

MODULE 2

ELEMENTS OF COST ACCOUNTING

There are three elements of cost namely material, labour and overhead expenses. Elements of cost are the cost incurred or consummated in the production of goods. These three elements of costs are directly traceable to the quantity or volume of goods produced.

UNIT ONE.

ELEMENTS OF COST: MATERIAL

Objectives

At the end of this chapter, students should be able to understand:

- The meaning of material as a cost element.
- The meaning of different terminologies in cost accounting.
- The difference between Accountant's and economist view of cost.
- The difference between cost unit and cost center

Learning Outcome:

At the end of this chapter, students should be able to:

- Explain the meaning of cost.
- Explain different terminologies in cost accounting.
- Different between accountant's and economist's view of cost.
- Analyze the difference between cost unit and cost center.

M2:1. MATERIAL

Cost of material is the expenses incurred on tangible materials and commodities other than the fixed asset, introduced into a product or utilized in the operation of an organization. Material used in production is not just the cost of tangible or most dominant material used in the production but all other materials input into the production such as the cost of

- a. raw materials
- b. component parts
- c. lubricating oil
- d. stationeries
- e. Consumable tools etc.

The cost of material which can also be known as stocks, stores, merchandise, inventory etc. is always a significant portion of total cost especially in manufacturing companies.

M2.2. Material Acquisition:

The preliminary steps that need to be followed in material acquisition include:

1. Determination of material requirements
2. Scouting for vendors
3. Deciding on the acceptable vendor. The vendor chosen should represent an appropriate balance between quality, price and delivery.

Other steps include:

4. Material purchase
5. Material reception and storage.
6. Materials issued appropriately charged to production or to cost centre as the case may be.
7. Documentation effectively done and
8. Stock taking conducted at the end of the period.

Material Purchase:

It is within the function of the procurement officer to purchase all materials not internally produced. To achieve this purpose the procurement unit should follow all the necessary procedure of the company such as selection of the supplier based on a specific criterion. Generally, the stages of material purchase involve originating the necessary documents, supplier selection, placing an order, receipt of the material in line with the order, and storage. Brief processes of material purchase are:

Purchase Requisition:

This is a document raised by the store department to request for material replenishment from the procurement officer. The document must contain the comprehensive description of the material required. Amongst others the quantity, quality, and the expected delivery date of the material are stated in the purchase requisition.

Purchase Order:

With the purchase requisition, the procurement officer will then initiate the process of procurement following the specific organization procedure. Pro-forma invoice will be requested from different vendors after which a purchase order will be sent to the chosen vendor.

M2.3. Material Reception, Documentation and Storage.

Material Reception.

The documents necessary in material reception include purchase requisition, purchase order and goods received note.

Goods Received Note:

At the end when the goods are delivered, the stores department or the inspection officer will confirm the goods received in line with the purchase requisition, pro-forma invoice and purchase order. Any discrepancies noted will be appropriately dealt with. After the confirmation, a goods received note is raised stating the quantity, quality and other necessary description of the good received. The goods received note is an important document and is necessary so that the supplier's invoice can be verified and passed for payment by the purchase department.

M2.4. Material Documentation.

The stores Bin card is used to keep and track record of materials movement in the store. The card is maintained for each class and type of material. The stores bin card can be manually or electronically kept. It shows details of in and out of movements of materials in the stores. The main source documents to the store bin card are stores credit note for inflow of materials and the stores requisition and issue notes for outflow of materials. Normally at the end of the accounting period, during annual stock taking, the stores bin card is compared with the accounts store ledger card. Note that the stores bin card is kept by the store keeper or the procurement officer while the ledger card is kept by the accounting officer in charge of inventories. The stores bin card is mostly interested in the movement of material without pricing while the ledger card normally kept by the accounts department keeps record of the material movement and also the pricing.

M2.5. Material Pricing, Issues and Valuation of Stock.

The accounts section of the industry is more concerned with this section. The procurement section though handles the material purchase documentation and storage but the area of pricing is solely the responsibility of the accounts section. After purchase of the material and recording in the bin card, the necessary documents are sent to accounts department for proper computation.

M2.6. Material Control.

Besides material purchase and reception, another critical area in treatment of material cost is control. Material control simply means all necessary techniques or control installed in the process from purchase to consumption of the material in production, to ensure effective use of the material and equally maximize the profit potential of the company. Material cost control spans from the time of purchase to closing inventory of materials. It is defined as the system used in a firm to control the firm's investment in stocks. It includes the recording and monitoring of stock levels, forecasting future demands and deciding on how and when to make an order. There are certain factors that facilitate effective material cost control. These include:

- i. Objective budget of material purchase and usages.
- ii. Engagement of qualified procurement personnel.
- iii. Availability of sufficient storage facilities
- iv. Effective coordination among all departments involved in material handling.
- v. Proper documentation and use of designated documents for accounting purpose.
- vi. Proper classification and codification of materials.

There are three basic costs associated with material or inventory control

1. Carrying costs
2. Cost of obtaining stock (ordering cost).
3. Cost of being without stock. (stock out cost)

Carrying Cost:

Carrying costs are the cost that an entity pays for holding inventory in stock. It is also referred to as holding cost. Such costs include

- i. Material handling costs
- ii. Insurance
- iii. Cost of deterioration
- iv. Pilferage and evaporation
- v. Stock taking cost
- vi. Audit and stock recording cost
- vii. Stores staffing, storage charges (rent, lighting etc)
- viii. Interest on capital invested in stock
- ix. Employee costs
- x. Taxes etc.

Ordering Cost:

This is the cost of obtaining stock. Simply put, it is the expenses incurred to initiate and process an order to a supplier. The total amount of ordering costs increases with the number of orders placed by the organization. Such increase in ordering cost can be mitigated by placing large blanket orders that cover long period of time.

Examples of cost of ordering cost include

- i. Clerical and administrative cost of purchasing stock.
- ii. Set up cost for each production (for internally manufactured products).
- iii. Transport cost
- iv. Cost of goods inspection when received etc.

Cost of being without Stock (stock Out Cost):

Cost of being without stock otherwise known as stock out cost is the opportunity cost or the lost income and expense associated with a shortage of inventory. It is a situation where the items required satisfying the customer's order is completely out of stock. Such a situation creates a cost for the organization. Such stock out costs include

- i. Cost of production stoppages
- ii. Lost sale contribution
- iii. Loss of future sales
- iv. Loss of goodwill etc.

M2.7 Stock Control Levels:

The level of stock held will depend upon a number of variables which will each have cost implications. Management must make decisions about the control of stocks levels with a view to minimizing the cost in the business whilst achieving maximum efficiency in the availability of materials to fulfill planned usage requirements.

The following stock levels need to be considered.

1. Minimum stock level
2. Maximum stock level
3. Re-order stock level
4. Re-order stock quantity or Economic Order quantity
5. Average stock level.

Minimum Stock Level:

This can be referred to as the safety stock level. It is therefore the threshold value that indicates the lowest level which actual material stock items should not be allowed to fall below. Factors to be considered in determining minimum stock levels include rate of consumption, allowable delivery period and the re-order level of materials. It is computed as follows:

Minimum stock level = Re-order – (average consumption x average delivery period).

Maximum Stock Level:

This is the level whereby there should be no further stock procurement. It is the highest level that stock should be in the store. Minimum and maximum stock levels are stock lower and upper limits normally kept by the organization. To arrive at the maximum stock level for an organization, storage space available, rate of consumption, re-order quantity, re-order level and delivery period should be considered.

Maximum stock level is computed as

$$\text{Reorder level} + \text{Re-order quantity} - \left\{ \begin{array}{l} \text{minimum} \\ \text{Consumption} \end{array} \times \begin{array}{l} \text{minimum} \\ \text{delivery period} \end{array} \right\}$$

Average Stock Level: This is the center or midway between maximum and minimum stock level. It is mathematically computed thus:

$$\text{Average stock level} = \frac{\text{minimum stock level} + \text{maximum stock level}}{2}$$

Re-Order Stock Level: This is the level at which stock replenishment order should be placed. The critical factor to be considered here is the lead time (period of time between ordering and replenishment or delivery) and the rate of demand during the lead time. Rate of consumption, delivery period and reliability of supplier are the main factors that influence re-order stock level. Formulas for calculating re-order stock level is stated thus

$$\text{Re-order stock level} = \text{Maximum consumption} \times \text{Maximum delivery period}$$

Re-Order Stock Quantity:

This is an important inventory management system also generally known as **Economic Order Quantity (EOQ)**. This is the order quantity that minimizes the balance of cost between carrying costs and ordering costs. Economic order quantity (EOQ) is aimed at determining a consistent inventory level to reduce the total cost of both handling and ordering costs.

M2.8. Assumptions of Economic Order Quantity (EOQ).

- a. Stock holding cost is known and constant
- b. Ordering cost is known and constant
- c. Rates of demand are known
- d. Price per unit is known and constant
- e. Replenishment is made with the complete batch delivered at once.

EOQ is calculated thus: $\frac{2CoD}{Cc}$

Where

Co = Ordering cost

D = Demand per annum

Cc = Carrying cost per item per annum.

Illustration 2.1.

Cyprus manufacturing firm supplied the following data:

Average usage	100 units per day
Minimum usage	60 units per day
Maximum usage	130 units per day
Lead time	20-26 days
Previous EOQ	4,000 units

You are required to calculate the following from the data above.

- Reorder level
- Minimum level
- Maximum level

SOLUTION 2.1:

Reorder level = Maximum usage X maximum lead time
 $130 \times 26 = 3,380$ units.

Minimum level = Reorder level – average usage in average lead time
 $3,380 - (100 \times 23) = 1,080$ units.

Note: average lead time = $(20 + 26) / 2 = 23$

Maximum level: Minimum expected usage in minimum lead time
 $= 3,380 + 4,000 - (60 \times 20)$
 $= 6,180$ units.

ASELAGUN NIGERIA Limited is a manufacturing company with no properly defined purchasing policy for its major raw materials, the monthly demand of which is 5,000 units.

As a cost accountant, you have been informed by the purchasing manager that the purchasing cost of the materials for a month's consumption is N50,000 and the annual carrying cost per unit is 10% of the cost of material while the ordering cost is N1,200 per order.

You are required to calculate:

- Economic order quantity
- The number of orders per year
- The total ordering cost for the material per year
- The total carrying cost for the material per year
- The total frequency of order
- The total monetary cost per annum

Solution.

ASELAGUN NIG. LIMITED

Economic order quantity

$$EOQ = \sqrt{\frac{2D_{oc}}{C_c}}$$

Determination of Annual Demand = 5000 units x 12mths = 60,000 units

Determination of annual carrying cost = 5000 50,000 x 10% = N1

Material purchase cost percent = 5000 50,000 = N10

$$EOQ = \sqrt{\frac{2 \times 60,000 \times 1200}{N1}}$$

$$EOQ = 12,000 \text{ units}$$

ii. Number of orders per year $\frac{\text{Annual Demand}}{EOQ}$

$$D/Q = 60,000/12,000 = 5 \text{ times}$$

iii. Total ordering cost for the material per year.

$$ToC = \frac{\text{Annual Demand} \times \text{ordering cost per order}}{EOQ}$$

$$\frac{60,000 \times N1200}{12000} = N6000$$

iv. Total carrying cost for the material per year

$$TCC = \frac{EOQ}{2} \times \text{carrying cost}$$

$$TCC = \frac{12000 \times N1}{2} = N6,000$$

v. The total frequency of orders. = Annual Demand

$$= \frac{60,000}{12,000} = 5 \text{ times}$$

vi. Total monetary cost per annum

Material Purchase Cost (N10 x 60,000 units)	N 600,000
Total ordering cost	6,000
Total covering cost	6,000
	612,000

M2.9. Stock Vs Inventory.

The word stock and inventory are used interchangeably by students but they do not exactly mean the same thing. It is important to understand the meaning of each so as to know how to account for each of them where necessary.

Stock.

Stock items are basically the finished goods that are usually sold to customers. It is more specific while inventory is broader and includes both the goods sold (stock), as well as the materials required to produce such goods. Stock refers to the finished product that is ready to sell in the market. Note that stock can also include raw material if the company is responsible for selling raw material. The value of the stock depends on the cost of acquisition or the market price, depending on whichever is less. When stock is sold, it will be deducted from the balance sheet but added to the profit and loss statement as revenue.

Inventory.

Inventory refers to the finished product that's ready to distribute, the work in progress goods which is not completely converted into finished products and the raw material used to create the finished product. In most cases, inventory is mostly found in manufacturing companies. There are usually costs involved in maintaining inventory at optimum levels, which are decided by the top management.

Inventory is usually classified into four namely

1. Raw materials: These are components used to make final products.
2. Work in progress (WIP): These are inventory still in progress or process. It is neither a finished product nor a raw material. It is yet incomplete production. Work in progress includes raw material, labour, overhead and other essentials required to complete the production.
3. Maintenance repair and operating supplies (MRO) : These are items that support production but are not part of the finished products. Example computers, gloves, safety glasses, packing materials.

4. Finished goods: These are materials that have completed the production cycle and are now ready for consumption.

IAS 2: Inventories defined Inventories as

- Assets held for sale. For a retailer, these are items that the business sells- its stock in trade. For a manufacturer, assets held for sale are usually referred to as "finished goods"
- Assets in the process of production for sale (work in progress for a manufacturer)
- Assets in the form of materials or supplies to be used in the production process ("raw materials" in the case of manufacturer).

The standard sets out the requirements to be followed when accounting for inventory. Such methods include periodic inventory system and perpetual inventory system

Periodic Inventory System:

Opening inventory in the trial balance which is a debit balance and purchases which is also a debit balance is both transferred to cost of sales. This clears both accounts. Closing inventory is then recognized in the inventory account as an asset (debited) while the cost of sales is credited with the value of the closing inventory. Cost of sales therefore comprises purchases in the period adjusted for movements in inventory level from the start to the end of the period. Any loss on inventory is immediately dealt with and does not require a special accounting treatment as it is not included in cost of sales and thus written off to cost of sales.

Perpetual Inventory Method.

This is a system where inventory records are continually updated so that inventory value is always known. In perpetual inventory system, a record is kept of all receipts or items into the inventory (at cost) and all issues of inventory to cost of sales.

Each issue of inventory is given a cost, and the cost of the items issued is either the actual cost if obtainable or a cost obtained using a valuation

method. Each receipt and issue of inventory is recorded in the inventory account thereby rendering purchases account unnecessary.

M2.10. Measurement of Inventory.

Measurement of inventory in financial reporting affects both the cost of sales (and profit) and also totals asset value recorded in the statement of financial position.

IAS 2 requires that inventory must be measured in the financial statements at the lower of:

- ❖ Cost or
- ❖ Net realizable value

Cost of Inventories

IAS 2 states that the cost of inventories shall comprise all costs of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition.

Purchase Cost. The purchase cost of inventory will consist of the following:

- a. The purchase prices
- b. Import duties and other non-recoverable tax (excluding recoverable sales tax)
- c. Transport, handling and other costs directly attributable to the purchase (carriage inwards), if these costs are additional to purchase price
- d. Excludes any settlement discounts.

Net realizable value: This is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. It is the amount that can be obtained from selling the inventory in the normal course of business, less any further costs that will be incurred in getting it ready for disposal or sale.

Net realizable value is usually higher than cost. Inventory is therefore usually valued at cost. However, when inventory loses value perhaps because it has been damaged or is now obsolete, net realizable value will be

lower than cost. Note that the cost and net realizable value should be compared for each separately identifiable item of inventory, or group of similar inventories, rather than for inventory in total.

M2.11. Differences between Stock and Inventory

Here are some of the notable differences between stock and inventory according to the various parameters where they are used.

1. The Context

Inventory is often used for accounting purposes to determine the current raw materials, goods considered to be work in progress and finished products. On the other hand, stock is used in the business context as it's used to ascertain the bottom line of the business.

2. Valuation

When valuing inventory, it is determined using the cost incurred by the company using methods such as LIFO, FIFO and Average cost method. Stock, is valued at the market price which is the selling price at which the finished goods are sold to the customers.

3. Frequency

Inventory is valued before the end of the financial reporting period. It is valued less frequently compared to stock.

On the other hand, stock is valued frequently at intervals. In most cases, it can be valued on a daily basis since it determines the bottom line of the company.

4. The Revenue

Inventory takes into account all the assets of a business used to produce the goods it sells. Also, inventory is useful in determining the sale price of stock.

As mentioned, stock is used to determine the total amount of revenue generated by the business. If there's more stock sold, the business will have higher revenues.

5. Considerations

As mentioned, inventory is valued at least once every year. That's because inventory is usually replenished quite often to make sure there is adequate stock for the business to stay afloat. Furthermore, sale of inventory will create a cash infusion into the business but it is not considered as revenue. It is only when stock is sold that revenue increases.

M2.12. Valuation of Stock.

There are different methods of stock valuation of which we will consider only the first three listed below. International Financial Reporting Standard (IFRS) in stock valuation recommends that any of these three methods First In First Out (FIFO); Last In First Out (LIFO) and Weighted Average method should be adopted in stock valuation. They are:

- i. First In First Out (FIFO)
- ii. Last In First Out (LIFO)
- iii. Weighted average method
- iv. Standard price
- v. Replacement price.
- vi. The position of IFRS standard.

First In First Out (FIFO).

This a method of stock pricing or valuation that uses the price of the first, earliest or oldest batch of materials received for all issues until all units in the specified batch have been issued. With the first in, first-out-method of inventory measurement, it is assumed that inventory is utilized in the strict order in which it was received. The first items that are received into inventory are the first items that go out. Since the above assumption is made, it follows that the value of inventory at any time should be the cost of the most recently acquired units of inventory.

Features:

1. It represents historical cost and is an actual cost system.
2. It lags behind current conditions of price as it uses oldest material price.
3. Being an actual cost system, unrealized profits or losses do not arise.
4. During inflation period, product cost is understated and profit overstated while the reverse is the case during deflation (falling prices) period.
5. It is a good representation of stock keeping system.

Advantages.

- a. It is easy to understand and apply.
- b. It uses actual prices.
- c. It reflects normal movement of material.
- d. Disposes of oldest prices faster thereby bridging the gap between current prices and prices of last batch received.

Disadvantages:

- a. Issue prices in some cases do not reflect current economic situations.
- b. Creates unrealistic prices especially in an unstable economy. Stocks with low turnover will likely be priced at old unrealistic price.

ILLUSTRATION 2.2

Mr. Effiong decided on July 1, to invest his retirement benefit of N2,000,000 in a retail business to buy and sell designed plastic seats. The following transactions took place from that month till December.

PURCHASES			SALES		
Date	Quantity	Cost	Date	Quantity	Cost
July 1	100	360,000	Aug 12	250	1,250,000
Aug 5	200	760,000			
Sep 13	300	1,200,000			
Oct 10	200	700,000	Oct 15	300	1,350,000
Dec 2	250	700,000	Dec 12	200	750,000

Required: calculate the cost of shovels issued during the period and the value of shovels on hand on 31st Dec using the FIFO method.

- Show analysis of the closing inventory in each method.
- Calculate and discuss the effect each of the pricing methods will have on the reported profit of the business.

c. FIFO METHOD

Date	Receipts			Issued			Balance		
	Qty	UP	Value	Qty	UP	Value	Qty	UP	Value
July 1	100	3,600	360,000				100	3,600	360,000
August 5	200	3,800	760,000				300		1,120,000
August 12				100	3,600	360,000			
				150	3,800	570,000			
				250		930,000	50		190,000
Sept 13	300	4,000	1,200,000				350		1,390,000
Oct 10	200	3,500	700,000				550		2,090,000
Oct 15				50	3,800	190,000			
				250	4,000	1,000,000			
				300		1,190,000	250		900,000
Dec 2	250	2,800	700,000				500		1,600,000
Dec 12				50	4,000	200,000			
				150	3,500	525,000			
				200		725,000	300		875,000

d. c. Analysis of the closing inventory.

e. October 10	50 X 3,500	175,000
f. December 2	250 X 2,800	700,000
g.	300	875,000

h. Cost of sales

i. Date of sales	Qty sold	Cost of units sold
j. Aug 12	250	930,000
k. Oct 15	300	1,190,000
l. Dec 12	200	725,000
m.	750	2,845,000

n. Sales Revenue

o. Date of sales	Qty sold	Revenue
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p.	Aug 12	250	1,250,000
q.	Oct 15	300	1,350,000
r.	Dec 12	200	750,000
s.		750	3,350,000
t.	Expected profit (Revenue less cost)		505,000
u.	Note: The cost of the 750 seats sold using FIFO method is 2,845,000 while the closing inventory value of 300 seats is 875,000.		

Last In First Out (LIFO).

This is a direct opposite of FIFO method. It is a method whereby the prices of the last or newest batch of materials received is used until units of the specified batch have been issued and then the price of next earliest batch is used. The complexity of this method lies on the fact that once a new batch is received, the price of the new batch will be used even if the batch of the price in use is yet to be exhausted.

Features:

- It is an actual cost system.
- It is administratively complex and clumsy.
- Results in many batches being partly charged to production
- Product costs based on closely current prices.

Advantages.

- The issue price is more realistic than in FIFO.
- It uses actual price.
- During inflation period, product cost is overstated and profit understated while the reverse is the case during deflation (falling prices) period.
- It is simple to operate.

Disadvantages:

- It is complex to operate especially with fast moving stock.
- It is not realistic as it is contrary to normal issues procedure.

Weighted Average Method.

This is a perpetual weighted average system where the issue price is recalculated after each receipt of new batches considering both the quantity received and its associated price.

Features:

1. This is not actual buying in price.
2. It is less complex to administer.
3. It gives a more realistic and satisfactory price in an unstable economy.

Advantages:

- a. It absorbs the fluctuations in issue prices

Disadvantages:

- a. Issue price may not reflect current economic values

Illustration 2.2.2. Refer to illustration 2.2. You are required to use **LIFO** in the stock valuation.

LIFO METHOD

Date	Receipts			Issued			Balance		
	Qty	UP	Value	Qty	UP	Value	Qty	UP	Value
July 1	100	3,600	360,000				100	3,600	360,000
August 5	200	3,800	760,000				300		1,120,000
August 12				200	3,800	760,000			
				50	3,600	180,000			
				250		940,000	50		180,000
Sept 13	300	4,000	1,200,000				350		1,380,000
Oct 10	200	3,500	700,000				550		2,080,000
Oct 15				200	3,500	700,000			
				100	4,000	400,000			
				300		1,100,000	250		980,000
Dec 2	250	2,800	700,000				500		1,680,000
Dec 12				200	2,800	560,000	300		1,120,000

c. Analysis of the closing inventory.

July 1	50 X 3,600	180,000
September 13	200 X 4,000	800,000
December 2	50 X 2,800	140,000
	300	1,120,000

Cost of sales

Date of sales	Qty sold	Cost of units sold
Aug 12	250	940,000
Oct 15	300	1,100,000
Dec 12	200	560,000
	750	2,600,000

Sales revenue

Date of sales	Qty sold	Revenue
Aug 12	250	1,250,000
Oct 15	300	1,350,000
Dec 12	200	750,000
	750	3,350,000

Expected profit (Revenue less cost) 750,000

Note: The cost of the 750 seats sold using FIFO method is 2,600,000 while the closing inventory value of 300 seats is 1,120,000.

Illustration 2.2.2. Refer to illustration 2.2. You are required to use Weighted average in the stock valuation.

Weighted Average Method

Date	Receipts			Issued			Balance		
	Qty	UP	Value	Qty	UP	Value	Qty	UP	Value
July 1	100	3,600	360,000				100	3,600	360,000
August 5	200	3,800	760,000				300	3,733	1,120,000
August 12				250	3,733	933,250	50	3,735	186,750
Sept 13	300	4,000	1,200,000				350	3,962	1,386,750
Oct 10	200	3,500	700,000				550	3,794	2,086,750
Oct 15				300	3,794	1,138,200	250	3,794	948,550
Dec 2	250	2,800	700,000				500	3,297	1,648,500
Dec 12				200	3,297	659,400	300	3,297	989,100

c. Analysis of the closing inventory.

December 2 300 X 3,297 989,100

Cost of sales

Date of sales	Qty sold	Cost of units sold
Aug 12	250	933,250
Oct 15	300	1,138,200
Dec 12	200	659,400
	750	2,730,850

Revenue

Date of sales	Qty sold	Revenue
Aug 12	250	1,250,000
Oct 15	300	1,350,000
Dec 12	200	750,000
	750	3,350,000

Expected profit (Revenue less cost) 619,150

Note: The cost of the 750 seats sold using weighted average method is 2,730,850 while the closing inventory value of 300 seats is 989,100.

Effect of each method on reported profit.

Method	Revenue	Cost of sales	Profit
LIFO	3,350,000	2,600,000	750,000
FIFO	3,350,000	2,845,000	505,000
WEIGHTED AVERAGE	3,350,000	2,730,850	619,150

Comment: from the tabulated analysis above, more profit was generated in LIFO method while the lowest profit was generated in FIFO method. This could be caused by price fluctuation or unstable market for inventory.

Other Key Points from the Three Methods

	FIFO	LIFO	WEIGHTED AVERAGE
Closing stock (units)	750	750	750
Closing stock (N)	N875,000	N1,120,000	N989,100

Comment: From the table above, it is observed that the closing stock value is higher when LIFO method is adopted while it is lower when FIFO method is adopted. This could equally be caused by the price fluctuation or unstable market inventory. The closing inventory quantity remains the same but the value differs.

Illustration: 2.3

The following information is available about a component.

Opening stock	1 st Jan	500 @ N2
Receipts	6 th Jan	160 @ N2.20
	20 th Jan	180 @ N2.25
Issues	2 Jan	300
	16 Jan	210

Required: Complete three separate stores ledger accounts assuming that issues are priced using:

- LIFO
- FIFO
- WEIGHTED VERAGE

SOLUTION

Stores ledger Account' LIFO

	RECEIPTS				ISSUE			BALANCE		
	Qty	N	N		Qty	N	N	Qty	N	N
1st Jan bal	500	2	1,000					500	2	1,000
2 Jan Issue				300	2	600	200			400
6 th Jan Rec	160	2.20	352				360			752
16 Jan Issue				210	2.20	452	150			300
20 Jan Rec	180	2.25	405				330			705
				Bal c/d	330		705			
	840	1,757			840		1,757			

Closing inventory analysis:

Date	Material		Price		Value
	180	X	2.25	=	405
	150	X	2	=	300
					705

Stores ledger Account' FIFO

	RECEIPTS				ISSUE			BALANCE		
	Qty	N	N		Qty	N	N	Qty	N	N
1st Jan bal	500	2	1,000					500	2	1,000
2 Jan Issue				300	2	600	200			400
6 th Jan Rec	160	2.20	352				360			752
16 Jan Issue				210	2	422	150			330
20 Jan Rec	180	2,25	405				330			735
				Bal c/d	330		735			
	840	1,757			840		1,757			

Date	Material		Price		Value
	150	X	2.20	=	330
	180	X	2.25	=	405
					735

Stores ledger Account' AVERAGE PRICE

	RECEIPTS				ISSUE			BALANCE		
	Qty	N	N		Qty	N	N	Qty	N	N
1st Jan bal	500	2	1,000					500	2	1,000
2 Jan Issue				300	2	600	200			400
6 th Jan Rec	160	2.20	352				360			752
16 Jan Issue				210	2.088	439	150	2.088		313
20 Jan Rec	180	2,25	405				330	2,176		718
				Bal c/d			330			718
	840	1,757			840		1,757			

Closing inventory analysis: 718/330 = N2, 176.