

# production

- ★ Iso-quant are the product lines
- ★ MP & AP curve are so related that when average product increases.
- ★ Increasing Return to scale can be explained in term of External & Internal Economics.
- ★ An isoquant is tangent to an isocost line at the Equilibrium point.
- ★ At the point of Inflexion, the Marginal product is Maximum.
- ★ Diminishing Marginal Return implies Increasing Marginal Cost.
- ★ Law of variable proportion is valid, when only one input is fixed & all other inputs are kept variable.
- ★ Increase in all input leading to less than proportional increase in output is called Decreasing Return to Scale.
- ★ During 2nd stage of law of diminishing Return MP & AP are Decreasing.
- ★ Schumpeter gives the concept of Innovative Entrepreneurship.
- ★ External Economics of Scale are obtained by group of firms
- ★ When firm's output is zero - AVC will zero & AFC will positive
- ★ Law of diminishing Returns is applicable in any economic activity at a point of time.
- ★ Labour force wants more leisure.
- ★ In first stage of LOVP, the total product increases at Increasing Rate.
- ★ The concept of Return to Scale is Related to Long Run
- ★ Production activity in Long Run is analysed with the help of law of variable proportion.
- ★ External Economics can be achieved through - Extension of transport & credit facility.
- ★ External Economies arise due to Growth of Ancillary Industries.

- ★ production function is purely a technical relationship b/w input & output.
- ★ The concept of Return to Scale is Related with long run.
- ★ In Cobb-Douglas production function 2 inputs are Labour & Capital.
- ★ Linear Homogeneous production function is based on:~  
Decreasing Return to Scale.
- ★ production is defined as creation of utility in matter.
- ★ In Cobb Douglas function, labour contribute  $3/4^{th}$  & Capital about  $1/4^{th}$ .
- ★ Iso-quant also known production Indifference Curves.
- ★ Human Capital Refers to Human skill & abilities.
- ★ When AP rises result increase in Qty. of variable factor MP is More than Average product.
- ★ Cobb-Douglas production function is based on production of Manufacturing industries in USA.
- ★ In Economics, entire process of production is nothing but creation of utilities in form of goods & services.
- ★ Cobb-Douglas function is given by  $Q = K^{\alpha} L^{\beta} C^{\gamma}$  →  
if  $\alpha + \beta > 1$ , Increasing Return to Scale.
- ★ Man cannot create Matter, Man can create only utility in Matter.
- ★ At the point of Inflection, the Marginal product is Max.
- ★ In Cobb-Douglas prod. function, we'll get Constant Ret. to Scale.
- ★ MP, AP & TP of firm in short run will not compare with when marginal product is at max., AP & MP & TP is rising.
- ★ Supply of land is perfectly Inelastic.
- ★ MP is a Slope of TP.

## Cost

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- ★ Opportunity cost is cost of forgone opportunity.
- ★ AS output increases, Average fixed cost starts falling.

$AFC \Rightarrow \frac{\text{fixed cost}}{\text{No. of units produced}}$

- ★ AFC can be obtained through  $AFC \Rightarrow \frac{TFC}{TU}$

★ AFC curve is convex & downward sloping.

★ U shaped avg. fixed cost is based on law of variable proportion.

★ Shape of avg. cost curve is upward; MC must be rising.

★ Accounting cost include - Accounting + Explicit cost

★ Total fixed <sup>cost</sup> curve never be 'U' shaped.

\* External Economics occur due to Increasing Return to Scale.

★ At lowest point MC intersect the AVC & Short Run Avg Total cost curve.

★ Implicit cost defined as money payment which the self employed could have earned in their best alternative employment.

★ Return to Scale comes into operation when all inputs whether fixed or variable are changed in same proportion i.e., the scale of production changes.

★ AFC curve never touches any axis but it slopes downward.

★ Long Run Average cost curve also known as Enveloping curve.

★ Long Run does not have fixed cost.

★  $MC \Rightarrow \frac{\text{Diff. in TC}}{\text{Diff. in total unit}}$

★ Payment made to outsiders for their goods & services are called explicit cost.

★ Long run price also known as Normal price.

★ Fixed cost also known as overhead cost.

★ Avg Revenue curve also known as demand curve.

★ An increase in Demand without a change in supply lead to rise in price & Qty.

- ★ In long Run all factors are variable.
- ★ Explicit cost & Total cost is Implicit cost (-) Normal profit.
- ★ Cost in term of pain, Discomfort, disability involved in supplying the various factor of production by their owners are termed as real cost.
- ★ A firm should close down in short run, if it is not able to Recover AVC.
- ★  $MC \propto T_{cn} - T_{cn-1}$
- ★ when AC curve is rising, MC curve must be above to it.
- ★ Direct cost are also known as traceable cost.
- ★ AVC is always declining when when output increases.
- ★ Diminishing Marginal Return implies Increasing Marginal cost.
- ★ Since TFC is a constant amount, AFC will steadily fall as output increases.
- ★ AFC curve never 'U' shaped because it slopes downward through its length & never touch x axis.
- ★ fixed cost normally horizontal line.
- ★ A Rational producer will produce in the stage when  $MP < AP$  & MP is positive. [TC & TFC & TVC]
- ★ In short Run output of firm increases, its AFC decreases.
- ★ ~~LOP~~ LOP - applies to short Run, not in long Run.
- ★ Linear Homogenous production function is based on, constant Return to scale.
- ★  $AFC \propto TFC \div Q$
- ★ The vertical diff b/w TVC & TC curve equal to TFC.
- ★ price of commodity is best expressed as exchange value.
- ★ Accounting cost is less than Economic cost.
- ★ profit Maximisation is seen when  $MC = MR$
- ★ LOP not include least cost of production.
- ★ AFC curve is 'U' shaped curve.