Peak Load Pricing

Economics

CC-408

unit-2 Market structure

DR. VEENA KUMARI

ASSISTANT PROFESSOR

DEPT. OF ECONOMICS

PATNA WOMEN'S COLLEGE

Peak Load Pricing

- It is a form of inter-temporal price discrimination based on efficiency.
- For goods and services, demand peaks at particular times — for roads and public transport during commuter rush hours, for electricity during late afternoon and so on.
- Mc is also high during these peak periods because of capacity constraints. Prices should, thus, be higher during peak periods.
- Prices are normal or less during non-peak periods.
- Peak load pricing charges different prices at different times for the same good.

Peak Load Pricing

- **Marginal cost varies across time -** Price discrimination refers to the to the situation in which firms are charging different prices for the same good. In one sense, peak-load pricing is not price discrimination because the marginal cost will differ at different times. When the marginal cost differs you want to charge the marginal cost.
- **Example of networks –** utilities, roadways (does not yet include the Internet) Networks present the potential for congestion. This congestion is an externality. By being on the road, I increase the length of time of the commute for others on the road. One feature of peak times is that the congestion cost on others is very high at peak times. If everyone could pass through without impacting on others travelling there would be no transaction costs. One question to consider…whether difference in demand would lead to an argument for peak load pricing.
- **Congestion costs-** At times of peak congestion people are willing to pay more at that time. Peak-load pricing takes advantage of people's willingness to pay.

Fig…..

- shows, where D_1 is the demand curve for the peak period, and D_2 is the demand curve for non-peak period.
- The firm sets MC = MR for each period, such that price P_1 is high for the peak period, and the price P_2 is lower for the off-peak period, with corresponding quantities Q_1 and Q_2. This increases the firm's profit above what it would be if it charged one price for all periods. It is also efficient; the sum of producer and consumer's surplus is greater because prices are closer to MC.

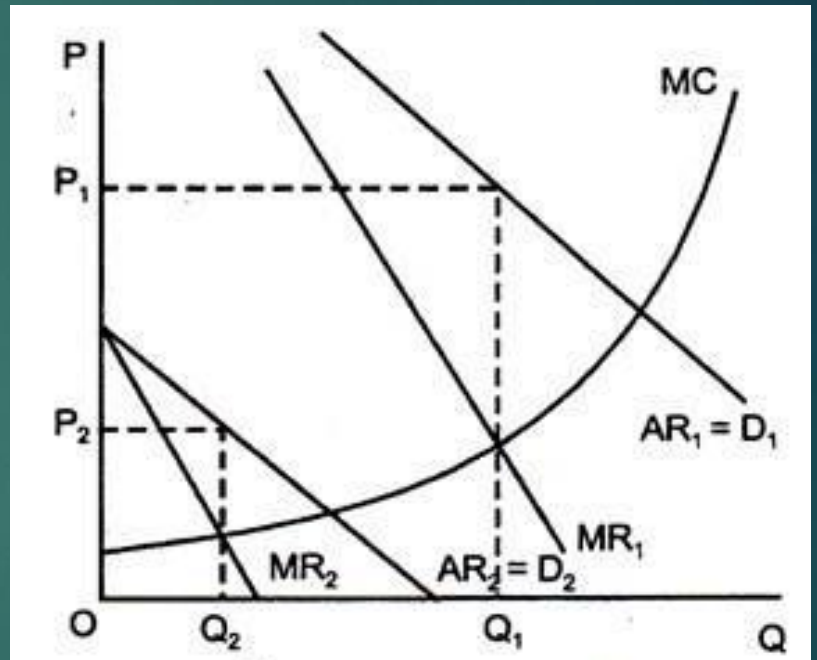

Fig. 9.13 : Peak-load Pricing

The Advantages

- Peak load pricing would help balance capacity usage.
- Reducing growth in peak load.
- Decreasing the need for capacity expansion, through charging customers in peak time a higher peak price.
- Shifting part of the load from the peak to the base load plants which called valley filling and Charging off peak customer a lower off peak price, thus having some savings in used fuels during peak time.

The Disadvantages

- The investment cost of installing time-sensitive measuring equipment. The new technology may entail switching costs. Producers may also have to hire field personnel and supervisors.
- Introducing PLP has some costs that need to be taken into consideration and must be weighed against the welfare gains of more efficient pricing. PLP requires sophisticated measurement of customer usage and advanced metering. Many utilities may lack information that allows differential pricing across periods of consumption and would therefore need to upgrade metering equipment so as to introduce PLP.
- The drawback of this theory is that it abstracts from a more general behaviour in which at least some consumers may choose to shift their demand from one season to another in response to a lower price during their "less desirable" season.
- False prediction leads to wrong pricing regulation.