

**Study Guide (Key Concepts): Second Quiz**  
**Economics 685: Managerial Economics**  
**Notes**

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# COST THEORY

## IV Long Run Costs

If long run average costs are decreasing, industry consolidation reduces costs. If long run average costs are increasing, spin-offs and outsourcing are in order.

## V Application: Banking mergers

## VI Measuring Cost Functions

Skipped.

## PRICING

### I Market Demand Function

Factors that affect quantity demanded.

1. Price of the product ( $P$ ). (inversely related to demand).
2. Income of consumers ( $I$ ). (positively or negatively related to demand).
3. Price of competitors. (positively related to demand).
4. Advertising ( $A$ ). (positively related to demand).
5. Price of complementary goods. (inversely related to demand).

### II Price Elasticity and the Optimal Pricing Policy

#### A Price Elasticity of Demand

- Elasticity measures the degree of pricing power a firm has or the degree of competition in the industry.
- If the elasticity is between 0 and -1, the firm can increase prices and lose relatively few customers, thus increasing profits.

elasticity	economics term	pricing power	level of competition
$e_p = -\infty$	perfectly elastic	none	perfect competition
$e_p < -1$	elastic	little	competitive
$e_p = -1$	unitary elastic	moderate	moderate competition
$-1 < e_p < 0$	inelastic	strong	imperfect competition
$e_p = 0$	perfectly inelastic	infinite	no competition

Table 1: Elasticity jargon

## B Examples

## C Examples and Determinants of Elasticity

Determinants of elasticity:

1. Level of competition (decreases elasticity).
2. Degree of product differentiation (increases elasticity).
3. Level of income (decreases elasticity).
4. Length of time (decreases elasticity).

## D Example: Set the price to maximize profits

## E Optimal pricing policy

- Optimal Pricing Policy is a fixed markup over marginal costs.
- Optimal markup is determined by the elasticity.
- Thus marginal costs (increases price) and the degree of competition (decreases price) are the two factors that determine the price.

## III Other Elasticities

## IV Estimating Demand

Skipped.

elasticity	economics term	meaning
$e_I > 0$	Normal Good	Quantity Demanded increases with income
$e_I < 0$	Inferior Good	Quantity Demanded decreases with income
$0 < e_I < 1$	Necessity	Quantity Demanded is not sensitive to income
$e_I > 1$	Luxury	Quantity Demanded is sensitive to income

Table 2: Income Elasticity Meanings

## V Evaluating Pricing Strategies: Cost plus pricing

- Uses wholesale costs (equal to cost of goods) rather than marginal costs.
- Typically fails to account for labor and transportation costs.
- Typically fails to account for degree of competition.
- Can be close to optimal price when wholesale costs are close to marginal costs.

## VI Evaluating Pricing Strategies: Price Discrimination

### A Degrees of discrimination

1. First degree: discriminate against every customer.
2. Second degree: discriminate based on quantity purchased.
3. Third degree: discriminate against a group.

### B Pitfalls of discrimination

1. Discrimination requires a lack of competition.
2. There are costs to acquiring information about customers.
3. A target group is not always easy to identify.
4. Arbitrage can sometimes result.
5. Price discrimination can be illegal.

## **VII Evaluating Pricing Strategies: 99 cent pricing**

- Raises queue time and/or labor costs.
- Helps to prevent theft.
- No evidence that consumers believe \$1.99 is really \$1.

## **VIII Evaluating Pricing Strategies: Flat rate pricing and price confusion**

- Customers like flat rate pricing.
- Flat rate pricing usually generates shortages on the most popular products. Consumers thus “pay” by having to buy earlier than desired or risk that the product is sold out.
- A complicated pricing scheme discriminates against customers with no time to figure out the best price.
- Other methods of price discrimination generally do not annoy customers as much.

## **IX Evaluating Pricing Strategies: The popcorn problem**

Charging very different markups for goods usually bought together may be a way of price discriminating.

# **BUSINESS STRATEGY**

## **X Framework: Two Person Games**

### **A Payoff matrix**

### **B Dominant Strategy**

Compute the optimal strategy for each of the possible strategies of the opponent. The strategy is dominant if the optimal strategy is the same for all possible strategies of the opponent.

## **C Nash Equilibrium**

1. Predict a strategy for any player.
2. Compute the optimal strategy of the other player, given the prediction.
3. Compute the optimal strategy of the first player, given the optimal strategy of the other player. If the strategy is identical to the predicted strategy, then the strategies constitute a Nash Equilibrium.

## **XI Some Simple Games**

### **A Anti-Coordination Games: to compete or not?**

### **B Coordination Games**

### **C Mixed Coordination and Anti-Coordination**

Advantages of coordinating (competing) or not coordinating (not competing).

1. Coordinate by locating near competitors to draw shoppers to the area.
2. Coordinate by locating near competitors if (even with two competitors) demand in the area is better than other areas.
3. Coordinate if differentiating your product and being wrong about customer preferences yields more losses than the gains from being right about customer preferences.
4. Coordinate only if incumbant firms will not react forcefully to your entry.

### **D Prisoners Dilemmas**

- A prisoner's dilemma is one in which the optimal outcome for both firms is to cooperate and not compete, but incentives result in firms cheating, leading to the worst possible outcome for both firms.

### **1 Cartels and Cheating**

The incentive to cheat in cartels is very strong.

## 2 Price Matching Offers

By offering to match prices, firms decrease the incentive for other firms to cheat on a cartel agreement.