**Unit- 4: Labour Demand**

Labour is demanded because it contributes to production of goods and services; thus it is derived demand. If the demand for commodity A increases, then the producer of commodity A will hire more labour. Labour as a factor of production carries an advantage as compared to capital- it is relatively easy to change the units of labour employed compared to capital.

Classical economists assumed that there is perfect competition in markets. In perfect competition, as you know, the firms are price takers- they cannot decide the price. Firms choose the output level at ongoing prices in order to maximize profits. Further, choice of the level of output and quantity of labour used are one decision. Now, the question is how a firm decides on the level of production, given the labour cost. A firm will increase output until the Marginal Cost (MC) of production a unit of output is equal to the Marginal Revenue (MR) received from its sale. For such a firm, MR is equal to the price (MR = P). The MC will be equal to the ratio of wages (W) to the number of units of output produced by the additional units of labour.

$$MC= \frac{W}{MP}$$

As per the condition for short run profit maximization, in perfectly competitive market, P = MC. Hence,

$$P= \frac{W}{MP\_{L}},or, \frac{W}{P}=MP\_{L}$$

O

L1

L

MPL

a

MPL

W/P

Wage

Labour

Thus a firm will hire up to the point where the additional output obtained by hiring one more unit of labour (MPL) is equal to the real wage (W/P) paid to labour. Above figure shows this condition where employment ( number of labour units) is depicted on the X-axis and real wage (W/P) is shown in Y-axis along with MPL.

At point ‘a’ in the figure we observe that W/P = MPL. To the left of point a, we have MPL> W/P and to the right of point a, MPL < W/P. The labour demand curve is downward sloping due to the law of diminishing returns. With an objective of profit maximization, the firm employs more labour when MPL> W/P and reduces the number when MPL< W/P. The aggregation of the individual firms’ demand curves for labour gives economy wide demand curve for labour. So the aggregate labour demand function (Ld) can be written as

$$L^{d}=f\left(\frac{W}{P}\right)\_{\left(-\right)}$$

The negative sign (-) in the expression indicates that a higher real wage rate is associated with a lower demand for labour.