

BAIN LIMIT PRICING THEORY

**PRANAV SHEKHAR
ASSISTANT PROFESSOR,ECONOMICS
R.N.COLLEGE,ECONOMICS**

INTRODUCTION

- 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 $P = LAC$).

CONCEPT OF LIMIT PRICING

- 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 OF THE THEORY

- 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.

FACTORS DETERMINING LIMIT PRICE

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

DIGRAMMETIC PRESENTATION

assume further that the limit price (PL) is correctly calculated (and known both to the existing firms and to the potential entrants). Given PL, only the part AD' of the demand curve and the section am of the MR are certain for the firms. The part to the left of A, that is, DA is uncertain, because the behaviour of the entrant is not known.

Whether the firms will charge the PL or not depends on the profitability of alternatives open to them, given their costs.

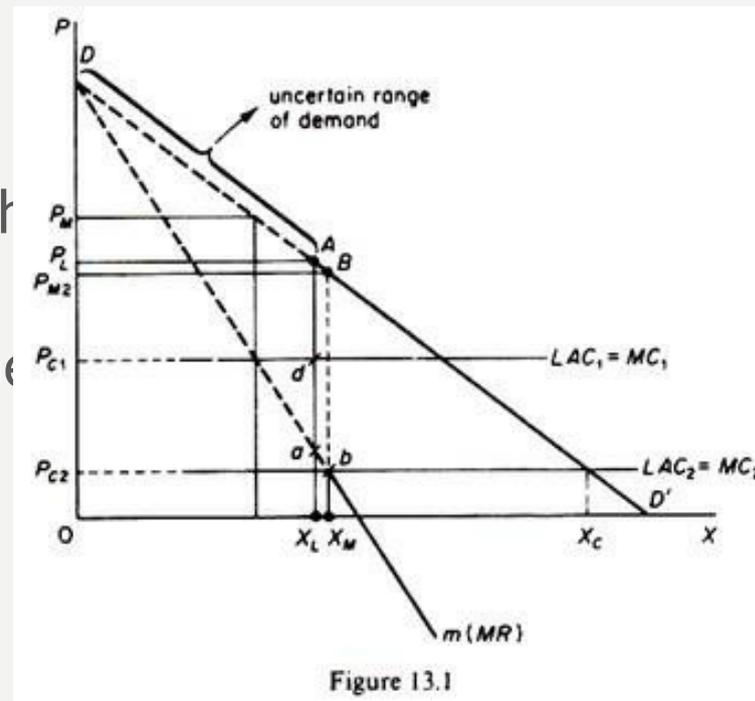
Assume the LAC (which is uniquely determined by the addition of the LMC = LAC of the collusive oligopolists) is LAC1. In this case two alternatives are possible.

• Either to charge the PL (and realise the profit $PLAdPc1$ with certainty)

• Or to charge the monopoly price, that is, the price that corresponds to the intersection of $LAC1 = MC1$ with the MR. This price will be higher than PL (given LAC1), but its precise level is uncertain post-entry. Thus the profits in the second alternative are uncertain and must be risk-discounted. The firm will compare the certain profits from charging PL with the heavily risk-discounted profits from the second 'gamble' alternative, and will choose the price (PL or PM) that yields the greatest total profit less than unity.

DIAGRAM

- Assume that the LAC is $LAC_2 = MC_2$. In this case the price that maximises profit is P_{M2} (corresponding to the intersection MC_2 and MR over the certain range of the latter). The P_{M2} is lower than P_L . The firm will clearly charge P_{M2} which maximises the profits. In this case the ceiling set by the price P_L is not operative.
- 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.



THREE ALTERNATIVES FOR OLIGOPOLISTIC FIRM

- alternatives open to the established firms are three:
- 1. To charge a price equal to PL and prevent entry.
- 2. To charge a price below PL and prevent entry (this will be adopted if $PM < PL$).
- 3. To charge a price above PL 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 $PL < LAC$).

- THANK YOU