

Chapter 10 – Job and Order Costing

LO 1: Explain the differences in job-order, process and operation costing.

Product costing system: Accumulates the costs of a production process and assigns them to the products or services that constitute the organisation's output.

The most common types of product costing systems include job-order and process costing, as well as their hybrid operation costing.

Job-order costing: Treats each individual job as the unit of output and assigns costs to it as the job uses resources. Job-order costing is appropriate for the following situations:

- Each unit or batch of products is distinct and clearly distinguishable from other products.
- Each unit or batch is of relatively high value, which makes the benefits of separately assigning production costs worth the cost of doing so.
- Each unit or batch of products is often priced differently, frequently in accordance with an ordering or bidding process.
- Each unit or batch of products can feasibly trace its direct costs.

Job-order costing is useful for the following purposes:

- Identifying types of jobs that are likely to be most profitable so that the organisation can specify the scope and scale of its operations.
- Providing data to predict costs of future jobs so that the organisation chooses appropriate jobs on the basis of the expected resources needed and profitability.
- Managing the costs of current jobs to ensure that they stay within expectations and to provide early warning if costs will exceed expectations.
- Renegotiating job contracts before introducing any significant changes in jobs that will affect resources, costs or profits.
- Reporting actual financial results of the period's operations to demonstrate the organisation's efficiency to internal and external parties such as creditors and stockholders.

Reliable cost information helps management know

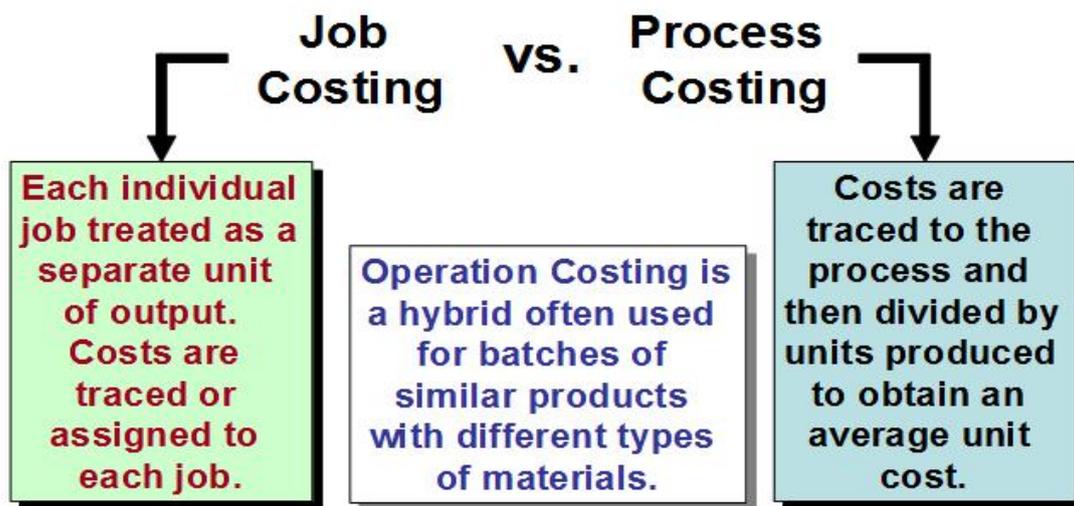
- 1) whether the changes are expensive or inexpensive
- 2) what the changes cost so that the commissioned price or bid can be renegotiated.

In contrast process costing: treats all units processed during a time period as the output to be costed and does not separate the record costs for each unit produced.

Process costing is appropriate for the following types of production processes:

- Units of output that are homogeneous and indistinguishable from one another
- Individual product units that are typically of relatively low value
- Individual product units for which it is not feasible to trace direct costs

Companies that use continuous processes use process costing to value many identical units of product or service.



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Operation costing: Is another product costing method which is a hybrid of job-order and process costing used by companies that continuously produce many products that have a large proportion of common inputs but that also have observable differences created for different customers.

Furthermore, a company can use job-order costing for its unique products and process costing for its mass-produced products.

LO 2: Explain how costs flow through the manufacturing accounts.

All cost-accounting systems rely on a basic cost-flow model, which is a periodic accounting framework for recording the costs of jobs (or processes). The basic cost-flow model is an inventory or stock model or equation that measures all of the resources used to produce products for sale. The basic cost-flow model follows:

$$\text{Opening balance} + \text{Transfers in} - \text{Transfers out} = \text{Closing balance}$$

- At any time, every active job has an opening balance that measures the cost of resources used on the job to date.
- Resources used or transferred in during the time the job is active also are assigned to measure resource use.
- Transfers out record the accumulated costs of products that are (a) transferred to another process in the organisation, (b) completed and stored, or (c) sent to the customer. Costs of defective products that must be scrapped or recycled should be counted as separate costs of the job or of the period.
- The closing balance for the job is the traced cost of products that are still in process at the end of an accounting period.

An imbalance of the cost-flow model indicates an unintentional error, wasted resources or, perhaps, theft or fraud. By making the misuse of physical resources difficult, the cost-flow model becomes a control mechanism, which is a policy or procedure that helps the organisation ensure that its goals and objectives are met.

LO 3: Assign direct costs to production jobs or products using a job-order costing system.

Job-cost record (or file, card, sheet): Records the costs of all production-related resources used on the job to date.

In a job-order costing system, Work-in-progress inventory is a control account because cost records in the subsidiary ledger support it. Costs associated with each job are recorded on a job-cost record. Thus, job-cost records serve as subsidiary ledgers to the WIP inventory account.

Material requisition form: The source document for tracing the cost of a raw material from Raw material inventory as direct material to the WIP account, and to the job-cost records of the specific jobs.

LO 4: Record indirect, manufacturing overhead costs.

Manufacturing overhead typically is a heterogeneous pool of indirect costs. In traditional cost systems indirect costs are assigned to individual production jobs using a predetermined overhead rate.

LO 5: Use a predetermined overhead rate to assign normal indirect resource costs to production jobs.

Predetermined overhead rate: The estimated fixed manufacturing overhead divided by the normal level of an appropriate cost driver, can provide a reliable estimate of actual indirect product costs over the course of a year. By using a predetermined overhead rate, a company normalises (i.e., smooths out) overhead applied to various production jobs.

Normal costing system: Applies manufacturing overhead to jobs using a predetermined overhead rate based on normal production capacity, which is an average of recent periods' production activity supplied. Normal costing assigns to production jobs the actual costs of direct material and direct labour, and applied manufacturing overhead. Predetermined overhead rates may be established by the following five steps, which are a simplified version of the ABC process:

1. Identify the costs to be included as indirect costs.
2. Estimate and sum the annual costs for all indirect-cost items identified in step 1.
3. Select the cost driver(s).
4. Estimate the annual level of the cost driver.
5. Compute the predetermined overhead rate.

Predetermined overhead rate = Estimated annual manufacturing overhead cost/Estimated annual cost-driver level

The predetermined overhead rate (POHR) used to apply overhead to jobs is determined before the period begins.

$$\text{POHR} = \frac{\text{Budgeted total manufacturing overhead cost for the coming year}}{\text{Budgeted total units in the allocation base for the coming period}}$$

Ideally, the allocation base is a cost driver that causes overhead.

The Manufacturing overhead account also records the allocation or application of overhead costs using the predetermined overhead rate, multiplied by the cost-driver activity used.

LO 6: Measure and dispose of the manufacturing overhead variance.

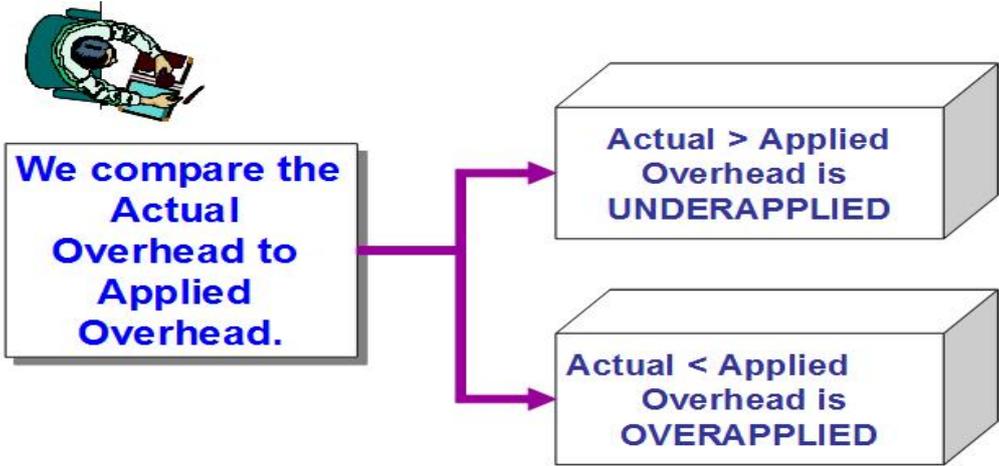
The Manufacturing overhead account is a temporary asset account, so it is 'closed' at the end of an accounting period. Closing an account means that its balance is transferred at the end of the accounting period to some other account, leaving a zero balance in the closed account.

Under normal costing, the actual manufacturing overhead incurred is unlikely to equal the amount of applied overhead, which is the amount of manufacturing overhead assigned to WIP inventory as a product cost. It is calculated by multiplying the predetermined overhead rate by the actual cost driver volume.

Overhead variance: The difference between the actual overhead and the applied overhead.

Under-applied: The actual incurred overhead exceeds normal applied overhead.

Over-applied overhead: The normal overhead applied exceeds overhead incurred.



The manufacturing overhead variance is closed entirely to Other expenses or Cost of sales, if the variance is judged to be an immaterial amount. Or if prorated to WIP inventory, FG inventory and Cost of sales, if the variance is judged to be material.

The allocation of a materially large variance is its allocation in proportionate amounts to WIP inventory, FG inventory, and Cost of sales – all of the product cost accounts through which the cost passed.

The difference in operating income between prorating the variance and assigning it to Cost of sales is a matter of timing. Any difference between actual and applied overhead eventually is expensed, even if a company prorates.

A persistently material overhead variance might indicate the need to revise overhead rates, impose new procedures to reduce costs, or investigate possible accounting errors.

LO 7: Understand the use of job-order costing information for decision making.

The job-costing system gives firm owners information to plan the costs of all types of new work.

LO 8: Measure reconcile and interpret operating income using absorption and variable costing.

The product-costing method used can significantly affect a manufacturing company's reported income by changing the timing when certain costs are recognised as expenses. This section explores three alternative product-costing methods. It begins by comparing the two traditional methods, absorption costing and variable costing. Then it examines a third method that is more recent in origin, throughput costing.

The most widely used product-costing method is absorption (or accrual or full costing), which includes direct material, direct labour, and both variable and fixed manufacturing overhead in the costs of products. An alternative to product costing is variable costing.

Variable costing: Applies direct material and direct labour costs but only variable manufacturing overhead to products.

The primary difference between the two methods is the timing when fixed overhead costs are recognised as expenses. Eventually, all fixed overhead cost is expensed under either absorption or variable costing, but absorption costing first assigns fixed overhead costs to products, which remain in inventories until the products are sold. Absorption costing inventories fixed overhead with the other product costs until the time when the products are sold. Variable costing, however, treats fixed overhead as a period expense immediately, as it is incurred, and does not count fixed overhead as a product cost.

Contribution margin: The difference between sales revenue and variable cost of sales that, measures the incremental profit earned toward covering fixed costs and desired profits.

In general, if inventories increase, absorption costing will report higher operating income than variable costing. The converse also is generally true: when inventories are depleted, products that had been stored with fixed overhead attached will be expensed, and absorption costing will report lower operating profit.

Evaluation

Some managers find absorption costing to be unintuitive and confusing and prefer to use variable costing for internal income reporting. Variable costing dovetails much more closely than absorption costing with any operational analyses that require a separation between fixed and variable costs.

Product costs computed under absorption costing could be more accurate measures of the full uses of production resources than those computed under variable costing because absorption costs recognise and contain fixed, indirect production costs. However, just as the overall average cost could misstate product costs by allocating indirect production costs, absorption costs could misstate the use of indirect production resources. It is possible that a firm's various product lines use indirect production resources to a different degree. Absorption costing also ignores each product line's differential use of non-production resources. Thus, absorption costing actually could distort the costs to provide products and services if they represent greatly different levels of support from indirect resources.

Many managers prefer to use absorption-costing data in cost-based pricing decisions. They argue that fixed manufacturing overhead is a necessary cost incurred in the production process. Proponents of variable costing counter that a product's variable cost provides a better basis for making the pricing decision. They note that any price above a product's variable cost makes a positive contribution to covering fixed cost and profit.

Using absorption costing, only, may obscure the necessity of using fixed, capacity-related resources productively at all times.

- **Absorption Costing**

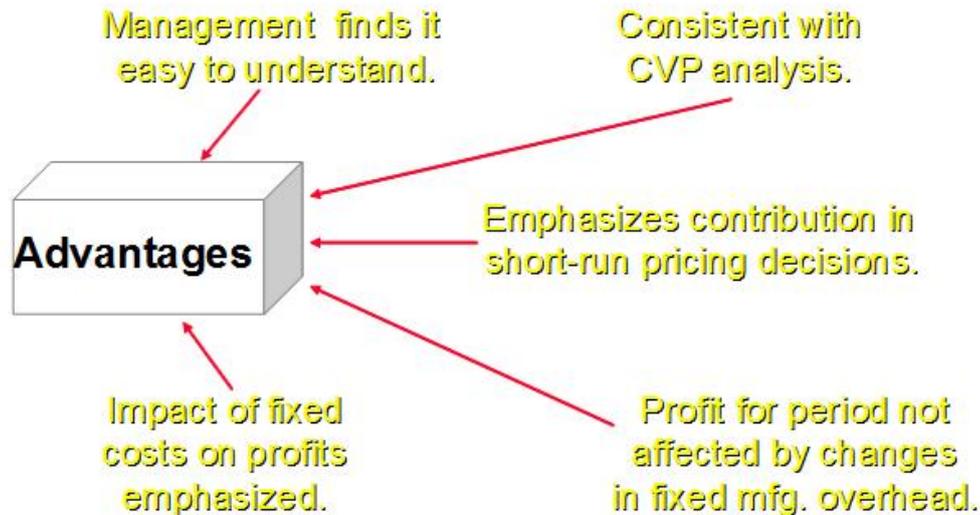
AC is based on the principle of full costing, which is based on *variable budgeting*. Full costing refers to both variable and fixed costs.

- **Direct Costing**

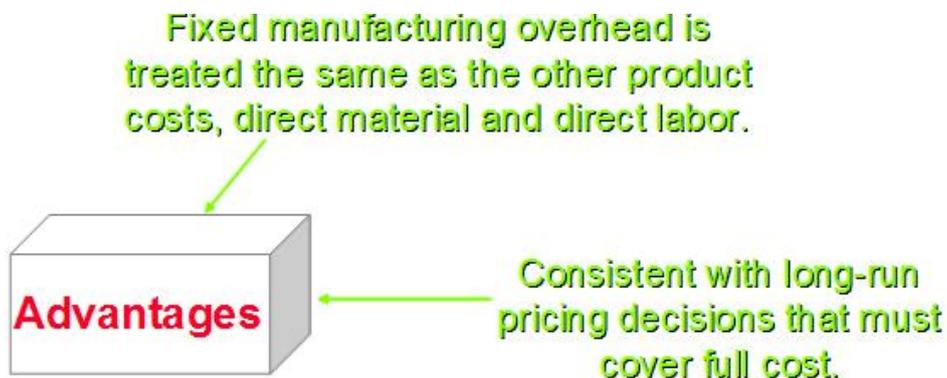
DC is based on the principle of variable costing, which is based on *mixed budgeting*.

Traditional product costing systems, and job-order costing systems in particular have tended to emphasise the production activities of the value chain to the relative exclusion of the other components. Although traditional approaches to product costing, such as job and order costing, are important, activity-based costing and management are better suited to managing the entire value chain.

Variable Costing



Absorption Costing



LO 9: Be aware of ethical considerations for managing job costs.

Most managers and accountants believe it would be unethical for a manager to intentionally overproduce inventory just to reduce costs and temporarily boost reported income.

Improprieties in job-order costing generally result from one or more of the following actions: misstating the stage of completion, charging costs to the wrong jobs, or simply misrepresenting costs.

- Management needs to know the stage of completion of projects to evaluate performance and control costs.
- To avoid the appearance of cost overruns on a specific job, supervisors sometimes are tempted to encourage employees to charge the job's costs to their jobs that are not in danger of cost overruns.
- Sometimes managers know a job's correct costs but intentionally deceive a customer to obtain a higher payment.

Preventing improprieties by understanding contracts.

LO 10: Measure and understand throughput costing's effects on costs and operating income.

Advocates of the Theory of Constraints approach to management have been advocating throughput costing as the best alternative to either absorption or variable costing.

Throughput costing: Assigns only out-of-pocket spending for direct costs as the cost of products or services.

Advocates of throughput costing argue that adding any other indirect, past, or committed costs to a product's accounting cost creates improper incentives to drive down the average cost per unit by making more products than can be used or sold.

Throughput costing avoids the incentive to overproduce because the cost per unit depends only on out-of-pocket costs, not how many units are made. Therefore, inventories should be small, and production should reflect demand.

Louisa Malina experimented with throughput costing and decided that only direct materials qualified as a throughput cost.