

POWER BOOSTER

Total Revenue–Total Cost Approach (TR–TC Approach)

A firm attains the stage of equilibrium when it maximises its profits, i.e. when he maximises the difference between TR and TC. After reaching such a position, there will be no incentive for the producer to increase or decrease the output and the producer will be said to be at equilibrium. According to TR–TC approach, producer's equilibrium refers to stage of that output level at which the difference between TR and TC is positively maximized and total profits fall as more units of output are produced. So, two essential conditions for producer's equilibrium are:

1. The difference between TR and TC is positively maximized;
2. Total profits fall after that level of output.

The first condition is an essential condition. But, it must be supplemented with the second condition. **So, both the conditions are necessary to attain the producer's equilibrium.**

Producer's Equilibrium (When Price remains Constant)

When price remains same at all output levels (like in case of perfect competition), each producer aims to produce that level of output at which he can earn maximum profits, i.e. when difference between TR and TC is the maximum.

Let us understand this with the help of Table 8.3, where market price is fixed at ₹ 10 per unit:

Table 8.3: Producer's Equilibrium (When Price remains Constant)

Output (units)	Price (₹)	TR (₹)	TC (₹)	Profit = TR – TC (₹)	Remarks
0	10	0	5	–5	Profit rises with increase in output
1	10	10	8	2	
2	10	20	15	5	
3	10	30	21	9	
4	10	40	31	9	Producer's Equilibrium
5	10	50	42	8	Profit falls with increase in output
6	10	60	54	6	

According to Table 8.3, the maximum profit of ₹ 9 can be achieved by producing either 3 units or 4 units. But, the producer will be at equilibrium at 4 units of output because at this level, both the conditions of producer's equilibrium are satisfied:

1. Producer is earning maximum profit of ₹ 9;
2. Total profit falls to ₹ 8 after 4 units of output.

In Fig. 8.3, Producer's equilibrium will be determined at OQ level of output at which the vertical distance between TR and TC curves is the greatest. At this level of output, tangent to TC curve (at point G) is parallel to TR curve and difference between both the curves (represented by distance GH) is maximum.

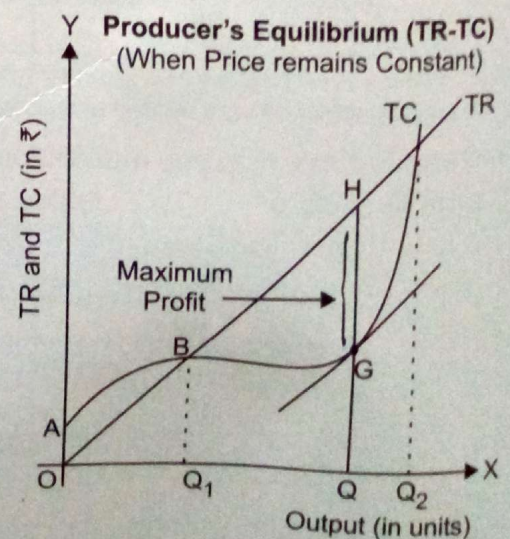


Fig. 8.3

At quantities smaller or larger than OQ , such as OQ_1 or OQ_2 units, the tangent to TC curve would not be parallel to the TR curve. So, *the producer is at equilibrium at OQ units of output.*

Producer's Equilibrium (When Price Falls with rise in output)

When price falls with rise in output (like in case of imperfect competition), each producer aims to produce that level of output at which he can earn maximum profits, i.e. when difference between TR and TC is the maximum.

Let us understand this with the help of **Table 8.4**:

Table 8.4: Producer's Equilibrium (When Price Falls with rise in output)

Output (units)	Price (₹)	TR (₹)	TC (₹)	Profit = TR - TC (₹)	Remarks
0	10	0	2	-2	Profit rises with increase in output
1	9	9	5	4	
2	8	16	9	7	
3	7	21	11	10	
4	6	24	14	10	Producer's Equilibrium
5	5	25	20	5	Profit falls with increase in output
6	4	24	27	-3	

As seen in **Table 8.4**, producer will be at equilibrium at 4 units of output because at this level, both the conditions of producer's equilibrium are satisfied:

1. Producer is earning maximum profit of ₹ 10;
2. Total profits fall to ₹ 5 after 4 units of output.

In **Fig. 8.4**, producer's equilibrium will be determined at OQ level of output at which the vertical distance between TR and TC curves is the greatest. At this level of output, tangent to TR curve (at point H) is parallel to the tangent to TC curve (at point G) and difference between both the curves (represented by distance GH) is maximum.

