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Sem- V
Topic : Factor Pricing Analysis Under Perfect Competition

Factor Pricing Under Perfect Competition

According to the modern theory of pricing of factors of production, under conditions of perfect competition. It is the forces of demand for and supply of factors which determine their prices. The demand for the factors service is derived demand which is derived from the demand for the product that it helps to produce. Thus, the demand for the factor ultimately depends upon the demand for goods it helps to produce. The greater the demand for goods a particular type of factor helps to make, the greater the demand for that type of factor.

Just as demand for a good depends upon its utility, the demand for a factor depends upon the Marginal revenue productivity of the factor. In fact, under perfect competition in the factor market, the downward sloping part of the marginal revenue productivity curve of the factor is the demand curve for that factor.

Assumptions :

The analysis of factor pricing under perfect competition is based on the following assumptions:

- *There is perfect competition in the product market and the factor market.*
- *The number of buyers and sellers of factor services is large.*
- *All units of a factor are homogeneous.*
- *There is perfect substitutability between factors and their units*
- *All factor- units are divisible.*
- *Buyers and sellers of factor services have complete knowledge about market conditions.*

- *Buyers and sellers of factor services have complete freedom to enter and leave the market.*

*The supply of a factor service means the number of units which a resource on a sales at a particular price. There is a direct relationship between price and the supply of a factor service.this is in the short run when the supply of productive service is not perfectly elastic. Most of it will be supplied at a higher price and less at a lower price. Thus,**the shape of the supply curve of a factor service is upward sloping from left to right** (that is it has a positive slope.)*

*Under a perfectly competitive factor market there are many buyers of a productive service so that a single firm purchases only a small portion of the total factor service and in no way influences its market price. It takes the price of the factor service as given and employs as many units as it needs at that price. Thus, the supply of a factor service to the firm is **perfectly elastic** in the long run at the given market price. As designed for a firm working under perfect competition in the factor market, the extra cost of hiring an extra unit of the factor will be equal to the price of the factor which remains unchanged. Thus, marginal factor cost under perfect competition in the factor market is equal to the price of the factor i.e;*

***Pf = MFC.** (Shown in Figure 180)*

Determination of factor price

Given the demand and supply condition of factor service as enumerated above the firm will continue to employ more units of a particular factor service so long as the additional revenue obtained from an additional revenue obtained from an additional unit of the factor service (MRP) exceeds the extra cost of employing it (MFC). It will be earning maximum profits at the point at which the MRP equals the MFC. It will be earning maximum profits at which the MRP = MFC. If the firm employs less than this, MRP would be higher than MFC and it would be its advantage to hire more units of the factor service because they would add to revenue more than costs. In case the firm decides to hire beyond the point of equality of MRP and MFC, it would be a loser because costs would rise more than revey. Thus, in a perfectly competitive factor market the firm will be in equilibrium when MRP>MFC or MRP= MFC which implies two conditions:

1. ***MRP mast equal MFC***

2. ***The MRP curve must cut the MFC curve from above at the equilibrium point.***

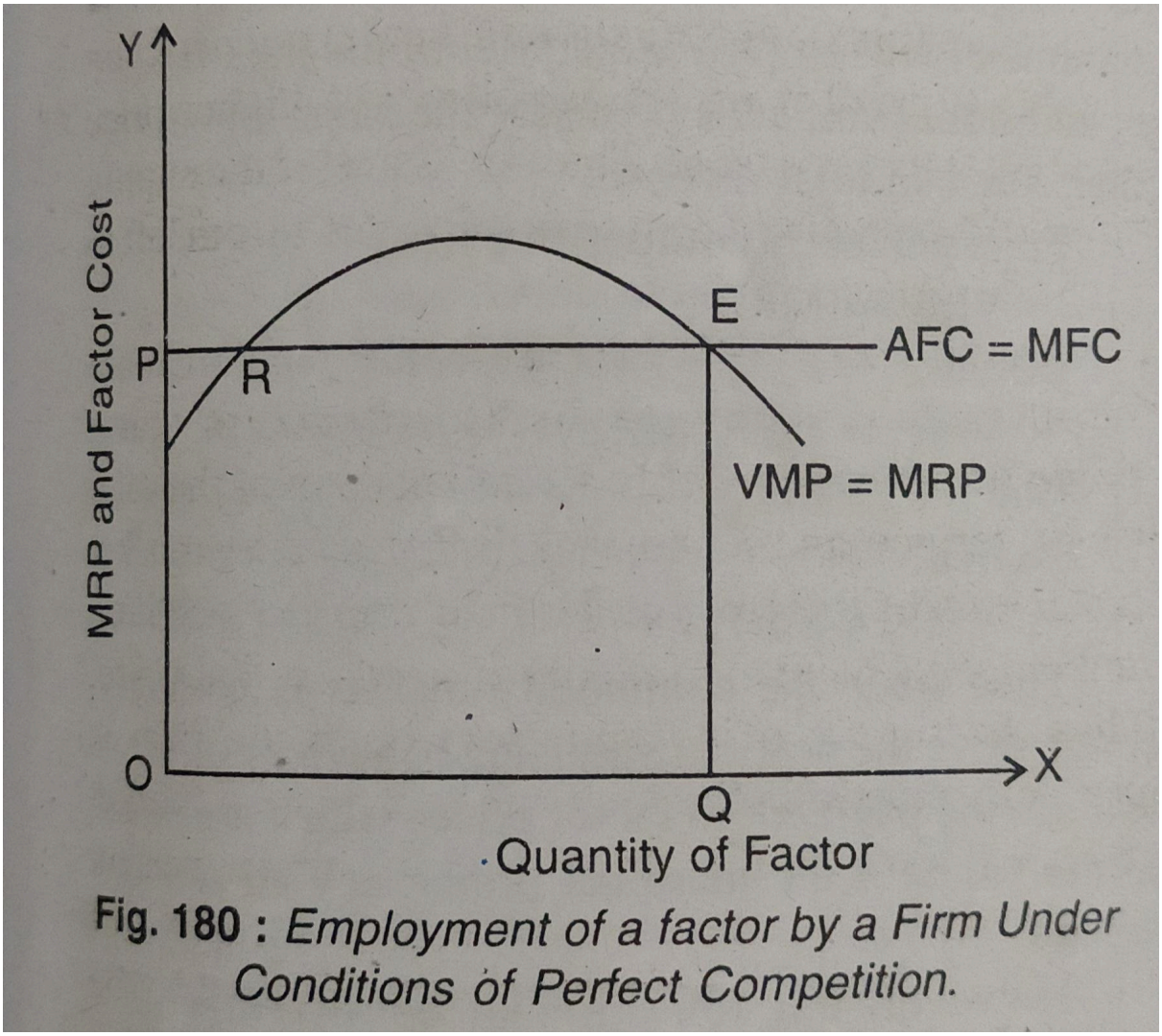

Fig. 180 : *Employment of a factor by a Firm Under Conditions of Perfect Competition.*

In the above given graph; VMP equals MRP is the demand curve and AFC= MFC is the supply curve of the factor service. Since the price of the factors is given and constant at OP for the firm, the MRP curve cuts the MFC curve at E from the above. This is the equilibrium point for the firm at which it employees OQ units of the factor service. The MRP curve also cuts the MFC curve at R. But this can not be the equilibrium point because MRP cuts MFC from below . It is not the point of maximum profit for the firm because MRP is higher than MFC beyond this point R. Thus E is the point of equilibrium in a perfectly competitive factor market when

MRP = VMP = MFC = AFC = Price

Note*:*

Under perfect competition in both factor and product markets, a firm may be at a profit or at a loss in the short run. But in the long run, it must earn normal profits.