrective action.

Cost control does not necessarily mean minimizing costs, but it does mean keeping them within acceptable limits. Responsible managers receive periodic reports that reveal any significant variances through management by exception. Thus, both the cause of the variance and the type of managerial response needed can be determined.

3. *Recordkeeping cost savings.* Standard costs can be used for inventory valuation with cost savings in the recordkeeping function. Inventories are maintained on the basis of standard costs without the detailed accounting of the actual costs needed in an actual costing system. Since standard costs are predetermined costs, they are used to record the materials, labor and manufacturing overhead as production takes place. For example, materials requisition forms and labor time tickets can be standardized and prepared at the beginning of each year instead of being completed as production takes place. A reconciliation of the actual costs is made at the end of an accounting period with variance analysis, thus eliminating much of the detailed accounting work and clerical cost incurred during the period.

4. *Managerial decision making.* Standard cost information is available on a timely basis for managerial decision making. It is observed that a significant amount of relevant cost information must be available for accurate decision making. Managers make decisions regularly concerning such activities as product pricing, make/buy situations, product profitability analysis, departmental performance evaluation, and the utilization of resources. In many cases, standard costs can be used without waiting for the results of the actual performance.

5. *Cost awareness.* Standard costs make employees more aware of costs and their impact on the operation. Most employees are not trained accountants and are more concerned with operating results than with the costs associated with them. Since the standard costs represent what costs should be, they make the employees more cost and time conscious, thus promoting an efficient use of resources. An incentive wage system, tied in with standard costs, can be implemented to further increase the benefits from cost awareness. For example, a bonus may be offered to employees who perform their work within the standard amount of time allowed.

3. Limitations of standard costs

The limitations of standard costs should be understood so they can be minimized. Otherwise, these limitations may negate many of the benefits of standard costs and create behavioral problems in an organization. The most significant limitations encountered in the use of standard costs are the following:

1. Many standards are founded on judgment rather than fact and, as a result, are subject to human error. If the plan is faulty to begin with, future comparisons of actual and standard performance are meaningless.

2. Standards that are either too tight or too loose can lead to unsatisfactory behavior on the part of the employees involved. If the standards are too tight, the employees will either: (1) be frustrated and look for ways to "beat the system" or (2) simply ignore the standards as unattainable performance targets. In contrast, standards that are too loose will encourage underachievement on the part of the workers and will not provide any incentive for improvement.

3. Standard costs must be reviewed constantly to determine if revision is needed.

4. Use of direct costing

Direct costing (also called variable costing) is an alternative inventory valuation method that can be used for internal reporting purposes. With direct costing, only the variable manufacturing costs (direct materials, direct labor, and variable manufacturing overhead) are treated as product costs.

This method eliminates the problems associated with unit costs that vary inversely with production volume because the fixed manufacturing costs accounted for as period costs.

Three major steps are involved in the application of variable costing:

1. All costs - manufacturing, selling, and administrative - are analyzed carefully to determine which are variable and which are fixed. A mixed cost is separated into its variable and fixed components with one of the cost estimation methods discussed in the previous section.

2 Variable manufacturing costs - direct materials, direct labor, and variable manufacturing overhead - are assigned as product costs. Therefore, the work in process inventory, finished goods inventory, and cost of goods sold are costed on the basis of the manufacturing costs that vary proportionately with the level of production volume.

3. All fixed manufacturing overhead costs, as well as all selling and administrative expenses, are treated as period costs and charged to the income statement as they are incurred. However, the variable selling and administrative expenses are separated from the fixed selling and administrative expenses for presentation on the income statement. The variable selling and administrative expenses are deducted from sales revenue along with the variable cost of goods sold to determine the *contribution margin* of a period. In contrast, the fixed selling and administrative expenses are subtracted (along with the fixed manufacturing overhead costs) from the contribution margin to determine the net income of a period.

5. Benefits of direct costing

The major benefits of variable costing are:

1. Direct costing forces management to evaluate the cost behavior pattern of each cost item, thus making the managers aware of how sensitive costs are to changes in the level of activity.

2. The information needed for cost-volume profit analysis can be obtained directly from the income statement instead of from special analysis that is independent of the income statement.

3. Direct costing provides the basis for the preparation of a flexible budget in which variable and fixed costs are separated.

4. Since variable and fixed costs are divided variable costing assists management in such decision-making activities as profit planning, cost control, pricing and resource allocations.

6. Limitations of direct costing

The main limitations are:

- 1. The separation of many cost behavior patterns into variable and fixed components often is very difficult, and the results are only approximate.**
- 2. Direct costing is not acceptable for external financial reporting or income tax reporting.**
- 3. Direct costing may give the misleading impression that only the variable costs must be considered in pricing decisions. In the long run, both variable and fixed costs must be recovered before net income can be earned. Short-run pricing may be based on variable costing in special situations.**
- 4. Balance sheet inventories valued with direct costing will be understated in terms of the total costs required to produce them, and various liquidity measures such as working capital and the current ratio will be adversely affected in financial statement analysis.**

7. Process costing method

Process costing method are used by firms with repetitive production. A process costing method is used by a manufacturing firm that has a continuous production flow and homogeneous products. Industries that produce chemicals, rubber, plastics, wine, petroleum, small electronics, and Pharmaceuticals utilize process costing. Many nonmanufacturing firms also rely on process costing concepts and procedures to accumulate the costs incurred in performing activities, such as food preparation in a fast-food restaurant.

The main point of process costing is the processing center(s) in which the work is performed during a specified period of time. The recordkeeping required is less detailed than it is in job order costing because the costs assigned to a processing center are not reassigned to individual products as jobs. Direct materials, direct labor, and manufacturing overhead are charged to a Work in Process Inventory account established for each processing center with procedures similar to those used in job order costing but without the detail of job accounting.

When multiple processing centers are used, the relationships between the centers must be clearly defined to accurately accumulate production costs as they flow through the centers to finished goods inventory. The processing centers are organized on the basis of a sequential product flow or a parallel product flow. Production costs accumulated in each processing center are transferred along with the related products to the next center that works on the products.

The control document used in a process costing system is called a cost of production report. It provides management with a complete description of the cost performance and production activity of a process costing center during a particular time period, usually a month.

8. Job order costing method

Managers need reliable product cost information for such actions as setting selling prices, deciding what products to produce, selecting marketing strategies for products, computing cost of goods sold, and evaluating the firm's profit performance. Job order costing is used whenever products are produced as separately identifiable units or groups of units. In contrast, process costing is employed whenever homogeneous products are manufactured with a continuous production flow. Many nonmanufacturing firms apply product costing procedures to accumulate activity costs, such as an accounting firm determining the total cost of performing an audit of a client's financial records.

A job order cost sheet is the control document in a job order costing system and has two purposes: (1) it provides an itemized listing of the direct materials, direct labor, and manufacturing overhead assigned to a job and (2) it is a subsidiary ledger during and after the manufacturing operation. Direct and indirect manufacturing costs are treated differently in job order costing. The direct costs are traced to the products as production takes place, whereas manufacturing overhead is applied to products on the basis of some production activity measure.



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