

Part-I (LNMU)

MODULE 3: Production & cost

SHORT RUN MARGINAL COST (SMC)

Marginal cost is additional to the total cost caused by producing one more unit of output.

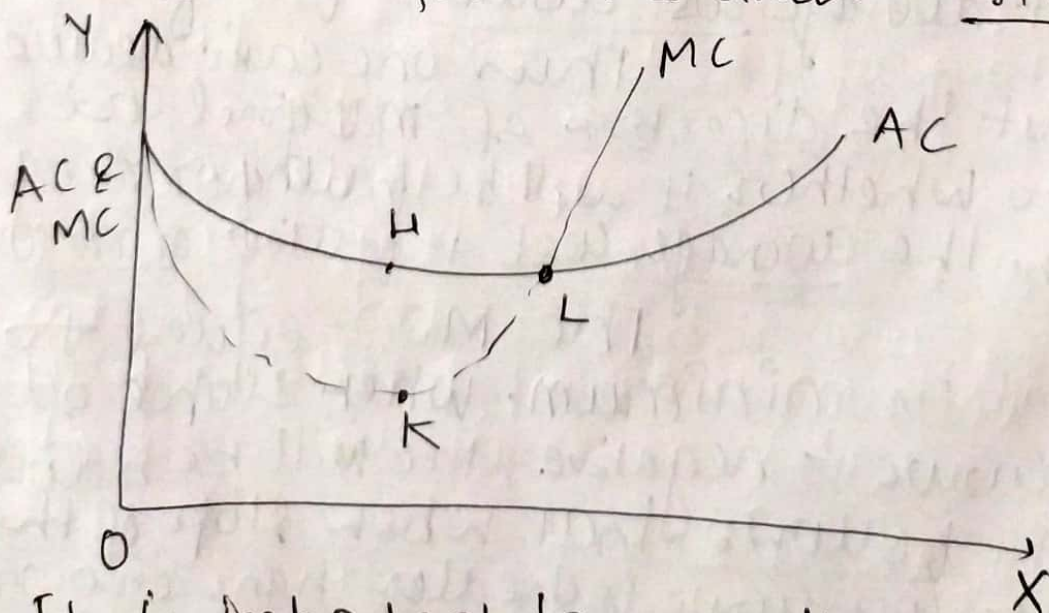
$$MC_n = TC_n - TC_{n-1}$$

Marginal cost is a change in total cost as a result of a unit change in output.

$$MC = \frac{\Delta TC}{\Delta Q}$$

$$\begin{aligned} MC_n &= TC_n - TC_{n-1} \\ &= TCN_n + TFC - TVC_{n-1} - TFC \\ &= TVC_n - TVC_{n-1} \end{aligned}$$

Hence, marginal cost is the additional to the total variable costs when output is increased from $n-1$ units to n units.



It is important to note that we can't generalize about the direction in which marginal cost is moving from the way

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average cost is changing, that is, when average cost is falling we can't say that marginal cost will be falling too. When average cost is falling, what we can say definitely is only that the marginal cost will be below it, but marginal cost itself may be either rising or falling.

When average cost is rising, the marginal cost must be above it, but marginal cost itself may be either rising or falling.

In the figure given in last page, where up to the point K, marginal cost is falling as well as below the cost. As a result, the average cost is falling. But, beyond point K and up to point L, marginal cost curve lies below the average cost curve with the result that average cost curve is falling.

Thus one can't deduce about the direction of marginal cost as to whether it will be falling or rising when the average cost is falling or rising.

The MC is equal to AC at its minimum. When slope of AC curve is negative, MC will be below it. It follows that when slope of the average cost curve is greater than zero or in other words, when the average cost curve is rising, MC will be greater than it.