MONOPOLISTIC COMPETITION: OLIGOPOLY

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Oligopoly

- **Oligopoly** is a market structure dominated by a few large producers of homogeneous or differentiated products.
- Because of their “fewness”, oligopolists have considerable control over their price.
  - Examples: tires, beer, cigarettes, copper, greeting cards, steel, aluminum, and automobiles

Characteristics of Oligopoly

- ***A few large producers*** – firms are generally large and together they dominate the industry.
- ***Either homogeneous or differentiated products*** – the products are standardized, or differentiated with heaving advertising.
- ***Price maker*** – the firm can set its price and output levels to maximize its profit.

Characteristics of Oligopoly

- ***Strategic behavior*** – Self-interested behavior that takes into account the reactions of others.
- ***Mutual interdependence*** – each firm's profit depends not entirely on its own price and sales strategies but also on those of the other firms.
- ***Blocked entry*** – barriers to entry exist which make it hard for new firms to enter.

THREE OLIGOPOLY MODELS

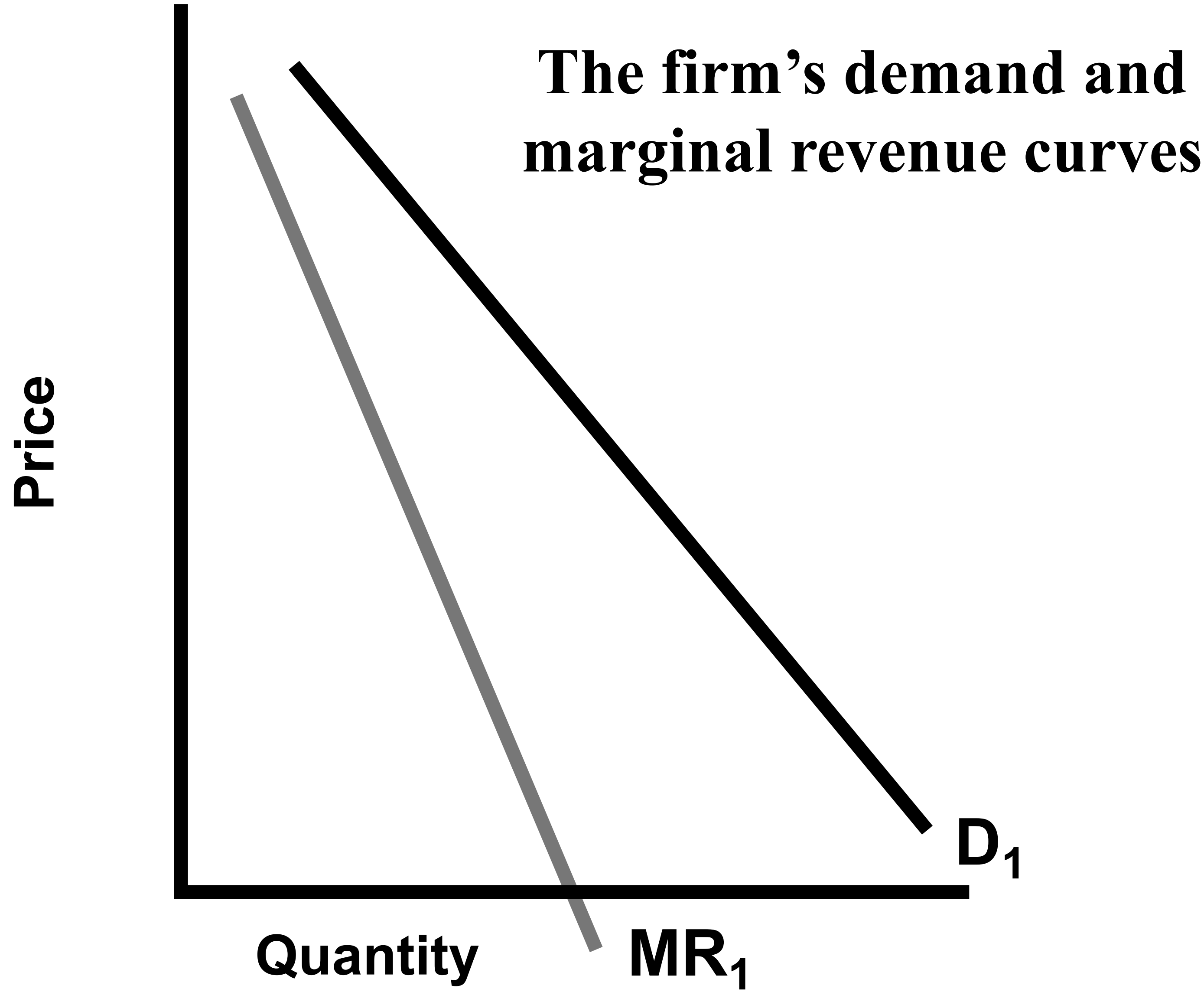
Alternative Models:

a) Kinked Demand Curve
b) Cartels and Collusion
c) Price Leadership

Kinked-Demand Model

- In the kinked-demand model, oligopolists face a demand curve based on the assumption that competitors will ignore a price increase and follow a price decrease.
  – An oligopolist's competitors will ignore a price increase above the going price but follow a price decrease below the going price.
  – The demand curve is kinked at this price and the marginal-revenue curve has a vertical gap.

KINKED DEMAND THEORY: *NONCOLLUSIVE OLIGOPOLY*



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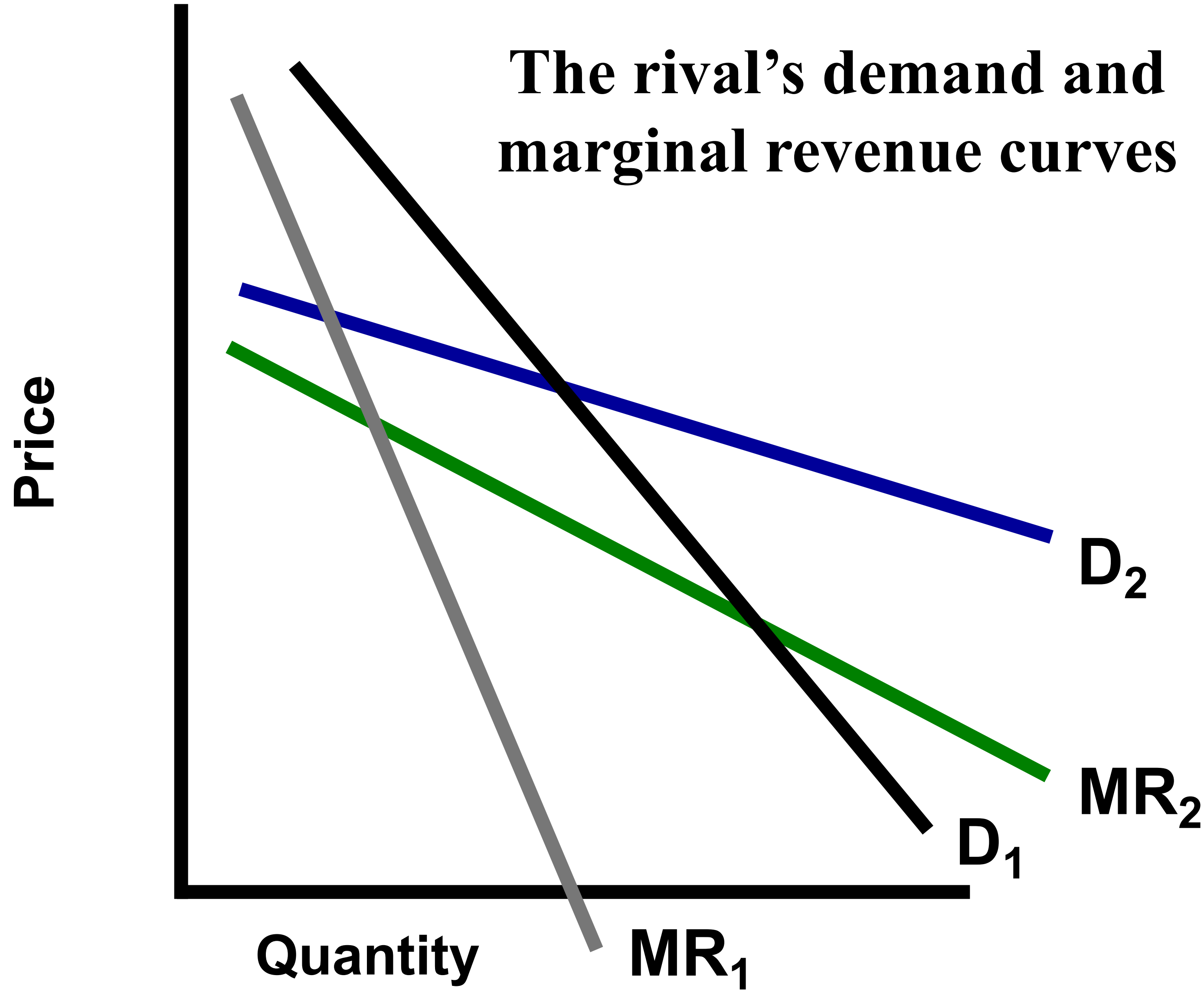

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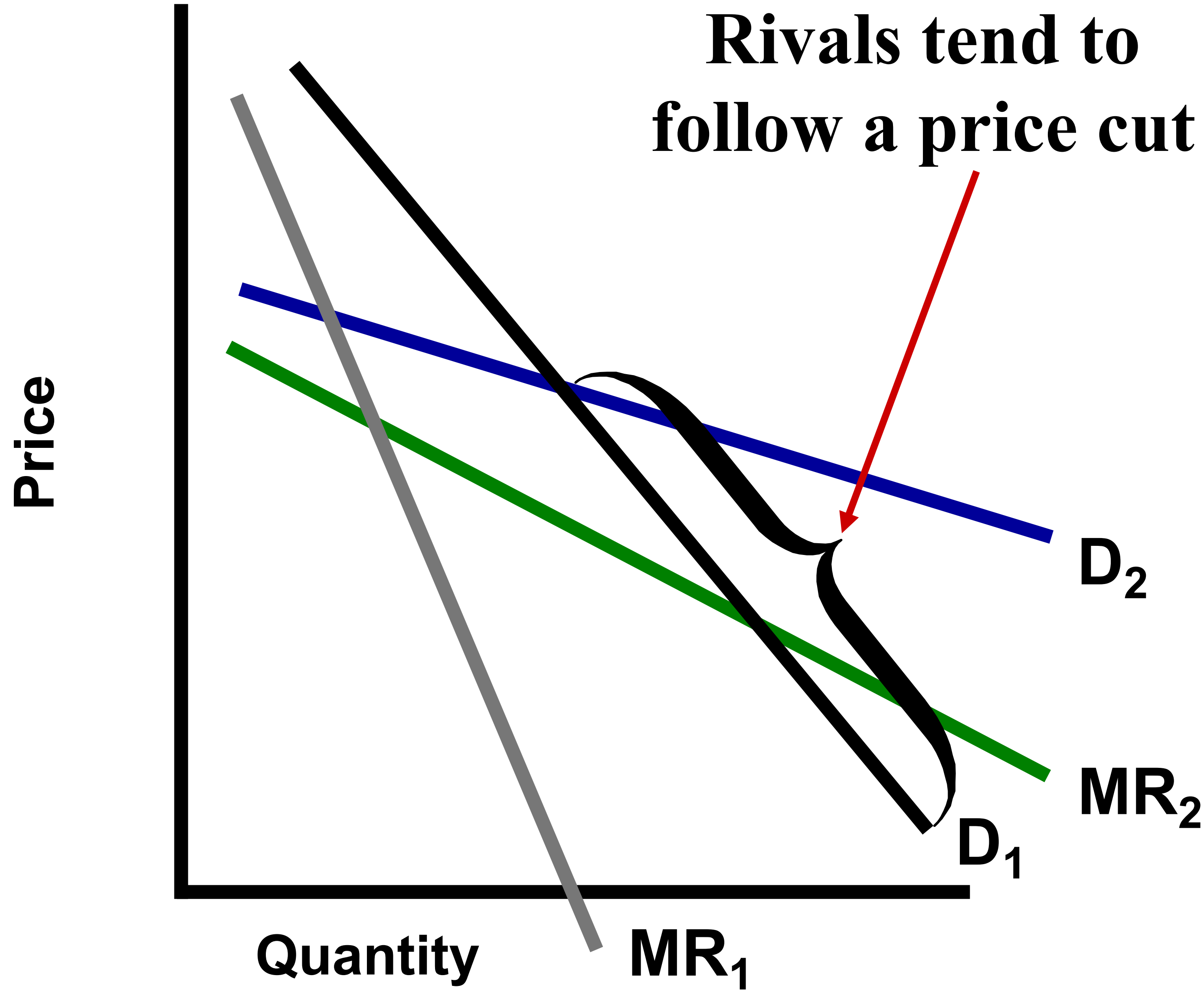

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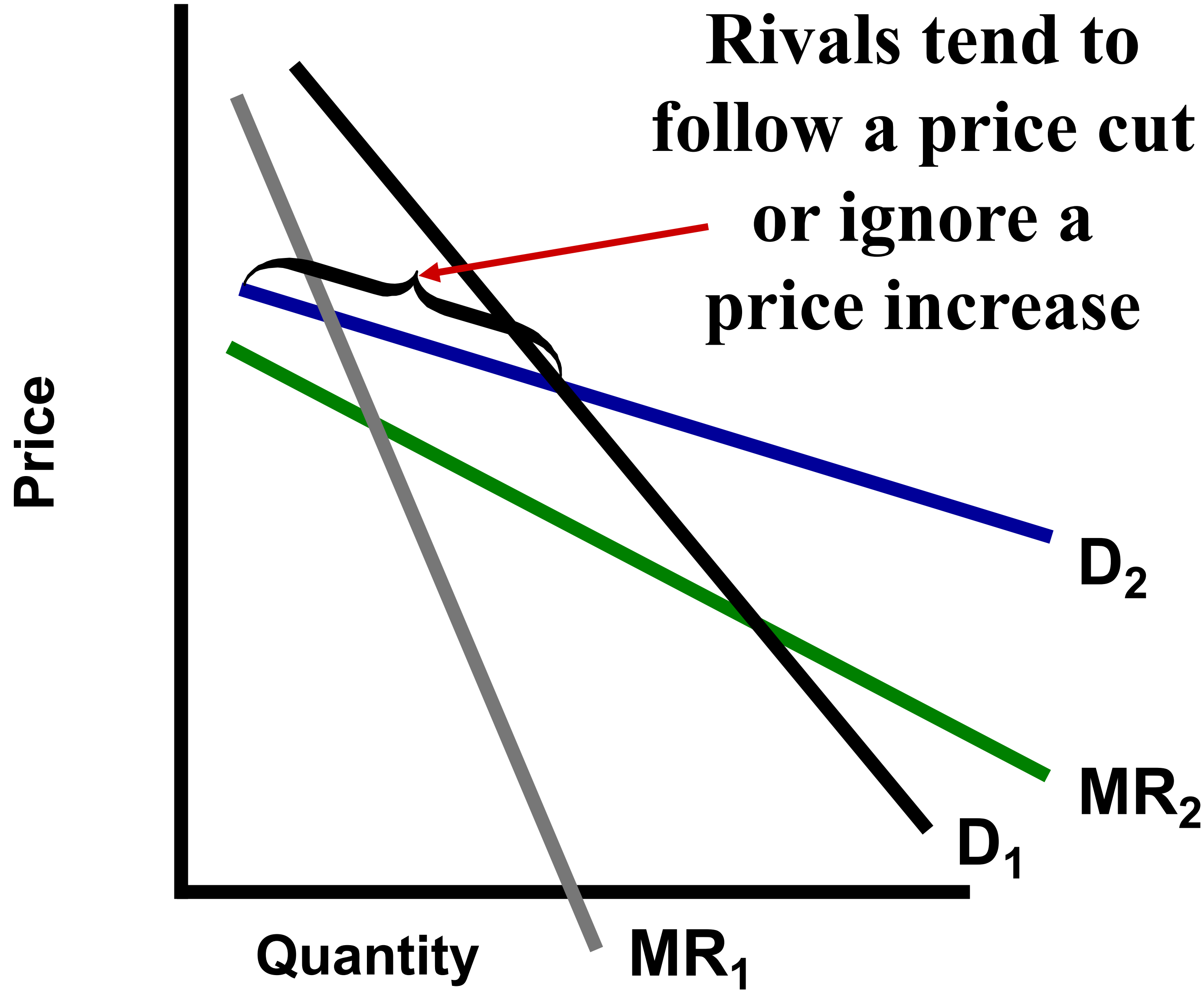

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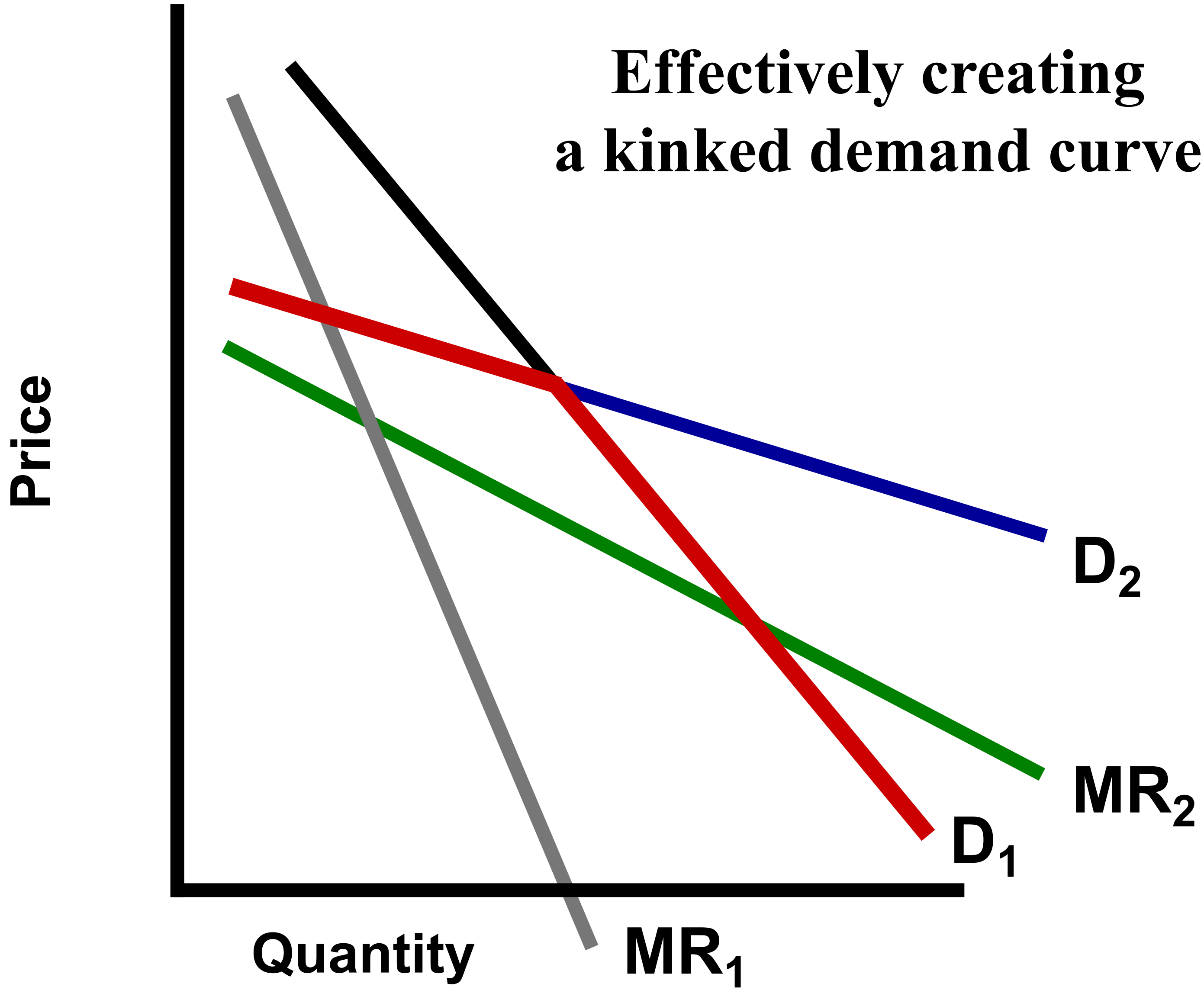
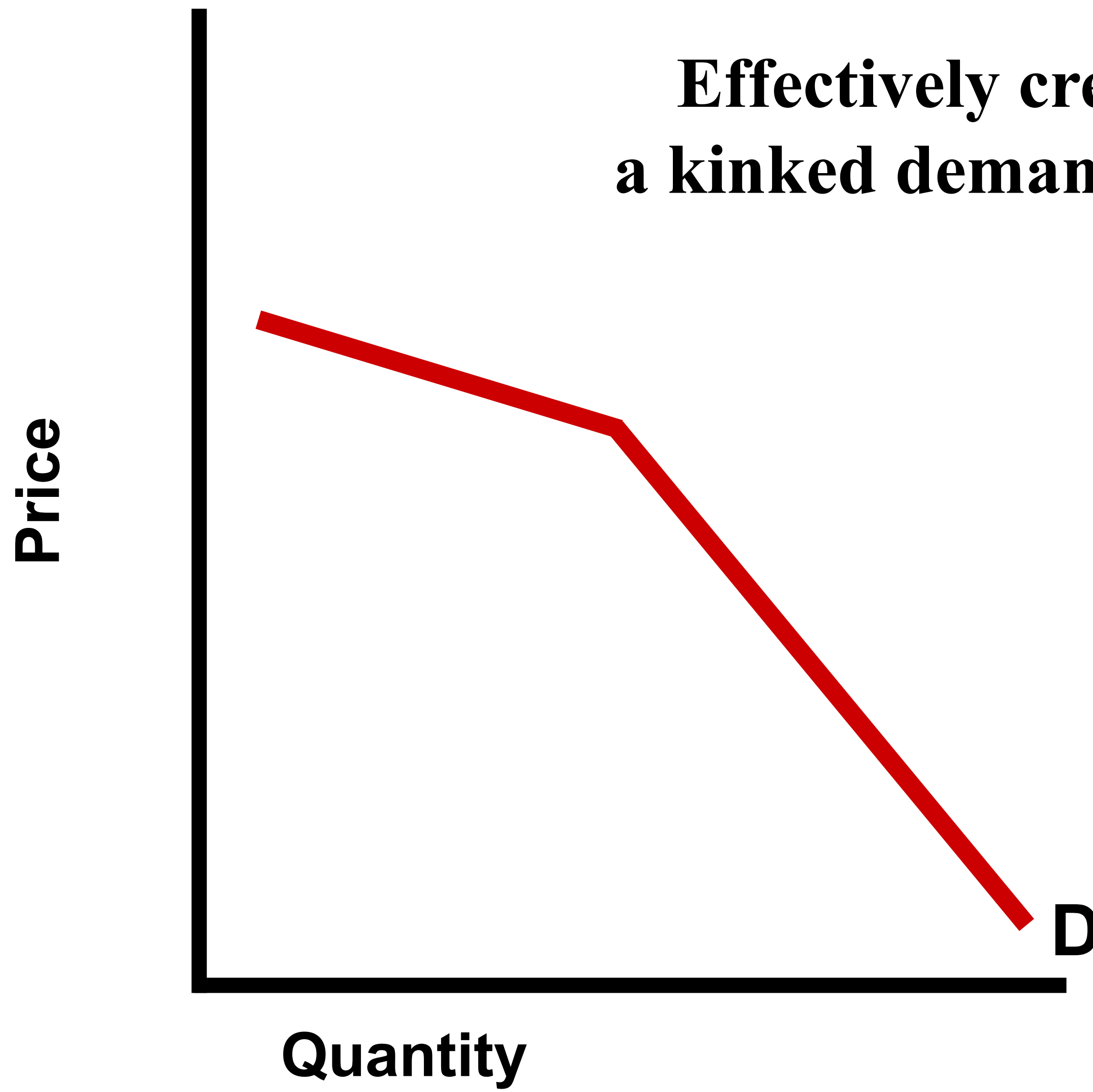


KINKED DEMAND THEORY:
NONCOLLUSIVE OLIGOPOLY

Effectively creating a kinked demand curve



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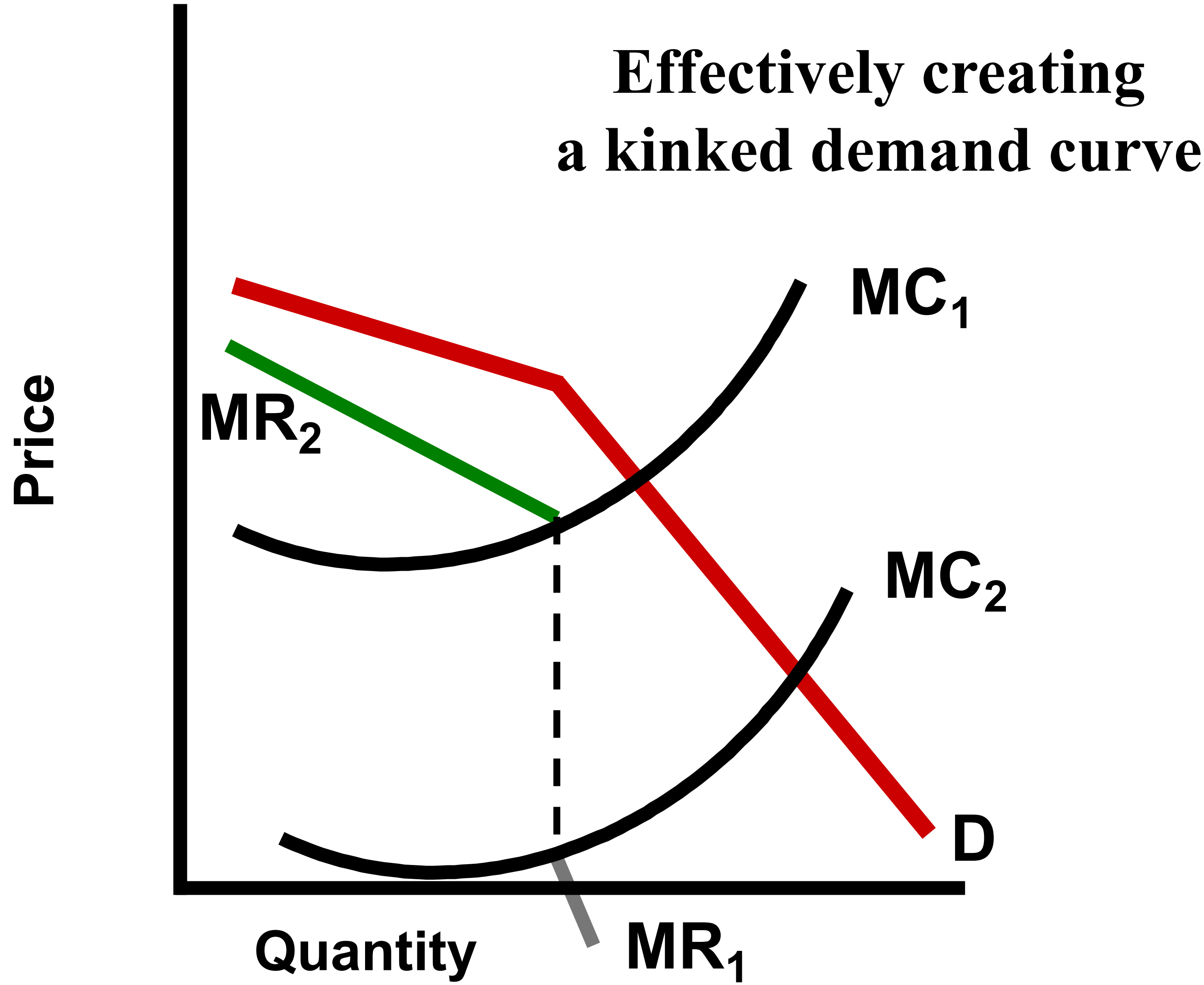

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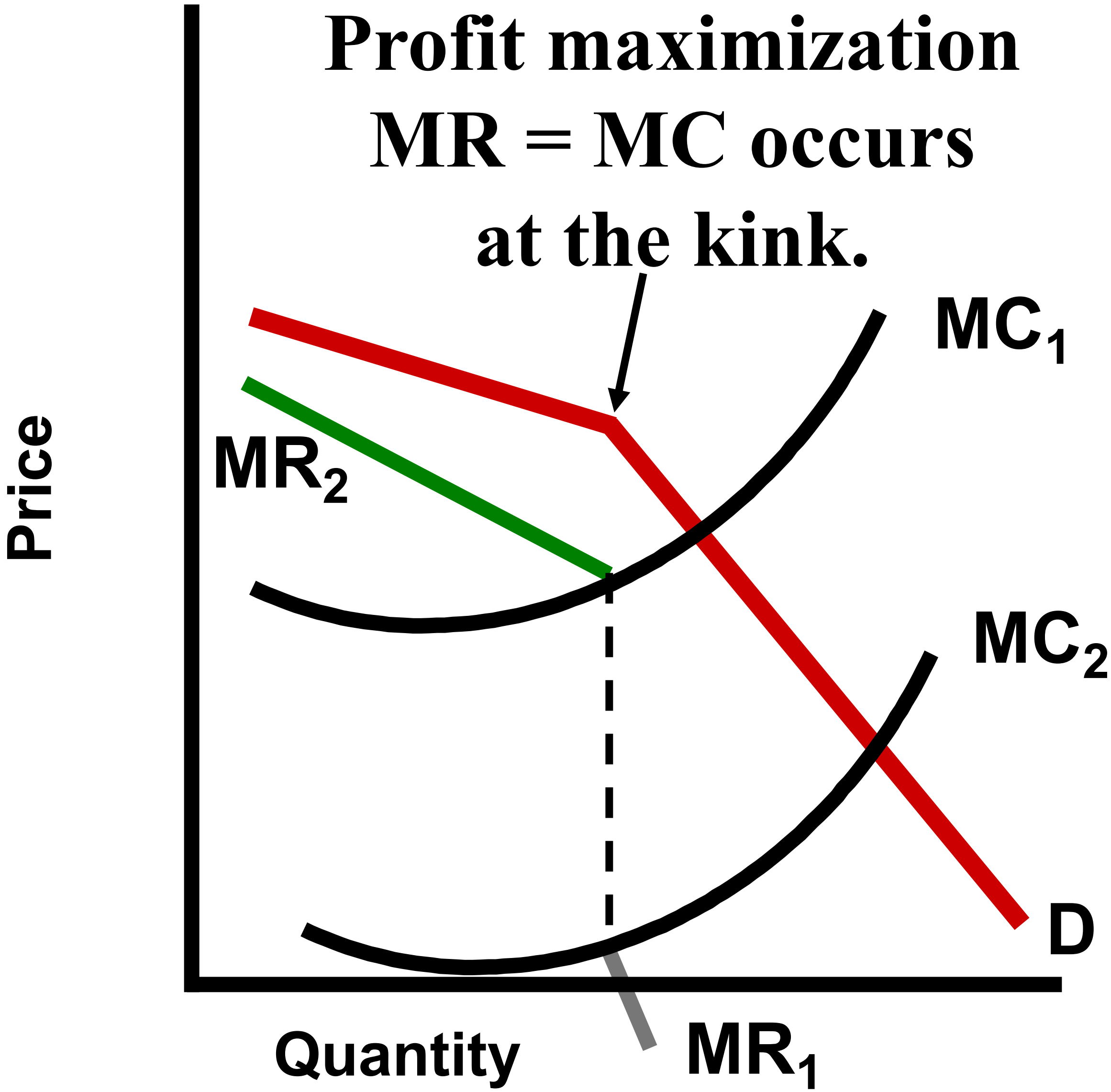

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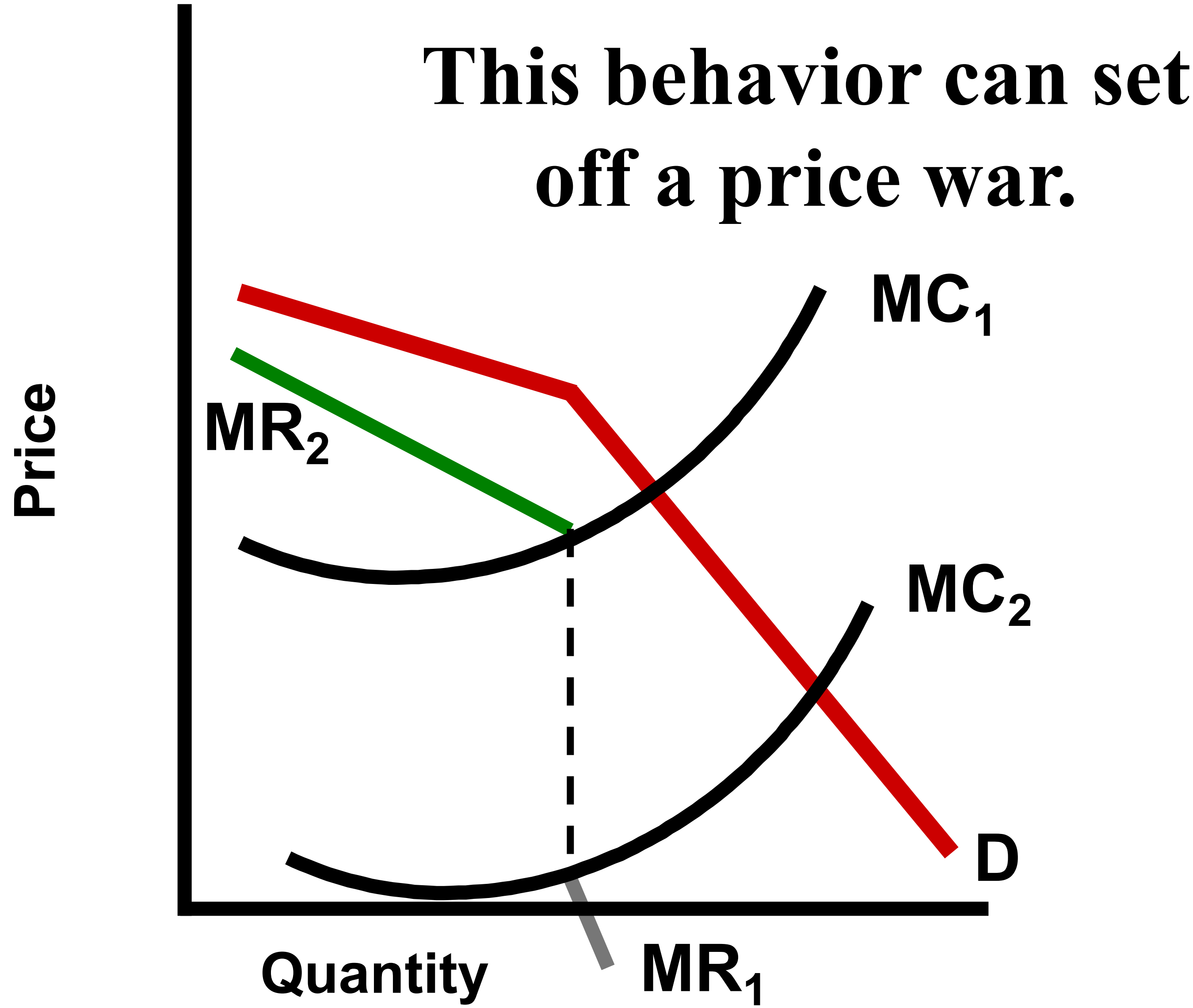
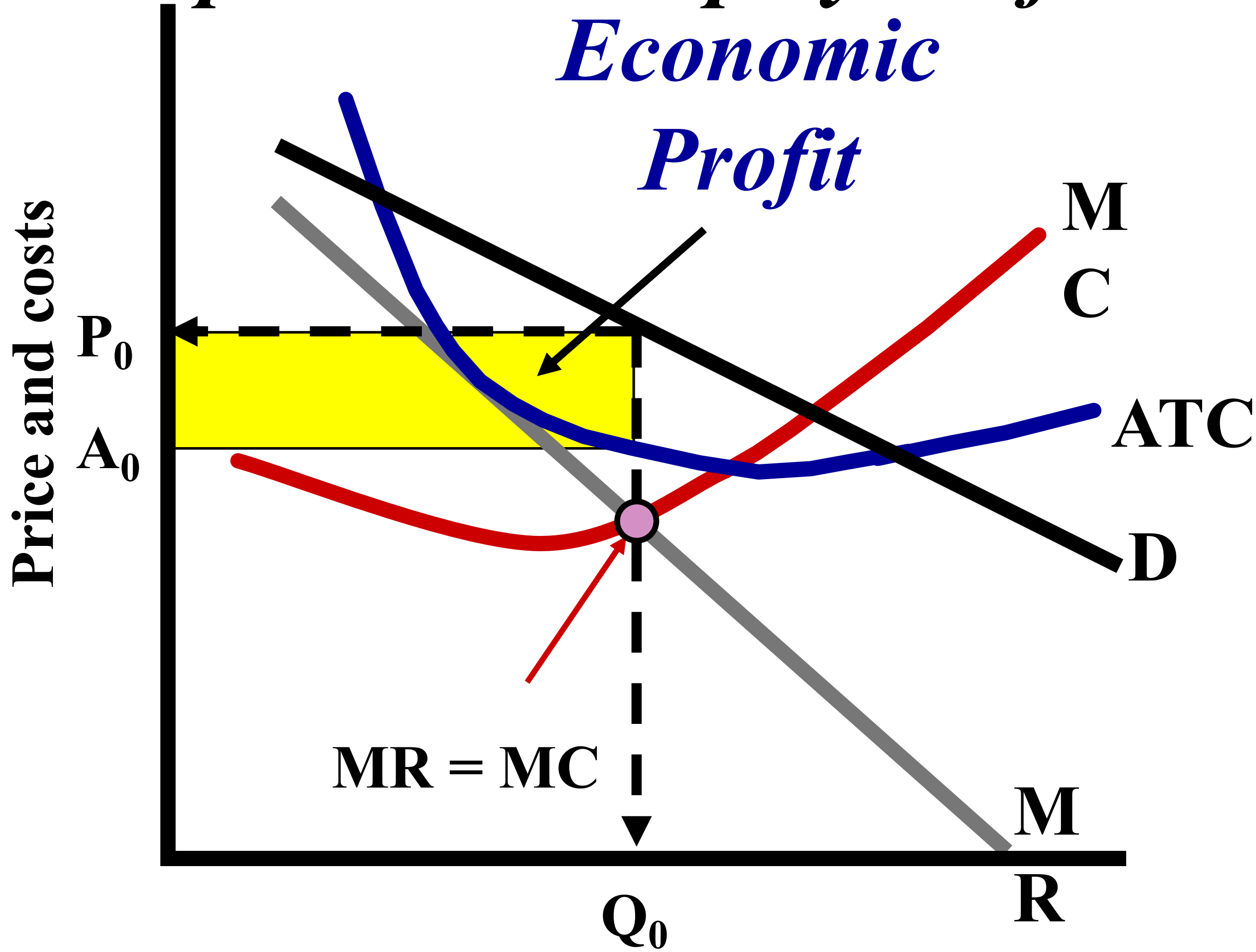


CARTELS AND OTHER COLLUSION

- Oligopoly is beneficial to collusion.
- If a few firms face identical or highly similar demand and costs…
- They will tend to seek joint profit maximization.

CARTELS AND OTHER COLLUSION

Colluding Oligopolists Will Split the Monopoly Profits.



CARTELS AND OTHER COLLUSION:

Overt Collusion

- **The OPEC Cartel**

A formal, usually secret, collusion agreement among competing firms (mostly oligopolistic firms) in an industry designed to control the market, raise the market price, and otherwise act like a monopoly. Also termed explicit collusion, the distinguishing feature of overt collusion is a formal agreement. This should be contrasted with implicit or tacit collusion that does not involve a formal, explicit agreement.

CARTELS AND OTHER COLLUSION:

Covert Collusion

- **Tacit (Silent) Understandings**

Seemingly independent, but parallel actions among competing firms (mostly oligopolistic firms) in an industry that achieve higher prices and profits, much as if guided by an explicit collusion agreement. Also termed implicit collusion, the distinguishing feature of tacit collusion is the lack of any explicit agreement. They key is that each firm seems to be acting independently, perhaps each responding to the same market conditions, but the end result is the same as an explicit agreement. This should be contrasted with explicit or overt collusion that does involve a formal, explicit agreement.

CARTELS AND OTHER COLLUSION

Obstacles to Collusion

- **Demand and Cost Differences**
- **Number of Firms**
- **Cheating**
- **Recession**
- **Potential Entry**
- **Antitrust Law**

PRICE LEADERSHIP MODEL

Leadership Tactics

- **Infrequent Price Changes**
- **Communications**
- **Limit Pricing**

Breakdowns in Price Leadership-Price Wars

Price Leadership

- Price leadership involves an implicit understanding that other firms will follow the lead when a certain firm in the industry initiates a price change.
- A price leader is likely to observe the following tactics:
  - Infrequent price changes
  - Communications
  - Avoidance of price wars

Market Share by Oligopoly

- Computer Operating Systems: New high-tech markets can become oligopolies when the companies provide unique products that are supported by an ecosystem of supporting technology. Computer operating systems are dominated by Microsoft's Windows, Apple's Mac OS and the open source Linux operating systems. These three systems capture close to 100 % of the computer operating system market due to their established positions.
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- Music Industry: The music entertainment industry is dominated by four music companies that control 80% of the market and these are universal Music Group, Sony Music entertainment, Warner Music Group. 35.10% 22.80% 21.10% 21% universal Sony warner others

Market Share by Oligopoly

- Auto industry: Auto industry is another example of an oligopoly, which is dominated by few firms and these firms are Hero Motor Corp., TVS and Honda. HERO: 40% Market Share Honda: 25% Market Share TVS: 14% Market Share 40% 14% 25% 21% HERO TVS HONDA OTHERS
-
- Oligopoly in soft drink industry: Two firms control 74 % of soft drink sales: o 42.8% Coca-Cola's 25 brands and 139 varieties. o 31.1% Pepsi's 18 brands and 163 varieties. Coca-Cola and Pepsi are in an oligopoly market. They are mutually and strategically interdependent, as a decision made by one firm invariably affects the other. They are selling the homogeneous product so they can control over price. 42.80% 31.10% 26.10% Series 1 Coca-Cola Pepsi others

OLIGOPOLY AND ADVERTISING

- **Less Easily Duplicated**
- **Adequate Resources**
- **Positive Effects of Advertising**
- **Effects of Advertising**
- **Brand Development**

OLIGOPOLY AND EFFICIENCY

Productive Efficiency

$$P = Minimum\ ATC$$

Oligopoly: No Productive Efficiency

Allocative Efficiency

$$P = MC$$

Oligopoly: No Allocative Efficiency

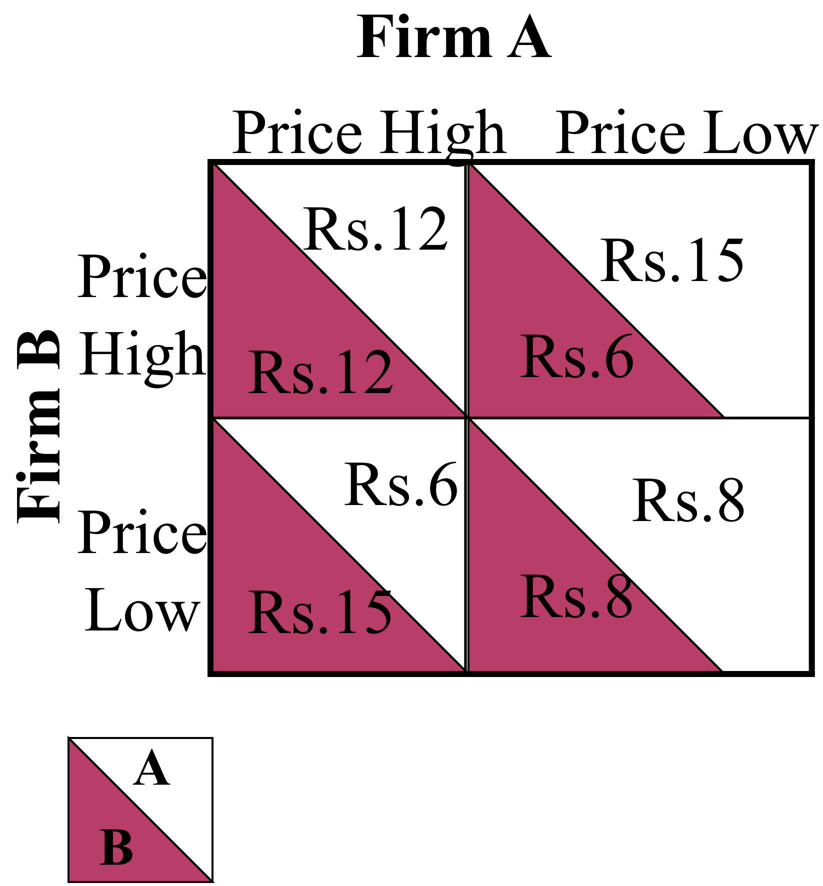
Qualifications

Oligopoly Behavior: A Game-Theory

- **Game theory** is the study of how people or firms behave in strategic situations.
  - It can be used to analyze the pricing behavior of oligopolists.
  - Suppose in a two-firm oligopoly (a duopoly), each firm must chose a pricing strategy, high or low.
  - A *payoff matrix* can be constructed to show payoffs (profit) to each firm that result from each combination of strategies.

Game Theory Example

- Two firms, A and B, must decide on a pricing strategy: price high or price low.
  - Although firms A and B are mutually interdependent, both can benefit from collusion. However, there may be incentive to cheat.



Mutual Interdependence

- Each firm's profit depends on its own pricing strategy and that of its competitor/rival.
- In the example, if both firms adopt a high-price strategy, each firm will earn Rs.12 million; if both adopt a low-price strategy, each will earn Rs.8 million.
- If one firm adopts a low-price strategy while the other adopts a high-price strategy, the low-price firm will earn Rs.15 million while the other firm earns Rs.6 million.

Collusive Tendencies

- Oligopolists can often benefit from cooperation, or collusion.
- **Collusion** is a situation in which firms act together and in agreement to fix prices, divide markets, or otherwise restrict competition.
  - In the example, firms A and B can agree to establish and maintain a high-price strategy so each can earn Rs.12 million.

Incentive to Cheat

- Oligopolists might have an incentive to cheat on a collusive agreement if they can benefit from such action.
  - In the example, suppose firms A and B agree to establish and maintain a high-price strategy. Either firm can cheat and lower its price in order to increase profit to Rs.15 million (a Rs.3 million increase).

Incentive to Cheat

- Because of possible incentives to cheat, independent action by oligopolists may lead to mutually “competitive” low-price strategies, which benefit consumers but not the oligopolists.
  – In the example, firms A and B will choose a low-price strategy and earn Rs.8 million each.

THANK YOU