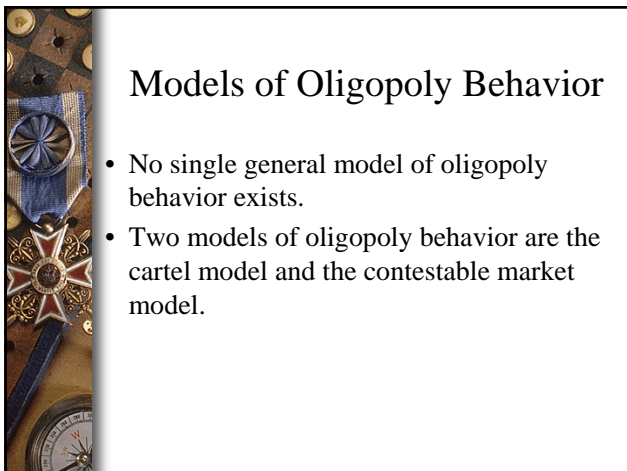


## Oligopolies

Chapter 13-

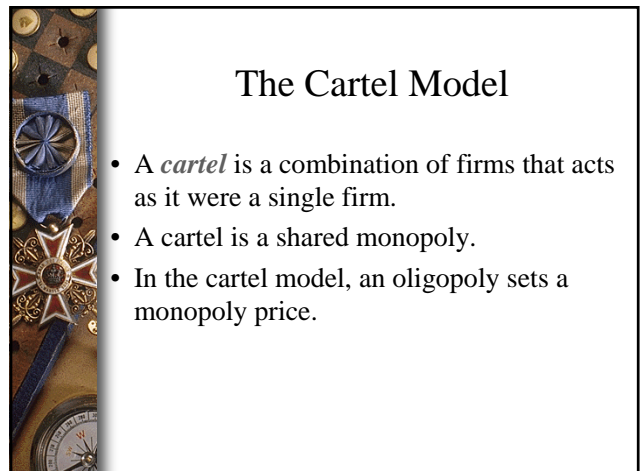
### Characteristics Oligopoly

- Oligopolies are made up of a small number of mutually interdependent firms.
- Each firm must take into account the expected reaction of other firms.



### Models of Oligopoly Behavior

- No single general model of oligopoly behavior exists.
- Two models of oligopoly behavior are the cartel model and the contestable market model.



### The Cartel Model

- A *cartel* is a combination of firms that acts as it were a single firm.
- A cartel is a shared monopoly.
- In the cartel model, an oligopoly sets a monopoly price.



## The Cartel Model

- If oligopolies can limit the entry of other firms and form a cartel, they can increase the profits going to the firms in the cartel.



## The Cartel Model

- The *cartel model of oligopoly*:
  - Oligopolies act as if they were monopolists,
  - That have assigned output quotas to individual member firms,
  - So that total output is consistent with joint profit maximization.



## Implicit Price Collusion

- Formal collusion is illegal in the U.S. while informal collusion is permitted.
- *Implicit price collusion* exists when multiple firms make the same pricing decisions even though they have not consulted with one another.



## Implicit Price Collusion

- Sometimes the largest or most dominant firm takes the lead in setting prices and the others follow.

## Cartels and Technological Change

- Cartels can be destroyed by an outsider with technological superiority.
- Thus, cartels with high profits will provide incentives for significant technological change.

## Why Are Prices Sticky?

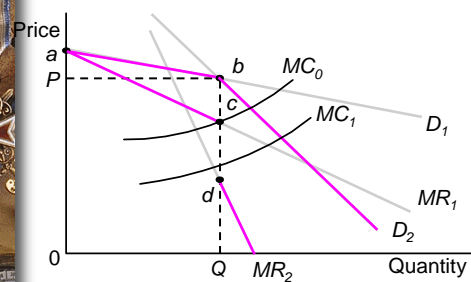
- Informal collusion is an important reason why prices are sticky.
- Another is the kinked demand curve.

## Why Are Prices Sticky?

- When there is a kink in the demand curve, there has to be a gap in the marginal revenue curve.

The kinked demand curve is not a theory of oligopoly but a theory of sticky prices.


## The Kinked Demand Curve





## The Contestable Market Model

- According to the *contestable market model*, barriers to entry and barriers to exit determine a firm's price and output decisions.
  - Even if the industry contains only one firm, it could still be a competitive market if entry is open.




## The Contestable Market Model

- In the contestable market model, an oligopoly with no barriers to entry sets a competitive price.




## Comparing the Contestable Market and Cartel Models

- The stronger the ability of oligopolists to collude and prevent market entry, the closer it is to a monopolistic situation.
- The weaker the ability to collude is, the more competitive it is.
- Oligopoly markets lie between these two extremes.



## Strategic Pricing and Oligopoly

- Both the cartel and contestable market models use *strategic pricing decisions* – firms set their price based on the expected reactions of other firms.



## New Entry as a Limit on the Cartelization Strategy

- The threat from outside competition limits oligopolies from acting as a cartel.
- The newcomer may not want to cooperate with the other firms.




## Price Wars

- Price wars are the result of strategic pricing decisions gone wild.
- Sometimes a firm engages in this activity because it hates its competitor.




## Price Wars

- A firm may develop a predatory pricing strategy as a matter of policy.
- *Predatory pricing strategy* involves temporarily pushing the price down in order to drive a competitor out of business.




## Game Theory and Strategic Decision Making

- Most oligopolistic strategic decision making is carried out with explicit or implicit use of game theory.
- *Game theory* is the application of economic principles to interdependent situations.



## Game Theory and Strategic Decision Making

- The *prisoner's dilemma* is a well-known game that demonstrates the difficulty of cooperative behavior in certain circumstances.



## Game Theory and Strategic Decision Making

- In the prisoner's dilemma, where mutual trust gets each one out of the dilemma, confessing is the rational choice.



## Prisoner's Dilemma and a Duopoly Example

- The prisoners dilemma has its simplest application when the oligopoly consists of only two firms—a duopoly.

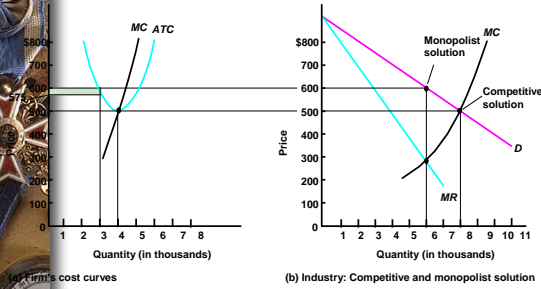


## Prisoner's Dilemma and a Duopoly Example

- By analyzing the strategies of both firms under all situations, all possibilities are placed in a payoff matrix.

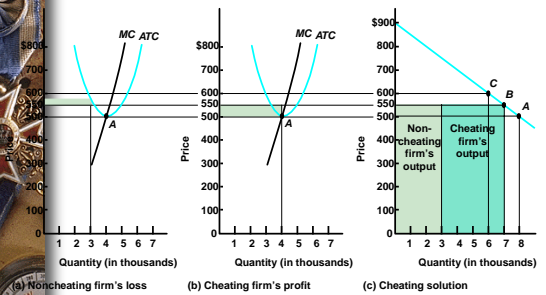
A *payoff matrix* is a box that contains the outcomes of a strategic game under various circumstances.

## Firm and Industry Duopoly Cooperative Equilibrium



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## Firm and Industry Duopoly Equilibrium When One Firm Cheats




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## Duopoly and a Payoff Matrix

- The duopoly is a variation of the prisoner's dilemma game.
- The results can be presented in a payoff matrix that captures the essence of the prisoner's dilemma.


## The Payoff Matrix of Strategic Pricing Duopoly

	A Does not cheat	A Cheats
B Does not cheat	A \$75,000 B \$75,000	A +\$200,000 B -\$75,000
B Cheats	A -\$75,000 B +\$200,000	A 0 B 0




## Oligopoly Models, Structure, and Performance

- Oligopoly models are based either on structure or performance.
- The four-fold division of markets considered so far are based on market structure.
- *Structure* means the number, size, and interrelationship of firms in the industry.



## Oligopoly Models, Structure, and Performance

- A monopoly is the least competitive, perfectly competitive industries are the most competitive.




## Oligopoly Models, Structure, and Performance

- The contestable market model gives less weight to market structure.

Markets in this model are judged by performance, not structure.

Close relatives of it have previously been called the barriers-to-entry model, the stay-out pricing model, and the limited-pricing model.



## Oligopoly Models, Structure, and Performance

- There is a similarity in the two approaches.
- Often barriers to entry are the reason there are only a few firms in an industry.
- When there are many firms, that suggests that there are few barriers to entry.
- In the majority of cases, the two approaches come to the same conclusion.