

Topic 5. COSTING OF PRODUCTS AND SERVICES

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Topic 5. Part 2.

- 5.1. Average costs vs. individualized costs
- 5.2. Job costing systems
- 5.3. Indirect cost pools and cost allocation
- 5.4. Cost accumulation; actual costs and budgeted costs
- 5.5. Process costing systems; equivalent units
- 5.6. Activity Based Costing (ABC)
- 5.7. Hybrid costing systems
- 5.8. Implications for the accounting information system

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5.5. Process costing systems; equivalent units

A process-costing system

A process-costing system is a costing system in which the costs of products or service is obtained by assigning costs to masses of like or similar units.

Common for manufacturing like chemical processing, oil refining, or food production like breakfast cereals

Illustrating process costing

- In a process-costing system,
 - ▷ the unit cost of a product or services is obtained
 - ▷ by assigning total costs
 - ▷ to many identical or similar units.

Illustrating process costing

- In manufacturing process-costing setting, each unit is assumed to receive
 - ▷ the same amount of direct materials costs,
 - ▷ direct manufacturing labour costs and
 - ▷ indirect manufacturing costs.
- Unit cost = total costs / number of units (*euro/unit*)

So, Job costing vs. Process costing

In a job-costing,

- individual jobs
- use different quantities of production resources.

Different professional working hours to conduct audit for different clients.

Process costing

- averages production costs
- over all units produced.

Mass production of similar tables, chairs, etc.

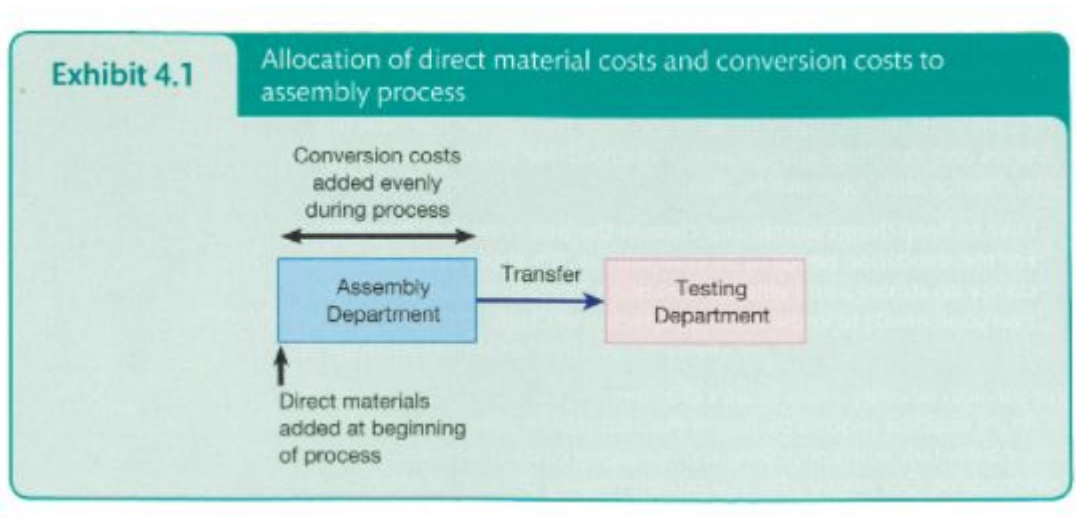
Breakdown of manufacturing costs

We will often use the following breakdown of manufacturing costs:

- Direct materials costs
 - Direct manufacturing labour costs
 - Indirect manufacturing costs
- } **“Conversion costs”**

Conversion costs

Process-costing system separate costs into cost categories according timing of when costs are introduced into the process.



Equivalent unit

- **Equivalent units** is an obtained amount of output units
 - ▶ that takes the quantity of each input (factor of production) in units completed or in work in progress, and
 - ▶ convert it into the amount of completed output units that could be made with the quantity of input.



5 steps approach

- Step 1: Summarise the flow of physical units of output.
- Step 2: Compute output in terms of equivalent units.
- Step 3: Compute equivalent unit costs.
- Step 4: Summarise total costs to account for.
- Step 5: Assign total costs to units completed and to units in closing work in progress.

Weighted-average method

- **The weighted-average** costing method
 - ▷ calculates the equivalent unit cost of the work done to date (regardless to the period in which it was done) and
 - ▷ assigns this cost to equivalent units completed and transferred out of the process and to equivalent units in closing work-in-progress stock.

First-in, first-out method

- **First-in, first-out (FIFO)** process-costing method
 - ▷ assigns all costs of the previous period's equivalent units in opening work-in-progress stock to the first units completed and transferred out of the process, and
 - ▷ assigns the cost of equivalent units worked on during the current period
 - ▷ first (1) to complete beginning stock,
 - ▷ then (2) to start and complete new units, and
 - ▷ finally (3) to units in closing work-in-progress stock.



*Bhimani A, Horngren CT, Datar SM and
Rajan M. Management and Cost
Accounting, 5/E. Financial Times Press
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Chapter 4.