

CONCEPTS OF COST

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RELATIONSHIP BETWEEN AVERAGE COST AND MARGINAL COST

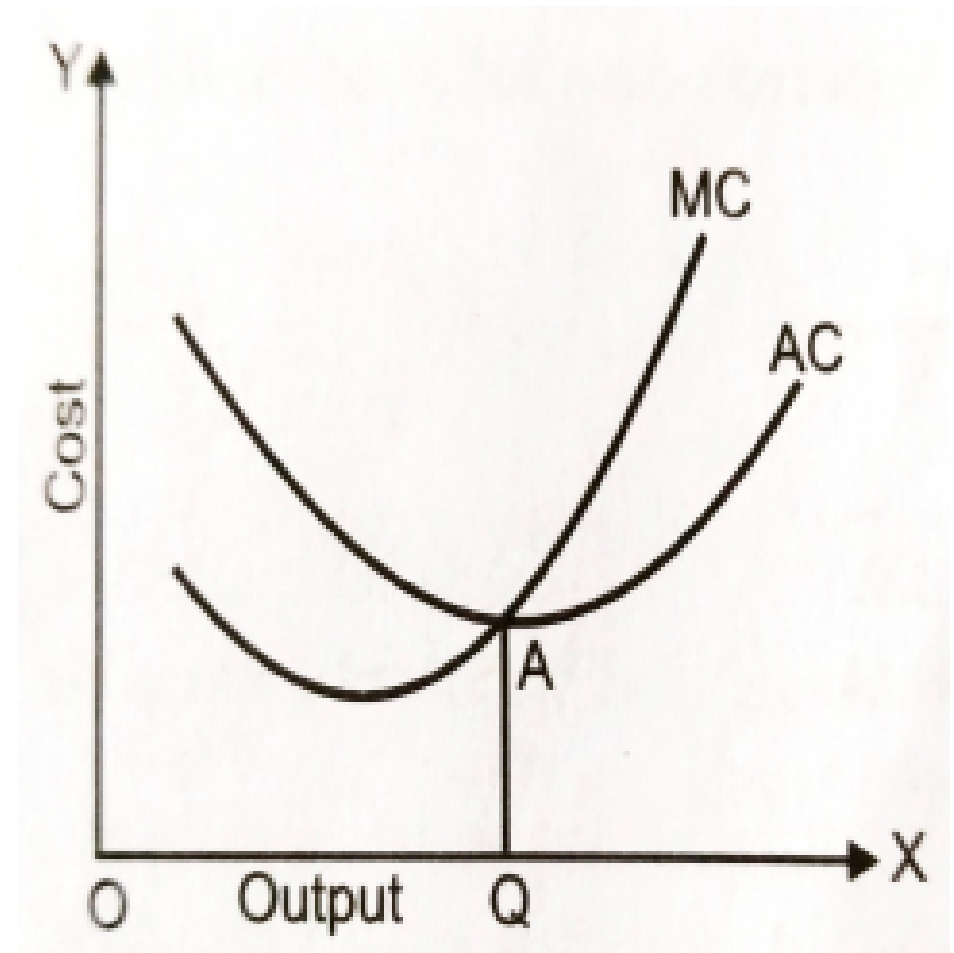
- In price theory, the relationship between AC and MC is of great importance. The whole marginal analysis of product pricing depends upon it. The relationship is better explained with the help of a table and a diagram showing Average Cost and the related Marginal Cost.

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UNIT OF OUTPUT	TOTAL COST(Rs.)	AVERAGE COST(Rs.)	MARGINAL COST(Rs.)
1	150	150	-
2	190	95	40
3	220	73.3	30
4	236	59	16
5	270	54	34
6	324	54	54
7	415	59.3	91
8	580	72.5	165

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- With the help of table and diagram, the points showing the relationship between AC and MC are:
- (1) They are derived from the same source.
- $AC = \frac{\text{Total Cost}}{\text{Total Output}}$
- $MC = \frac{\text{Change in Total Cost}}{\text{Change in Total Output}}$
- Average cost shows the inclination of the total cost curve over the output axis and Marginal cost is shown by the slope of the total cost curve at a particular level of output.



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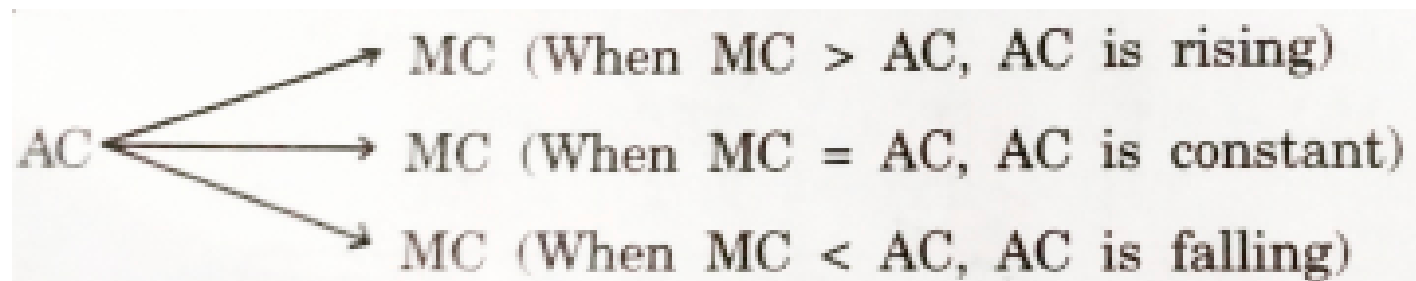
- **(2) When AC is falling , the MC is always lower than the AC.**
- Initially AC falls ,MC also falls. A common view is that when AC falls ,MC falls faster . However, this is not the case throughout . MC reaches a minimum and may then start rising even when the AC is falling .Hence, in state of falling AC,MC lies bellow AC as long as AC is falling. In the table AC is falling till it become Rs. 54 . And MC remains less than Rs. 54. In figure ,AC is falling till point A and MC continues to be lower than AC.
- **(3) When AC is rising , MC is greater than AC**
- When AC starts rising ,MC is greater than AC. In the table ,When AC rises from Rs.54 to Rs.59.3,MC rises from Rs. 54 to Rs. 91. In figure , AC starts rising from point A .And, beyond A ,MC is higher than AC.

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- (4) **When AC becomes minimum, MC cuts AC from below**, i.e., minimum average cost is equal to marginal cost. This relationship is derived from the fact that when AC is constant, (In the table, at the 6th unit AC doesn't change, i.e., Rs. 54) MC is equal to AC (Rs. 54). In figure, At point A, MC is intersecting AC at its minimum point from below. The minimum point of the AC curve is that from which the perpendicular to the X-axis (In figure, QA) is the Shortest.

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- In short,



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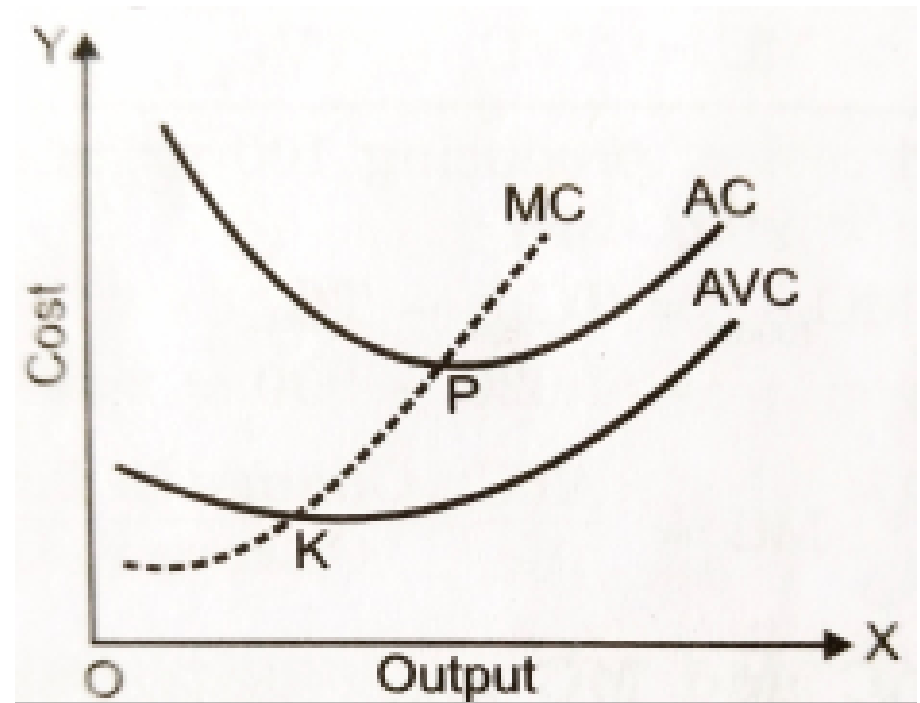
Relationship between AVC and MC

● MC has the same relation with AVC as it has with AC. Figure reveals:

(i) When AVC falls, $MC < AVC$.

(ii) When AVC rises, $MC > AVC$, and

(iii) When AVC is constant, $MC = AVC$ (At point K, it is the lowest point of AVC)



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AC, AVC, AFC and MC in one diagram

In this figure, MC curve is intersecting AC and AVC curve at their lowest point.

SAC and AVC get close to each other as SAC and AFC get away from each other as output increases. This is because, as output increases, the component of AVC in AC tends to increase while the component of AFC in AC tends to decrease.

At no stage AVC will touch AC because AFC can never be zero.

- To be Continued.....

