CHAPTER

4 Cost and Revenue Analysis

> "The big hurdle is going out and raising the revenue "
>
> *–Tyler Cowen*

Learning Objectives

1. To identify the cost involved in the production of any commodity or service and to present the ways in which it is utilized, combining with revenue in the calculation of profit of the firm; and
2. To point out how revenue is realized at the sale of the goods and services produced at the various types of market.

4.1 Introduction

Cost and revenue analysis refers to examining the cost of production and sales revenue of a production unit or firm under various conditions. The objective of a firm is to earn profit, and not to make loss. However, a firm's profit or loss is primarily determined by its costs and revenue. In simple terms, profit / loss is defined as the difference between the total revenue and the total cost i.e., Profit (or) Loss = Total Revenue - Total Cost. As costs and revenue are very important to decide the production behaviour of a firm and its supply behaviour in the market, it is necessary to understand the cost and revenue concepts .

4.2 Cost Analysis

Cost refers to the total expenses incurred in the production of a commodity. Cost analysis refers to the study of behaviour of cost in relation to one or more production criteria, namely size of output, scale of production, prices of factors and other economic variables. The functional relationship between cost and output is expressed as 'Cost Function'.

A **Cost Function** may be written as

$$C = f(Q)$$

Eg. $TC = Q^3 - 18Q^2 + 91Q + 12$

where, C=Cost and Q=Quantity of output. Cost functions are derived functions because they are derived from Production Functions. We shall discuss the basic cost concepts and their behaviour below.

4.3 Cost Concepts

4.3.1 Money Cost

Production cost expressed in money terms is called as money cost. In other words, it is the total money expenses incurred by a firm in producing a commodity. Money cost includes the expenditures such as cost of raw materials, payment of wages and salaries, payment of rent, interest on capital, expenses on fuel and power, expenses on transportation and other types of production related costs. These costs are considered as out of pocket expenses. Money costs are also called as Prime Cost or Direct Cost or Nominal Cost or Accounting Cost or Explicit Cost or Out of Pocket Cost, suiting to context.

4.3.2 Real Cost

Real cost refers to the payment made to compensate the efforts and sacrifices of all factor owners for their services in production. It includes the efforts and sacrifices of landlords in the use of land, capitalists to save and invest, and workers in foregoing leisure. Adam Smith regarded pains and sacrifices of labour as real cost of production.

4.3.3 Explicit Cost
(Paid out cost)

Adam Smith

Payment made to others for the purchase of factors of production is known as Explicit costs. It refers to the actual expenditures of the firm to purchase or hire the inputs the firm needs. Explicit cost includes, i) wages, ii) payment for raw material, iii) rent for the building, iv) interest for capital invested, v) expenditure on transport and advertisement vi) other expenses like license fee, depreciation and insurance charges, etc. It is also called Accounting Cost or Out of Pocket Cost or Money Cost.

4.3.4 Implicit Cost

Payment made to the use of resources that the firm already owns, is known as Implicit Cost. In simple terms, Implicit Cost refers to the imputed cost of a firm's self-owned and self-employed resources. A firm or producer may use his own land, building, machinery, car and other factors in the process of production. These costs are not recorded under normal accounting practices as no cash payment takes place. However, the value of the own services are imputed and considered for preparing the profit and loss accounts. Implicit Cost is also called as Imputed Cost or Book Cost.

4.3.5 Economic Cost

It refers to all payments made to the resources owned and purchased or hired by the firm in order to ensure their regular supply to the

process of production. It is the summation of explicit and implicit costs. Economic Cost is relevant to calculate the normal profit and thereby the economic profit of a firm.

Economic Cost = Implicit Cost + Explicit Cost

4.3.6 Social Cost

It refers to the total cost borne by the society due to the production of a commodity. Alfred Marshall defined the term social cost to represent the efforts and sacrifices undergone by the various members of the society in producing a commodity. Social Cost is the cost that is not borne by the firm, but incurred by others in the society. For example, large business firms cause air pollution, water pollution and other damages in a particular area which involve cost to the society. These costs are treated as social cost. It is also called as External Cost.

4.3.7 Opportunity Cost

It refers to the cost of next best alternative use. In other words, it is the value of the next best alternative foregone. For example, a farmer can cultivate both paddy and sugarcane in a farm land. If he cultivates paddy, the opportunity cost of paddy output is the amount of sugarcane output given up. Opportunity Cost is also called as 'Alternative Cost' or 'Transfer Cost'.

4.3.8 Sunk Cost

A cost incurred in the past and cannot be recovered in future is called as Sunk Cost. This is historical but irrelevant for future business decisions. It is called as sunk because, they are unalterable, unrecoverable, and if once invested it should be treated as drowned or disappeared. For example, if a firm purchases a specialized equipment designed for a special plant, the expenditure on this equipment is a sunk cost, because it has no alternative use and its opportunity Cost is zero. Sunk cost is also called as 'Retrospective Cost'.

4.3.9 Floating Cost

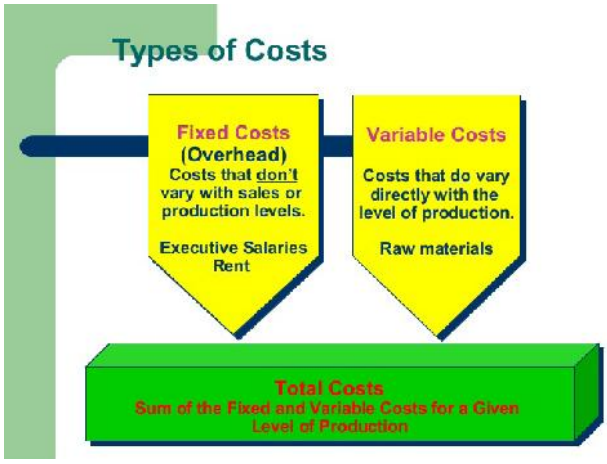
It refers to all expenses that are directly associated with business activities but not with asset creation. It does not include the purchase of raw material as it is part of current assets. It includes payments like wages to workers, transportation charges, fee for power and administration. Floating cost is necessary to run the day-to-day business of a firm.

4.3.10 Prime Cost

All costs that vary with output, together with the cost of administration are known as Prime Cost. In short, Prime cost = Variable costs + Costs of Administration.

4.3.11 Fixed Cost

Fixed Cost does not change with the change in the quantity of output. In other words, expenses on fixed factors remain unchanged irrespective of the level of output, whether the output is increased or decreased or even it becomes zero. For example, rent of the factory, watchman's wages, permanent worker's salary, payments for minimum equipments and machines insurance premium, deposit for power, license fee, etc fixed cost is also called as 'Supplementary Cost' or 'Overhead Cost'.



4.3.12 Variable Cost

These costs vary with the level of output. Examples of variable costs are: wages of temporary workers, cost of raw materials, fuel cost, electricity charges, etc. Variable cost is also called as Prime Cost, Special Cost, or Direct Cost.

4.4 Short run Cost Curves

4.4.1 Total Fixed Cost (TFC)

Table 4.1 Total Fixed Cost

Output (in unit)	Total Fixed Cost (in ₹)
0	1000
1	1000
2	1000
3	1000
4	1000
5	1000

All payments for the fixed factors of production are known as Total Fixed Cost. A hypothetical TFC is shown in table 4.1 and diagram 4.1

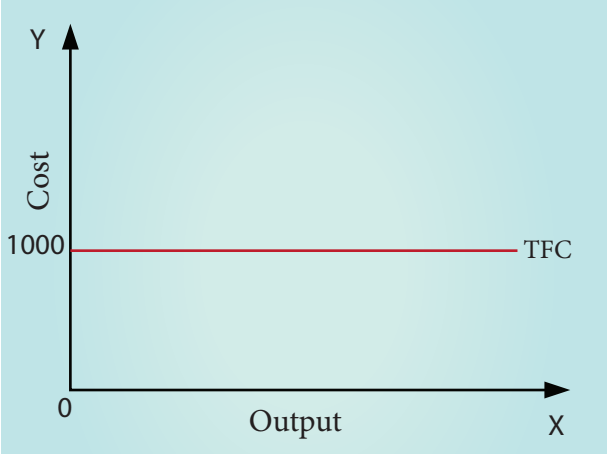


Diagram 4.1

For instance if TC = $Q^3 - 18Q^2 + 91Q + 12$, the fixed cost here is 12. That means, if Q is zero, the Total cost will be 12, hence fixed cost.

It could be observed that TFC does not change with output. Even when the output is zero, the fixed cost is ₹.1000. TFC is a horizontal straight line, parallel to X axis.

4.4.2 Total Variable Cost (TVC)

All payments to the variable factors of production is called as Total Variable Cost. Hypothetical TVC is shown in table-4.2 and Diagram 4.2

Table 4.2 Total Variable Cost

Output (in unit)	Total Variable Cost (in ₹)
0	0
1	200
2	300
3	400
4	600
5	900

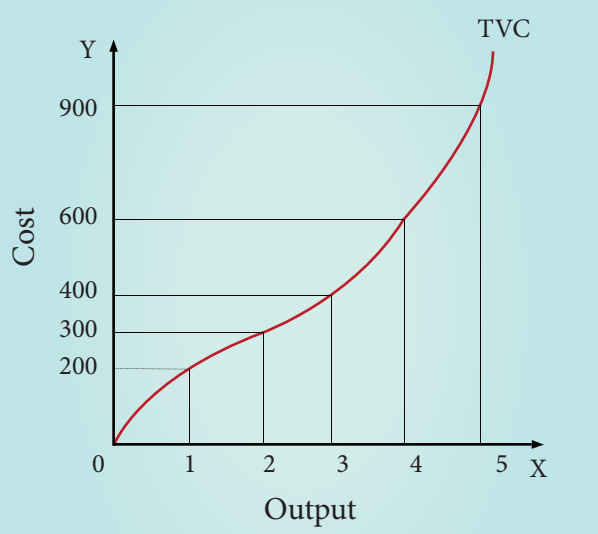


Diagram 4.2

In the diagram the TVC is zero when nothing is produced. As output increases TVC also increases. TVC curve slopes upward from left to right. For instance in TC = $Q^3 - 18Q^2 + 91Q + 12$, variable cost, TVC = $Q^3 - 18Q^2 + 91Q$

4.4.3 Total Cost Curves

Total Cost means the sum total of all payments made in the production. It is also called as Total Cost of Production. Total cost is the summation of Total Fixed Cost (TFC) and Total Variable Cost (TVC). It is written symbolically as

TC = TFC + TVC. For example, when the total fixed cost is ₹ 1000 and the total variable cost is ₹ 200 then the Total cost is = ₹ 1200 (₹ 1000 + ₹ 200).

If TFC = 12 and

$TVC = Q^3 - 18Q^2 + 91Q$

$TC = 12 + Q^3 - 18Q^2 + 91Q$

Table 4.3 Total Cost Curves

Output (in unit)	Total Fixed Cost (TFC) (in ₹)	Total Variable Cost (TVC) (in ₹)	Total Cost (TC) TFC+TVC (in ₹)
0	1000	0	1000
1	1000	200	1200
2	1000	300	1300
3	1000	400	1400
4	1000	600	1600
5	1000	900	1900

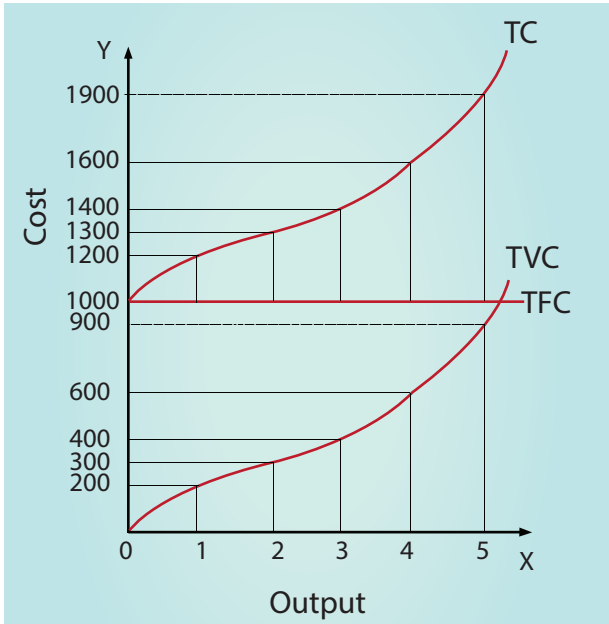


Diagram 4.3

It is to be noted that

a) The TC curve is obtained by adding TFC and TVC curves vertically.

b) TFC curve remains parallel to x axis, indicating a straight line.

c) TVC starts from the origin and moves upwards, as no variable cost is incurred at zero output.

d) When TFC and TVC are added, TC starts from TFC and moves upwards.

e) TC curve lies above the TFC curve

f) TVC and TC curves are the same shapes but beginning point is different.

4.4.4 Average Fixed Cost (AFC)

It refers to the fixed cost per unit of output. It is obtained by dividing the total fixed cost by the quantity of output. AFC = TFC / Q where, AFC denotes average fixed cost, TFC denotes total fixed cost and Q denotes quantity of output. For example, if TFC is 1000 and the quantity of output is 10, the AFC is ₹ 100, obtained by dividing ₹ 1000 by 10. AFC is shown in table 4.4 and diagram 4.4.

Table 4.4 Average Fixed Cost

Q (in unit)	TFC (in ₹)	AFC TFC/Q (in ₹)
0	1000	1000/0 = ∞
1	1000	1000/1 = 1000
2	1000	1000/2 = 500
3	1000	1000/3 = 333
4	1000	1000/4 = 250
5	1000	1000/5 = 200

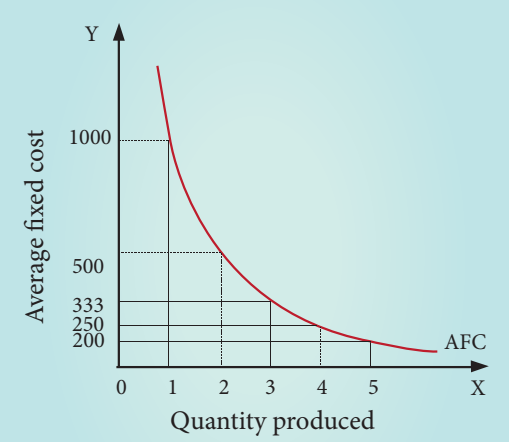


Diagram 4.4

It is to be noted that

a. AFC declines as output increases, as fixed cost remains constant

b. AFC curve is a downward sloping throughout its length, never touching X and Y axis. It is asymptotic to both the axes.

c. The shape of the AFC curve is a rectangular hyperbola.

4.4.5 Average Variable Cost (AVC)

Table 4.5 Average Variable Cost

Q (in unit)	TVC (in ₹)	AVC TVC/Q (in ₹)
0	0	0/0 = 0
1	200	200/1 = 200
2	300	300/2 = 150
3	400	400/3 = 133
4	600	600/4 = 150
5	900	900/5 = 180

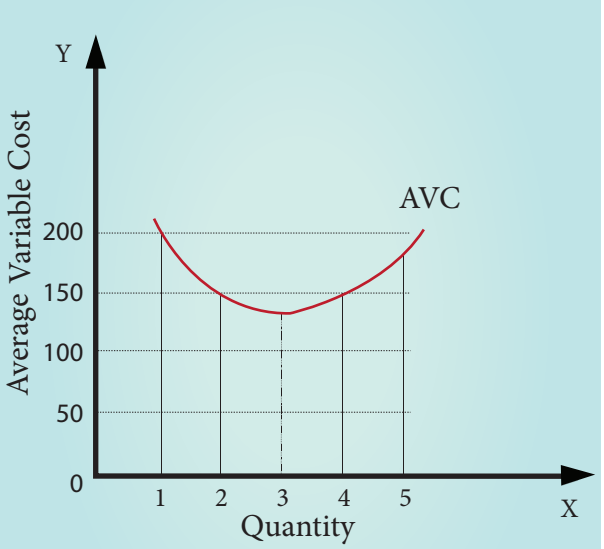


Diagram 4.5

It refers to the total variable cost per unit of output. It is obtained by dividing total variable cost (TVC) by the quantity of

output (Q). ***AVC = TVC / Q*** where, AVC denotes Average Variable cost, TVC denotes total variable cost and Q denotes quantity of output. For example, When the TVC is ₹ 300 and the quantity produced is 2, the AVC is ₹ 150, (AVC = 300/2 = 150) AVC is shown in table 4.5 and Diagram 4.5. If TVC = $Q^3 - 18Q^2 + 91Q$

AVC = $Q^2 - 18Q + 91$

It is to be noted that

a) AVC declines initially and then increases with the increase of output.

b) AVC declines up to a point and moves upwards steeply, due to the law of returns.

c) AVC curve is a U-shaped curve.

4.4.6 Average Total Cost (ATC) or Average Cost (AC)

It refers to the total cost per unit of output. It can be obtained in two ways.

1. By dividing the firm's total cost (TC) by the quantity of output (Q). ***ATC = TC / Q***. For example, if TC is ₹ 1600 and quantity of output is Q=4, the Average Total Cost is ₹ 400. (ATC = 1600/4 = 400) If ATC is $Q^3 - 18Q^2 + 91Q + 12$, then AC = $Q^2 - 18Q + 91 + 12/Q$

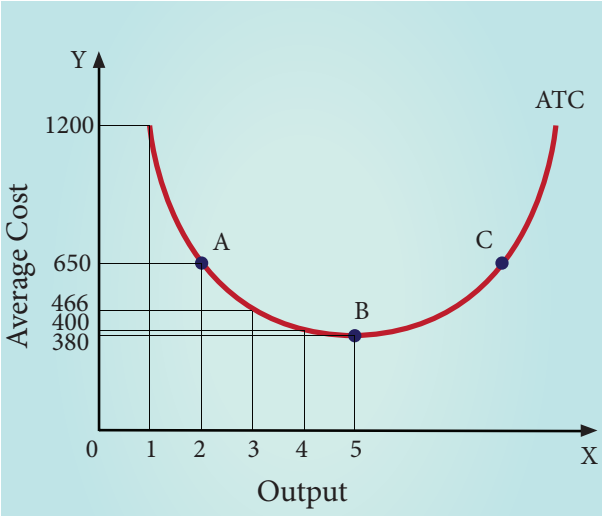


Diagram 4.6

2. ByATC is derived by adding together Average Fixed Cost (AFC) and Average Variable Cost (AVC) at each level of output. ***ATC = AFC + AVC***. For example, when Q= 2, TFC = 1000, TVC=300; AFC=500; AVC=150;ATC=650. ATC or AC is shown in table 4.6 and Diagram 4.6

It should be noted that

Table 4.6 Average Total Cost or Average Cost

Q (in unit)	TFC (in ₹)	TVC (in ₹)	TC (in ₹) TFC +TVC	ATC (TC/Q) (in ₹)	AFC (in ₹)	AVC (in ₹)	ATC (AFC +AVC) (in ₹)
0	1000	0	1000	1000 /0= ∞	0	0	0 + 0 = 0
1	1000	200	1200	1200 /1= 1200	1000	200	1000+200 =1200
2	1000	300	1300	1300 /2= 650	500	150	500 + 150= 650
3	1000	400	1400	1400 /3= 466	333	133	333 + 133= 466
4	1000	600	1600	1600 /4= 400	250	150	250 + 150= 400
5	1000	900	1900	1900 /5= 380	200	180	200 + 180= 380

a) ATC curve is also a 'U' shaped curve.

b) Initially the ATC declines, reaches a minimum when the plant is operated optimally, and rises beyond the optimum output.

c) The 'U' shape of the AC reflects the law of the variable proportions.

4.4.7 Marginal Cost (MC)

Table 4.7 Marginal Cost

Q (in unit)	TC (in ₹)	MC (in ₹)
0	1000	--
1	1200	1200 - 1000 = 200
2	1300	1300 - 1200 = 100
3	1400	1400 - 1300 = 100
4	1600	1600 - 1400 = 200
5	1900	1900- 1600 = 300

It is the cost of the last single unit produced. It is defined as the change in total costs resulting from producing one extra unit of output. In other words, it is the addition made to the total cost by producing one extra unit of output. Marginal cost is important for deciding whether any additional output can be produced or not. MC = ΔTC / ΔQ where MC denotes Marginal Cost, ΔTC denotes change in total cost and ΔQ denotes change in total quantity. For example, a firm produces 4 units of output and the Total cost is ₹ 1600. When the firm produces one more unit (4 +1 = 5 units) of output at the total cost of ₹ 1900, the marginal cost is ₹ 300.

MC = ₹ 1900 – ₹ 1600 = ₹ 300.

The other method of estimating MC is :

$$MC_n = TC_n - TC_{n-1}$$

where, 'MC' denotes Marginal Cost, 'TC_n' denotes Total cost of 'n'th item, TC_{n-1} denotes Total Cost of 'n-1' th item. For example,

when TC_4 = ₹1600, $TC_{(4-1)}$=₹1400 and then MC= ₹200, (MC=1600-1400)

MC schedule is shown in Table 4.7 and MC Curve is shown in diagram 4.7.

It is to be noted that

a) MC falls at first due to more efficient use of variable factors.

b) MC curve increases after the lowest point and it slopes upward.

c) MC cure is a U-shaped curve.

d) The slope of TC is MC.

If TC = $Q^3 - 18Q^2 + 91Q + 12$

MC = $3Q^2 - 36Q + 91$

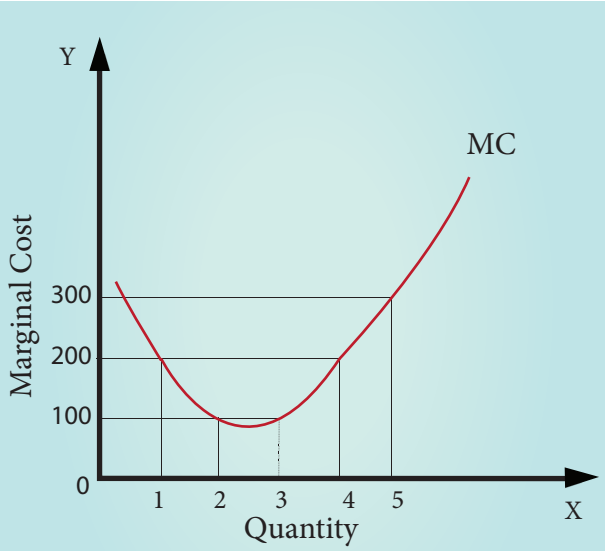


Diagram 4.7

4.4.8 The relationship between Average Cost and Marginal cost

There is a unique relationship between the AC and MC curves as shown in

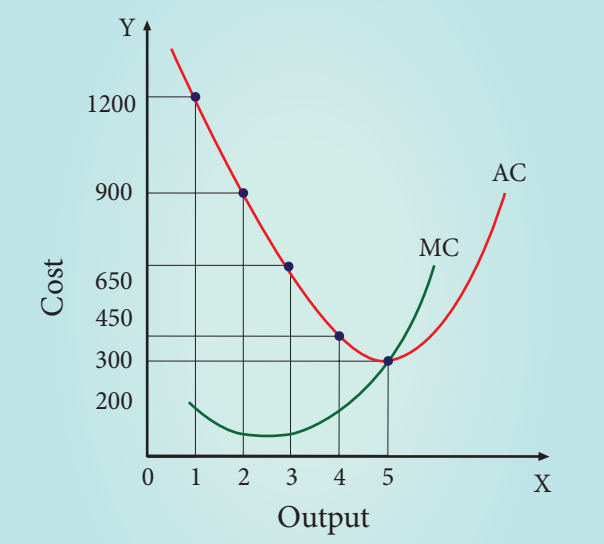


Diagram 4.8

diagram 4.8.

1. When AC is falling, MC lies below AC.
2. When AC becomes constant, MC also becomes equal to it.
3. When AC starts increasing, MC lies above the AC.
4. MC curve always cuts AC at its minimum point from below.

4.5 Long Run Cost Curve:

In the long run all factors of production become variable. The existing size of the firm can be increased in the case of long run. There are neither fixed inputs nor fixed costs in the long run.

LAC is given in diagram 4.9.

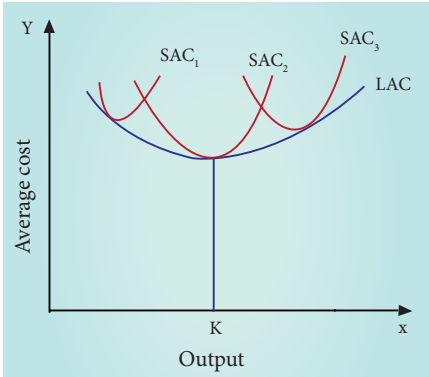


Diagram 4.9

Long run average cost (LAC) is equal to long run total costs divided by the level of output.

$$LAC = LTC/Q$$

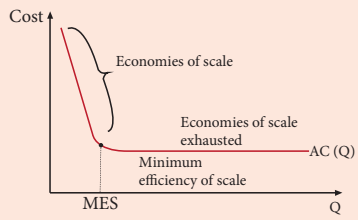
where, LAC denotes Long-Run Average Cost,

LTC denotes Long-run Total Cost and

Q denotes the quantity of output.

The LAC curve is derived from short-run average cost curves. It is the locus of points denoting the least cost curve of producing the corresponding output. The LAC curve is called as 'Plant Curve' or 'Boat shape Curve' or 'Planning Curve' or 'Envelop Curve'.

A significant recent development in cost theory is that the long-run average cost curve is L- shaped rather than U-shaped. The L-shape of the long-run average cost curve implies that in the beginning when output is expanded through increase in plant size and associated variable factors, cost per unit falls rapidly due to economies of scale.



4.6 Revenue Analysis

The amount of money that a producer receives in exchange for the sale of goods is known as revenue. In short, revenue means sales revenue. It is the amount received by a firm from the sale of a given quantity of a commodity at the prevailing price in the market. For example, if a firm sells 10 books at the price of ₹100 each, the total revenue will be ₹1000.

4.6.1 Revenue Concepts

The three basic revenue concepts are: Total Revenue, Average Revenue and Marginal Revenue.

a) Total Revenue:

Total revenue is the amount of income received by the firm from the sale of its products. It is obtained by multiplying the price of the commodity by the number of units sold.

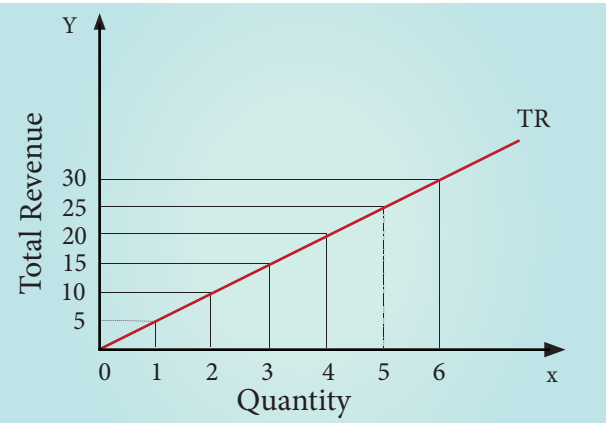


Diagram 4.10

Table 4.8

Total Revenue - Constant Price

Quantity sold (Q)	Price (P)	Total Revenue (TR)
1	5	5
2	5	10
3	5	15
4	5	20
5	5	25
6	5	30

$$TR = P \times Q$$

where,

TR denotes Total Revenue,

P denotes Price and

Q denotes Quantity sold.

For example, a cell-phone company sold 100 cell-phones at the price of ₹ 500 each. TR is ₹ 50,000. (TR= 500 × 100 = 50,000).

When price is constant, the behaviour of TR is shown in table 4.8 and diagram 4.10, assuming P=5. When P = 5; TR = PQ

When price is declining with increase in quantity sold. (Eg. Imperfect Competition on the goods market) the behaviour of TR is shown in table 4.9 and diagram 4.11. TR can be obtained from Demand fuction: If Q = 11–P,

When P = 1, Q = 10

Table 4.9

Total Revenue - Price declining

Quantity sold (Q)	Price (P)	Total Revenue (TR)
1	10	10
2	9	18
3	8	24
4	7	28
5	6	30
6	5	30
7	4	28
8	3	24
9	2	18
10	1	10

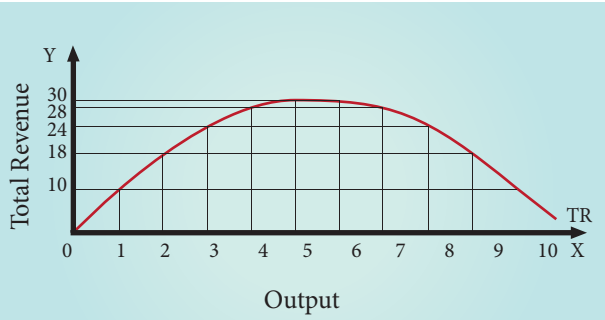


Diagram 4.11

TR = PQ = 1 × 10 = 10

When P = 3, Q = 8, TR = 24

When P = 10, Q = 1, TR = 10

b) Average Revenue

Average revenue is the revenue per unit of the commodity sold. It is calculated by dividing the Total Revenue(TR) by the number of units sold (Q)

AR = TR /Q; if TR = PQ, AR = PQ/Q = P

AR denotes Average Revenue, TR denotes Total Revenue and Q denotes Quantity of unit sold.

For example, if the Total Revenue from the sale of 5 units is ₹30, the Average Revenue is ₹6. **(AR= 30/5 =6)** It is to be noted that AR is equal to Price.

$$AR=TR/Q = PQ/Q=P$$

c) Marginal Revenue

Marginal revenue (MR) is the addition to the total revenue by the sale of an additional unit of a commodity. MR can be found out by dividing change in total revenue by the change in quantity sold out. MR = ΔTR / ΔQ where MR denotes Marginal Revenue, ΔTR denotes change in Total Revenue and ΔQ denotes change in total quantity.

The other method of estimating MR is:

$$MR=TR_n - TR_{n-1} \text{ (or) } TR_{n+1} - TR_n$$

where, MR denotes Marginal Revenue, TR_n denotes total revenue of nth item, TR_{n-1} denotes Total Revenue of $n\text{-}1^{th}$ item and TR_{n+1} denotes Total Revenue of $n+1^{th}$item.

If TR = PQ MR = ΔTR/ΔQ = P,

which is equal to AR.

4.6.2 Relationship between AR and MR Curves

If a firm is able to sell additional units at the same price then AR and MR will be constant and equal. If the firm is able to sell additional units only by reducing the price, then both AR and MR will fall and be different .

Constant AR and MR (at Fixed Price)

When price remains constant or fixed, the MR will be also constant and will coincide with AR. Under perfect competition as the price is uniform and fixed, AR is equal to MR and their shape will be a straight

line horizontal to X axis. The AR and MR Schedule under constant price is given in Table 4.10 and in the diagram 4.12

Table 4.10

TR, AR, MR - Constant price

Quantity Sold (Q)	Price (P) ₹	Total Revenue (TR) ₹	Average Revenue (AR) ₹	Marginal Revenue (MR) ₹
1	5	5	5	5
2	5	10	5	5
3	5	15	5	5
4	5	20	5	5
5	5	25	5	5
6	5	30	5	5

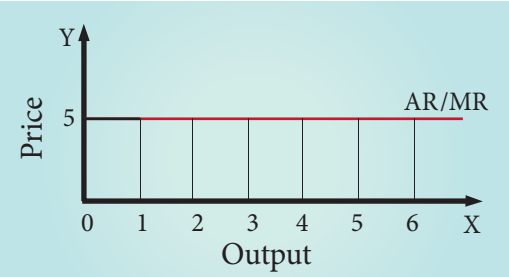


Diagram 4.12

Declining AR and MR (at Declining Price)

When a firm sells large quantities at lower prices both AR and MR will fall but the fall in MR will be more steeper than the fall in the AR.

It is to be noted that MR will be lower than AR. Both AR and MR will be sloping downwards straight from left to right. The MR curve divides the distance between AR Curve and Y axis into two equal parts. The decline in AR need not be a straight line or linear. If the prices are declining with the increase in quantity sold, the AR can be non-linear, taking a shape of concave or convex to the origin

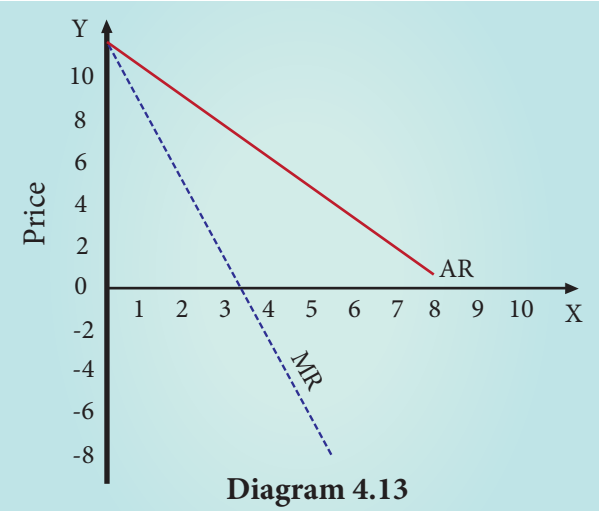


Diagram 4.13

Table 4.11

AR, TR, MR at declining price

Quantity Sold (Q)	Price (P)/ Average Revenue (AR) ₹	Total Revenue (TR) ₹	Marginal Revenue (MR) ₹
1	10	10	-
2	9	18	8
3	8	24	6
4	7	28	4
5	6	30	2
6	5	30	0
7	4	28	-2
8	3	24	-4
9	2	18	-6
10	1	10	-8

4.6.3 Relationship among TR, AR and MR Curves:

When marginal revenue is positive, total revenue rises, when MR is zero the total revenue becomes maximum. When marginal revenue becomes negative total revenue starts falling. When AR and MR both are falling, then MR falls at a faster rate than AR.

4.6.4 TR, AR, MR and Elasticity of Demand

The relationship among AR, MR and elasticity of demand (e) is stated as follows.

e = AR/AR – MR

The relationship between the AR curve and MR curve depends upon the elasticity of AR curve (AR = DD = Price).

a. When price elasticity of demand is greater than one, MR is positive and TR is increasing.
b. When price elasticity of demand is less than one, MR is negative and TR is decreasing.
c. When price elasticity of demand is equal to one, MR is equal to zero and TR is maximum and constant.

It is to be noted that, the output range of 1 to 5 units, the price elasticity of demand is greater than one according to total outlay method. Hence, TR is increasing and MR is positive.

Table 4.12 TR, AR, MR & Elasticity

Quantity (Q)	Price (P)	TR	AR	MR	Elasticity
1	10	10	10	10	e > 1
2	9	18	9	8	
3	8	24	8	6	
4	7	28	7	4	
5	6	30	6	2	
6	**5**	**30**	**5**	**0**	**e = 1**
7	4	28	4	-2	e < 1
8	3	24	3	-4	
9	2	18	2	-6	
10	1	10	1	-8	
11	0	0	0	-10	

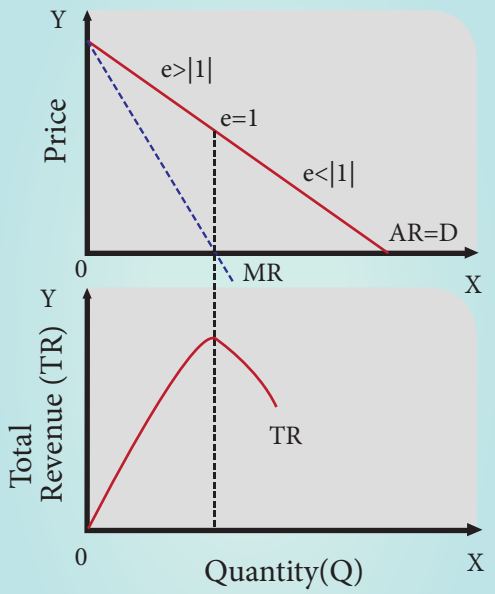


Diagram 4.14

At the output range of 5 to 6 units, the price elasticity of demand is equal to one. Hence, TR is maximum and MR equals to zero.

At the output range of 6 units to 10 units, the price elasticity of demand is less than unity. Hence, TR is decreasing and MR is negative.

4.7 Conclusion

This Chapter has analysed the behaviour of Cost Curves and revenue curves under two situations and the relationship among price elasticity of demand , TR, AR and MR.

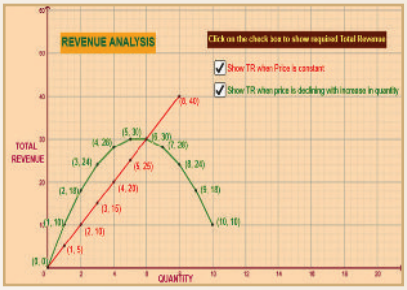
GLOSSARY

Cost	It refers to expenses incurred on production
Revenue	It refers to sales revenue
Explicit Cost	It refers to out of pocket expenses or money cost or accounting costs. They are the payments made to others.
Implicit Cost	The cost imputed for the resources provided by the owner.
Fixed Costs	The costs that remain constant at all levels of output. They do not vary with output.
Variable Cost	The cost that varies with the level of output.
Total Cost	The sum of total fixed cost and total variable costs.
Marginal Cost	The additional cost incurred for producing one more unit of output.
Average Cost	Cost per unit of output produced. It is obtained by dividing total cost by output.
Average Variable Cost	Variable Cost per unit of output, obtained by dividing total variable cost by output.
Average Fixed Cost	Fixed cost per unit of output, obtained by dividing total fixed cost by output.
Average Revenue	Average revenue refers to revenue per unit of output sold. It is obtained by dividing the total revenue by quantity sold.
Marginal Revenue	The additional revenue obtained by selling one more unit of output.

ICT CORNER

Cost and Revenue Analysis ANALYSIS: REVENUE ANALYSIS

This activity for Revenue Analysis helps in analysis of Total Revenue Under different conditions.

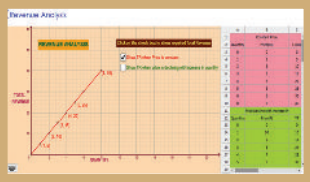


Steps:

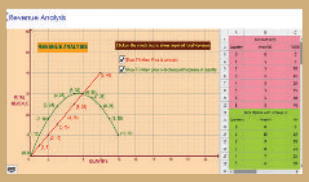
- Open the Browser type the URL given (or) Scan the QR Code.
- GeoGebra Work book called "XI STD ECONOMICS" will appear. Open the worksheet named "Revenue Analysis"
- In the Right side of the work sheet two data are given. 1.Total Revenue for the quantity when Price is constant and 2. Total Revenue for the quantity when Price is reduced when the quantity is increased. Analyse the graph drawn on the Left side for constant price. It is a straight-line graph.
- Now click on the check box , "Show Total Revenue when price is declining with increase in quantity". You can see a curve graph. Now analyse the data values and Graph in each Data and compare what is given in the text book lesson. You can get similar data from internet and type in the columns and see the change in graph.

Step1

Step2



Step3



Step4

Pictures are indicatives only*

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https://ggbm.at/ddY3wkjp

(or) scan the QR Code

VC1TK

MODEL QUESTIONS

Part-A Multiple Choice Questions

1. Cost refers to _____
   a. price
   b. value
   c. fixed cost
   d. cost of production

2. Cost functions are also known as _____ function.
   a. production
   b. investment
   c. demand
   d. consumption

3. Money cost is also known as _____ cost.
   a. explicit
   b. implicit
   c. social
   d. real

4. Explicit cost plus implicit cost denote _____ cost.
   a. social
   b. economic
   c. money
   d. fixed

5. Explicit costs are termed as
   a. out of pocket expenses
   b. real cost
   c. social cost
   d. sunk cost

6. The costs of self–owned resources are termed as _____ cost.
   a. real
   b. explicit
   c. money
   d. implicit

7. The cost that remains constant at all levels of output is _____ cost.
   a. fixed
   b. variable
   c. real
   d. social

8. Identify the formula of estimating average variable cost.
   a. TC/Q
   b. TVC/Q
   c. TFC/Q
   d. TAC/Q

9. The cost incurred by producing one more unit of output is_____cost.
   a. variable
   b. fixed
   c. marginal
   d. total

10. The cost that varies with the level of output is termed as _____ cost.
    a. money
    b. variable cost
    c. total cost
    d. fixed cost

11. Wage is an example for _____ cost of the production.

a. fixed

b. variable

c. marginal

d. opportunity

12. The cost per unit of output is denoted by _____ cost.

a. average

b. marginal

c. variable

d. total

13. Identify the formula of estimating average cost.

a. AVC/Q

b. TC/Q

c. TVC/Q

d. AFC/Q

14. Find total cost where TFC=I00 and TVC = 125.

a. 125

b. 175

c. 225

d. 325

15. Long-run average cost curve is also called as _____ curve.

a. demand

b. planning

c. production

d. sales

16. Revenue received from the sale of products is known as _____ revenue.

a. profit

b. total revenue

c. average

d. marginal

17. Revenue received from the sale of additional unit is termed as _____ revenue.

a. profit

b. average

c. marginal

d. total

18. Marginal revenue is the addition made to the

a. total sales

b. total revenue

c. total production

d. total cost

19. When price remains constant, AR will be _____ MR.

a. equal to

b. greater than

c. less than

d. not related to

20. A book seller sold 40 books with the price of ₹10 each. The total revenue of the seller is ₹_____.

a. 100

b. 200

c. 300

d. 400

Part- A Answers

1	2	3	4	5	6	7	8	9	10
d	a	a	b	a	d	a	b	c	b
11	12	13	14	15	16	17	18	19	20
b	a	b	c	b	b	c	b	a	d

Part-B Answer the following questions in one or two sentences.

21. Define cost.
22. Define cost function.
23. What do you mean by fixed cost?
24. Define Revenue.
25. Explicit Cost - Define.
26. Give the definition for 'Real Cost'.
27. What is meant by Sunk cost?

Part-C Answer the following questions in one paragraph.

28. Distinguish between fixed cost and variable cost.
29. State the differences between money cost and real cost.
30. Distinguish between explicit cost and implicit cost.
31. Define opportunity cost and provide an example.
32. State the relationship between AC and MC.
33. Write a short note on Marginal Revenue.
34. Discuss the Long run cost curves with suitable diagram.

Part-D Answer the following questions in about a page

35. If total cost = $10+Q^3$, find out AC, AVC, TFC, AFC when Q=5.
36. Discuss the short run cost curves with suitable diagram.
37. Bring out the relationship between AR and MR curves under various price conditions.

ACTIVITY

Visit a small business firm and identify the various items of expenditure incurred by the firm. Classify the items under fixed cost and variable cost. Estimate Total Fixed Cost, Total Variable Cost, Total Cost and Average Fixed Cost, Average Variable Cost and Average Total Cost.

References

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http://wikieducator.org/Introduction_to_Cost_Concepts