

# INDUSTRIAL ECONOMICS

## UNIT-2

### Bain theory of limit pricing

Bain formulated his 'limit-price' theory in an article published in 1949, several years before his major work *Barriers to New Competition* which was published in 1956.

His aim in his early article was to explain why firms over a long period of time were keeping their price at a level of demand where the elasticity was below unity, that is, they did not charge the price which would maximize their revenue.

His conclusion was that the traditional theory was unable to explain this empirical fact due to the omission from the pricing decision of an important factor, namely the threat of potential entry. Traditional theory was concerned only with actual entry, which resulted in the long-run equilibrium of the firm and the industry (where  $P = LAC$ ).

However, the price, Bain argued, did not fall to the level of LAC in the long run because of the existence of barriers to entry, while at the same time price was not set at the level compatible with profit maximization because of the threat of potential entry. Actually he maintained that price was set at a level above the LAC (= pure competition price) and below the monopoly price (the price where  $MC = MR$  and short-run profits are maximized).

This behaviour can be explained by assuming that there are barriers to entry, and that the existing firms do not set the monopoly price but the 'limit price', that is, the highest price which the established firms believe they can charge without inducing entry. Bain, in his 1949 article, develops two models of price setting in oligopolistic markets.

#### **Assumptions:**

1. There is a determinate long-run demand curve for industry output, which is unaffected by price adjustments of sellers or by entry. Hence the market

marginal revenue curve is determinate. The long-run industry-demand curve shows the expected sales at different prices maintained over long periods.

2. There is effective collusion among the established oligopolists.
3. The established firms can compute a limit price, below which entry will not occur.

**The level at which the limit price will be set depends:**

- (a) On the estimation of costs of the potential entrant,
  - (b) On the market elasticity of demand
  - (c) On the shape and level of the LAC,
  - (d) On the size of the market,
  - (e) On the number of firms in the industry.
4. Above the limit price, entry is attracted and there is considerable uncertainty concerning the sales of the established firms (post entry).
  5. The established firms seek the maximization of their own long-run profit.

**there is no collusion with the new entrant:**

Assume that the market demand is  $DABD'$  and the corresponding marginal revenue is  $Dabm$  (figure 13.1).



The observed fact of setting the price at a level where  $e < 1$  is justified by a situation where the limit price is low, cutting the demand curve at a point at which the MR is negative (figure 13.2). Clearly if the limit price is  $P_L^*$  the MR is  $b^*$  which is negative and hence the elasticity of demand at price  $P_L$  is less than unity.

**given that an entry-preventing price  $P_L$  is defined, the alternatives open to the established firms are three:**

1. To charge a price equal to  $P_L$  and prevent entry.
2. To charge a price below  $P_L$  and prevent entry (this will be adopted if  $P_M < P_L$ ).
3. To charge a price above  $P_L$  and take the risks associated with the ensuing entry and the indeterminate situation that arises in the post-entry period. (This course of action will be in any case adopted if  $P_L < LAC$ ).

The firm will choose the alternative which maximises profit.