PERFECT COMPETITION

A market said to be a perfectly competitive, when all firms regard themselves as price taker, they can sell all they wish at the going market price, and nothing at higher prices. Therefore in such market similar price exists. A set of conditions that is sufficient to guarantee this result are:

1. **A homogenous product:** competitive firms produce standardize or homogenous product. Given price consumer is indifferent as to the seller from which the product is purchased. Because of standardized product there is no point for non price competition.
2. **Many sellers:** In perfectly competitive market, there are many sellers, each making a small proportion of the total market. Therefore, there is no influence of individual seller on market price.
3. **Perfect information:** When buyers of the product are fully informed about the price and qualities of the product, we say there is perfect information. An important consequence is that, if any firm raises the price of its product above the price charged by other producers, it will lose all of its customers.
4. **Freedom of entry and exit:** Freedom of entry means, new firm starts up its production if it wishes, freely. There are no legal or other restrictions on entry. Freedom of exit means that any existing firm is free to cease its production and leave the market without any restriction.

The equilibrium of the firm

To develop a theory of the behaviour of a firm under perfect competition, our first step is to derive demand curve facing the firm.

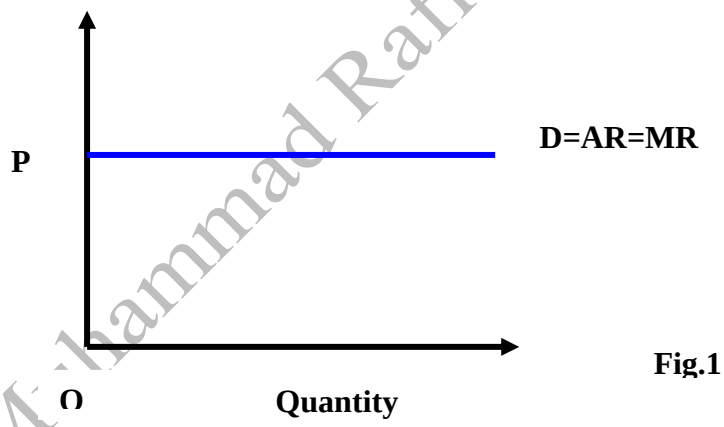


Fig.1

In perfect competition all firms are price taker, they have to sell any quantity at the given price; therefore demand curve is a horizontal straight line parallel to x-axis. The other reason for perfectly elastic demand curve is availability of close substitutes because of homogenous product.

A perfectly elastic demand curve has an important characteristic: the average revenue from the sale of every unit will be equal to the marginal revenue from the sale of an extra unit (AR=MR) as is shown in fig.1.

Optimum output for the firm.

There are two complementary approaches to determining the level of output at which a competitive firm will realize maximum profits and minimum losses. The first involves a comparison of marginal revenue and marginal cost; the second, a comparison of total cost and total revenue. Both approaches are applicable to all firms operating in any type of market structure.

MR=MC rule:

In the initial stages of production, where output is relatively low, MR usually exceeds MC. It is profitable to produce through this range of output. But at the later stages of production where output is relatively high, rising MC will exceeds MR. Therefore, the firm will maximize profit or minimize losses by producing at that point where MR=MC.
This is shown in the following fig.2.
In fig.2 MR equals to MC at point Q1, but MC is still falling. The firm will keep on producing because an additional unit adds more to total revenue than to the total cost. Therefore equilibrium output will be OQ2, where MR once again equals to MC and beyond this point production of an additional unit adds more to cost than to revenue.

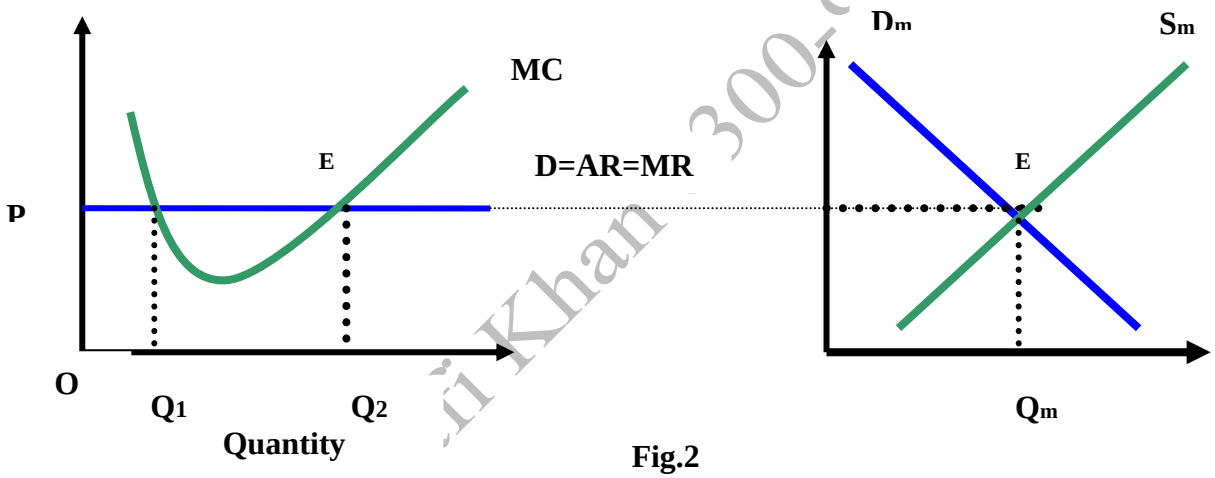


Fig.2

So it is concluded firm is at equilibrium at that point where not only MR=MC, but also slope of MC>slope of MR.
It should be noted that MC is always positive, because the firm must spend some money in order to produce an additional unit of output. Thus at equilibrium the MR is also positive.

Total Revenue Total Cost Approach

According to this approach firm gains maximum profits at output **OQ**, where gap between TC and TR is maximum i.e.; ab. As is shown in the following fig.

Firm operates in short run

A firm may face four different situations in the short run. Firstly, firm makes abnormal profit if at the given output average revenue exceeds average cost as shown in fig.4. Firm is at equilibrium at point Q, where MR intersects MC. OP will be the price for OQ output. At this point AR is greater than the AC and firm makes abnormal profit.
This situation never remains long, because there is no restriction on the entrance of new firms, therefore abnormal profit attracts new firm.

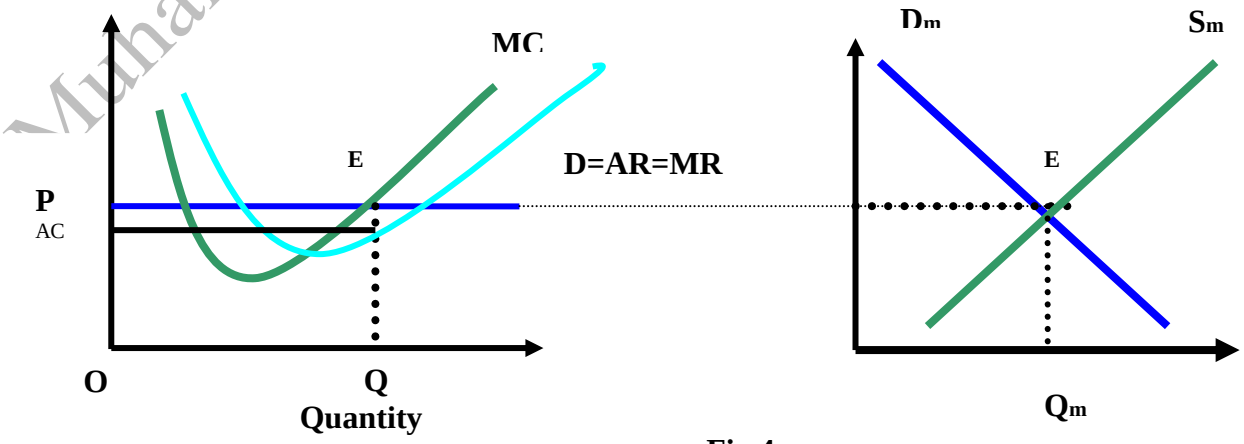


Fig.4

As new firms enter supply curve of industry shifts rightwards to Sm2, therefore price falls and firm faces new demand curve. At this point firm can make normal profit only because AR=AC as is shown in fig5.

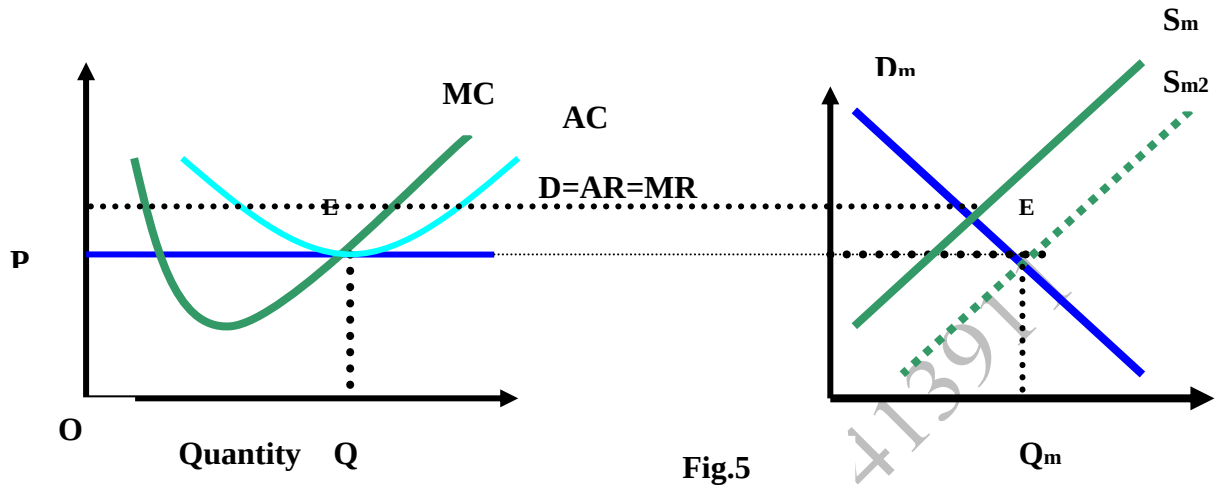


Fig.5

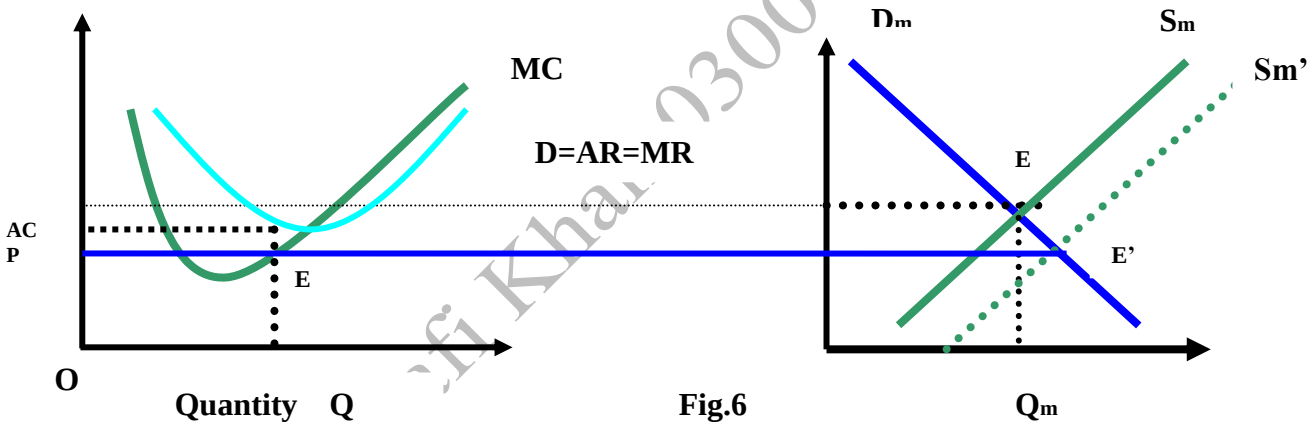


Fig.6

When new firms enter, due to increase in supply, price falls. Some firms at the given price suffer in loss i.e; AC>AR as shown in fig.6. Such firms keep on producing up to that point where its AVC is equal to its AR but if current prices unable to meet its AVC firms will shut down its business as is shown in fig.7

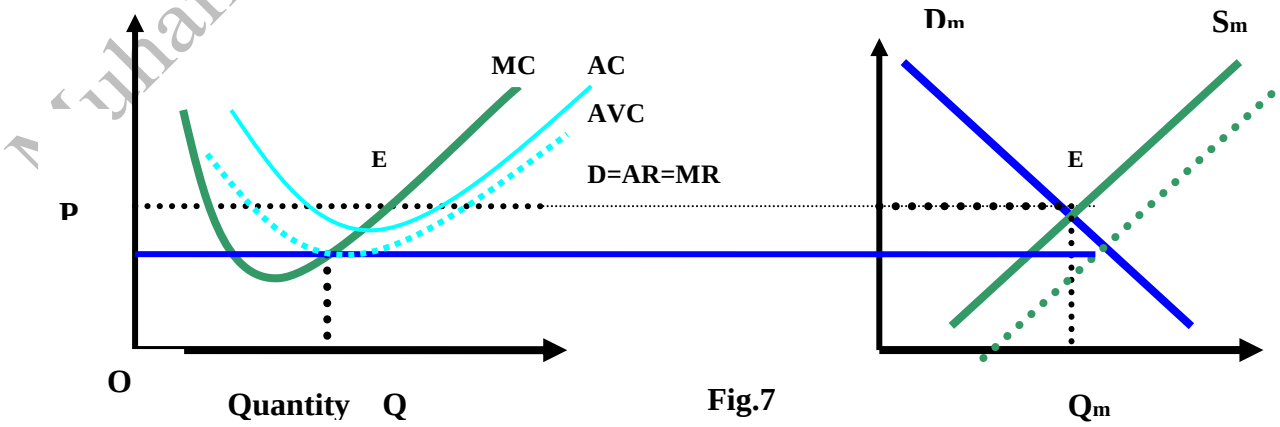


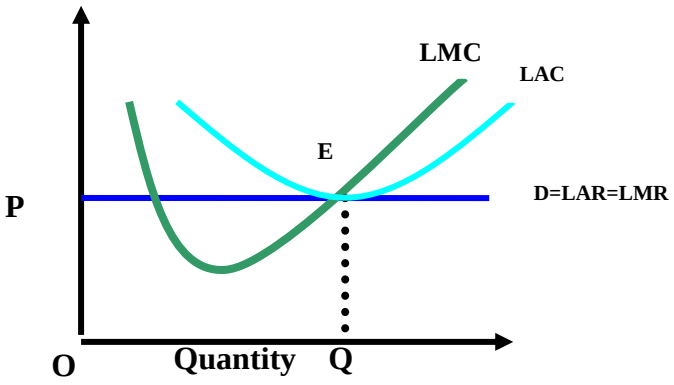
Fig.7

In fig.7 AVC is just touching to AR, as AR shifts downwards firm stops producing.

Sm'

A firm operates in the long run

In perfectly competitive market firms just make normal profit in the long run. After all long run adjustments are completed, that is when long run equilibrium is achieved , product price will be exactly equal to, and production will occur at, each firm's point of minimum average total cost.



Supply curve of a firm and of the industry

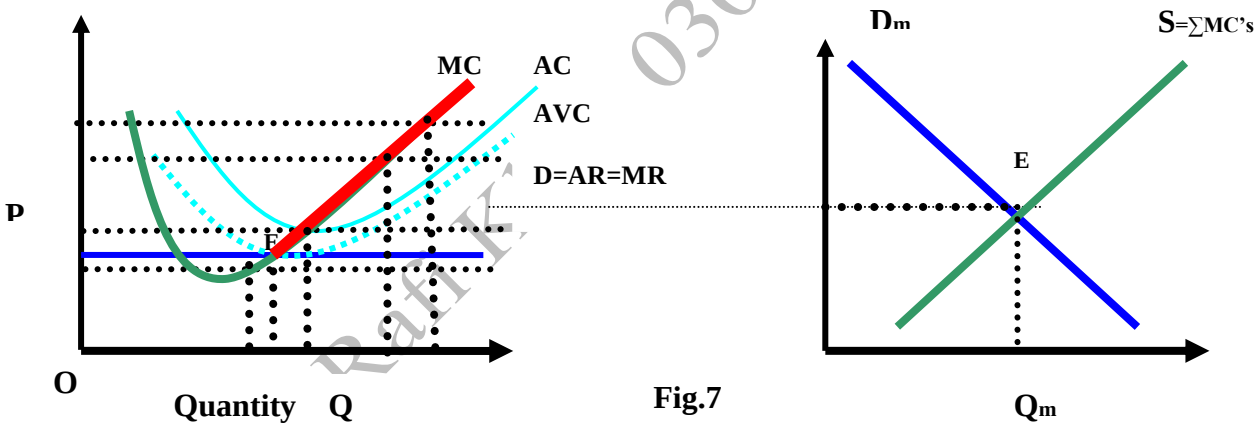


Fig.7

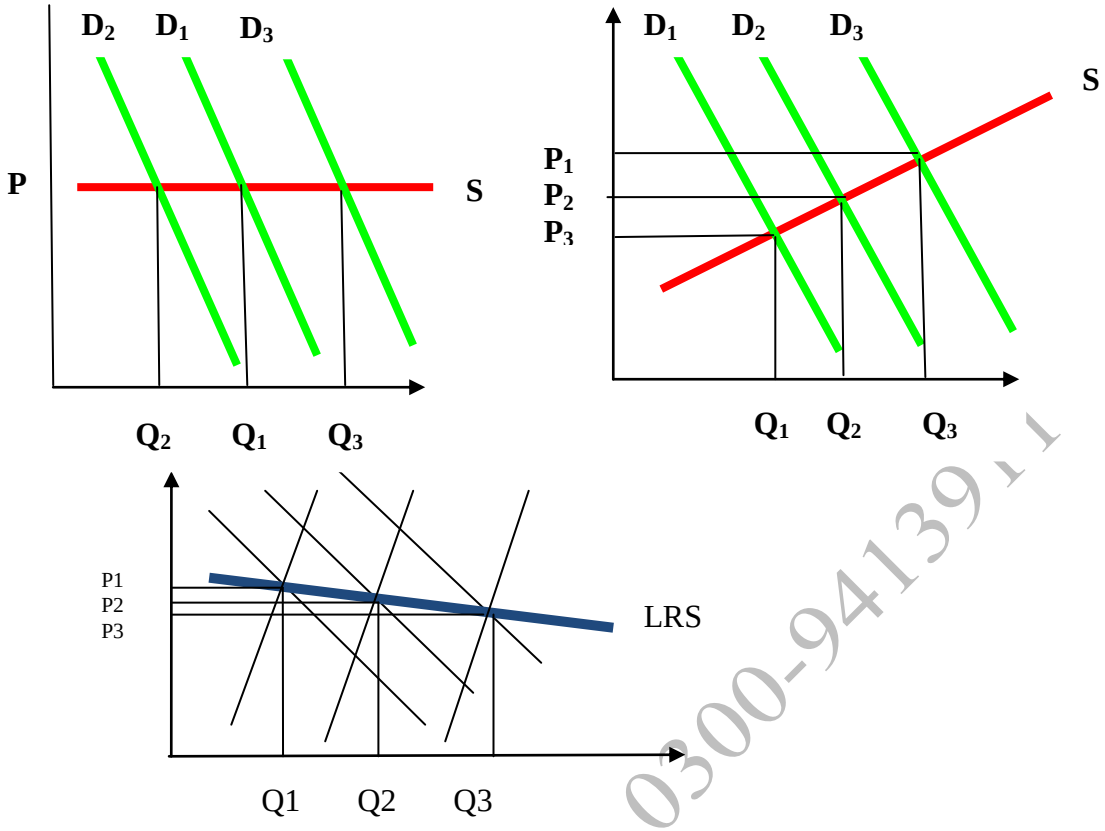
In a perfect competition MC curve, which is above than the AVC will be considered as the supply curve of the firm. From and above this point firm is willing to produce at all prices which are determined by market forces. On the other hand supply curve of the industry includes summation of MCs of all firms.

Long run supply for a constant-cost industry

Supply curve of a constant-cost industry is perfectly elastic because the entry or exodus does not affect resources prices or, therefore, unit cost. An increase or decrease in demand will cause an expansion or contraction in industry but no alteration in prices.

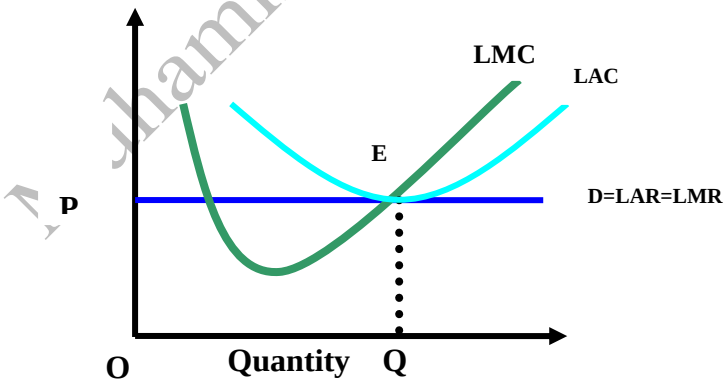
Long run supply for an increasing-cost industry

Supply curve of an increasing cost industry is upwards sloping because entry of new firms affect resource prices or, therefore, nit cost. An increase in demand will cause an expansion in industry which causes a rise in prices.



Perfect competition and economic efficiencies.

There are two types of economic efficiencies, i.e. productive efficiency and allocative efficiency. Productive efficiency means to produce at the least possible cost. In market structures this is the point where MC=AC. In perfect competition, in the long run a firm produces at that point where marginal cost is equal to average cost as it is shown in the following figure. This is the least possible cost at which a firm produces.



Allocative efficiency means to produce most wanted products by the society; the output of each product at which its marginal cost and price are equal.(MC=P). it has shown in the above fig. where prices are charged according to the marginal cost.