

3-1: Pricing With Market Power

When a firm has market power (when price elasticity is less than infinite), and when marginal costs are constant (thus, equal to ATC), the optimal markup is a simple function of ϵ .

Firms often employ a "cost-plus" pricing strategy, but cost-plus is optimal only under a set of restrictive conditions.

Price discrimination: charging different prices to different customers based upon their elasticity of demand.

- Differential pricing based on cost differences does not constitute price discrimination.
- With price discrimination, the ratio of prices across markets will be different than the ratio of marginal costs

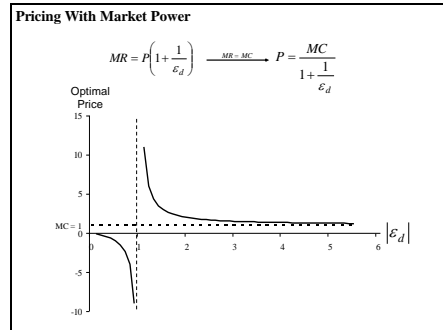
Requirements for price discrimination:

1. Market Power
2. Information (about ϵ)
3. Ability to prevent arbitrage

Types:

1. 1st degree (perfect)
2. 2nd degree (self-selection by customer)
3. 3rd degree (selection by indicators; market segmentation)

Non-linear pricing: the "two-part tariff"



Is cost plus pricing profit maximizing?

- "Cost plus" pricing:

$$P = ATC(1 + m)$$

- Profit maximizing pricing:

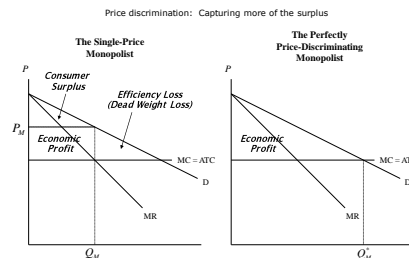
$$P = MC \frac{\epsilon}{1 + \epsilon}$$

- The less elastic is demand, the larger the optimal markup:

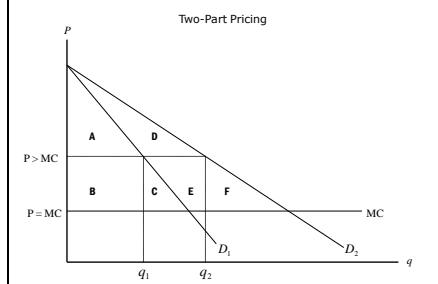
If $ATC = MC$, then $(1 + m) = \frac{\epsilon}{1 + \epsilon}$

ϵ_p	Cost Markup	Price Markup
-1	∞	100.0%
-2	100.0%	50.0%
-3	50.0%	33.3%
-4	33.3%	25.0%
-5	25.0%	20.0%
-6	20.0%	16.7%
-7	16.7%	14.3%
-8	14.3%	12.5%
-9	12.5%	11.1%
-10	11.1%	10.0%
-11	10.0%	9.1%
-12	9.2%	8.3%
-13	8.3%	7.7%
-14	7.7%	7.2%
-15	7.1%	6.7%
-16	6.7%	6.3%
-17	6.3%	5.9%
-18	5.9%	5.6%
-19	5.6%	5.3%
-20	5.3%	5.0%
-21	5.0%	4.8%
-22	4.8%	4.5%
-23	4.5%	4.3%
-24	4.3%	4.2%
-25	4.2%	4.0%

Pricing With Market Power – Basic Price Discrimination



Pricing With Market Power – Nonlinear Pricing



Relevant exercises: Problem Set 3, exercises 1 through 3.