ECONOMICS 201: WEEK 7 IMPERFECT COMPETITION

MONOPOLISTIC COMPETITION

OLIGOPOLY

MARKET STRUCTURES

Imperfect competition refers to those market structures that fall between perfect competition and pure monopoly.

Perfect Competition

Imperfect competition

Monopoly

MARKET STRUCTURES

Perfect competition and pure monopoly are ideal models.

Most real world industries fall in between.

Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly

MONOPOLISTIC COMPETITION

Markets that have some features of competition and some features of monopoly.

- **Many sellers**
- **Free entry and exit**
- **Product differentiation**

  Products are close but not perfect substitutes.

  Example: ***I-phone, Android phone, Windows phone***

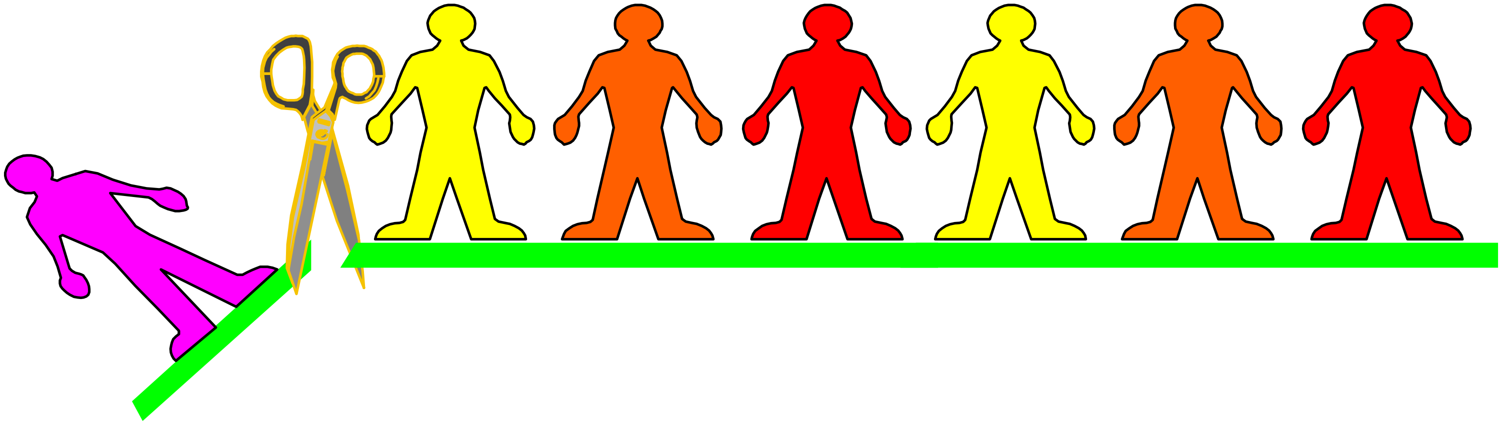
MANY SELLERS

THERE ARE MANY FIRMS COMPETING FOR THE SAME GROUP OF CUSTOMERS.

FREE ENTRY OR EXIT

Firms can enter or exit the market without restriction.

Firms will enter and exit until the firms are making exactly zero economic profits.



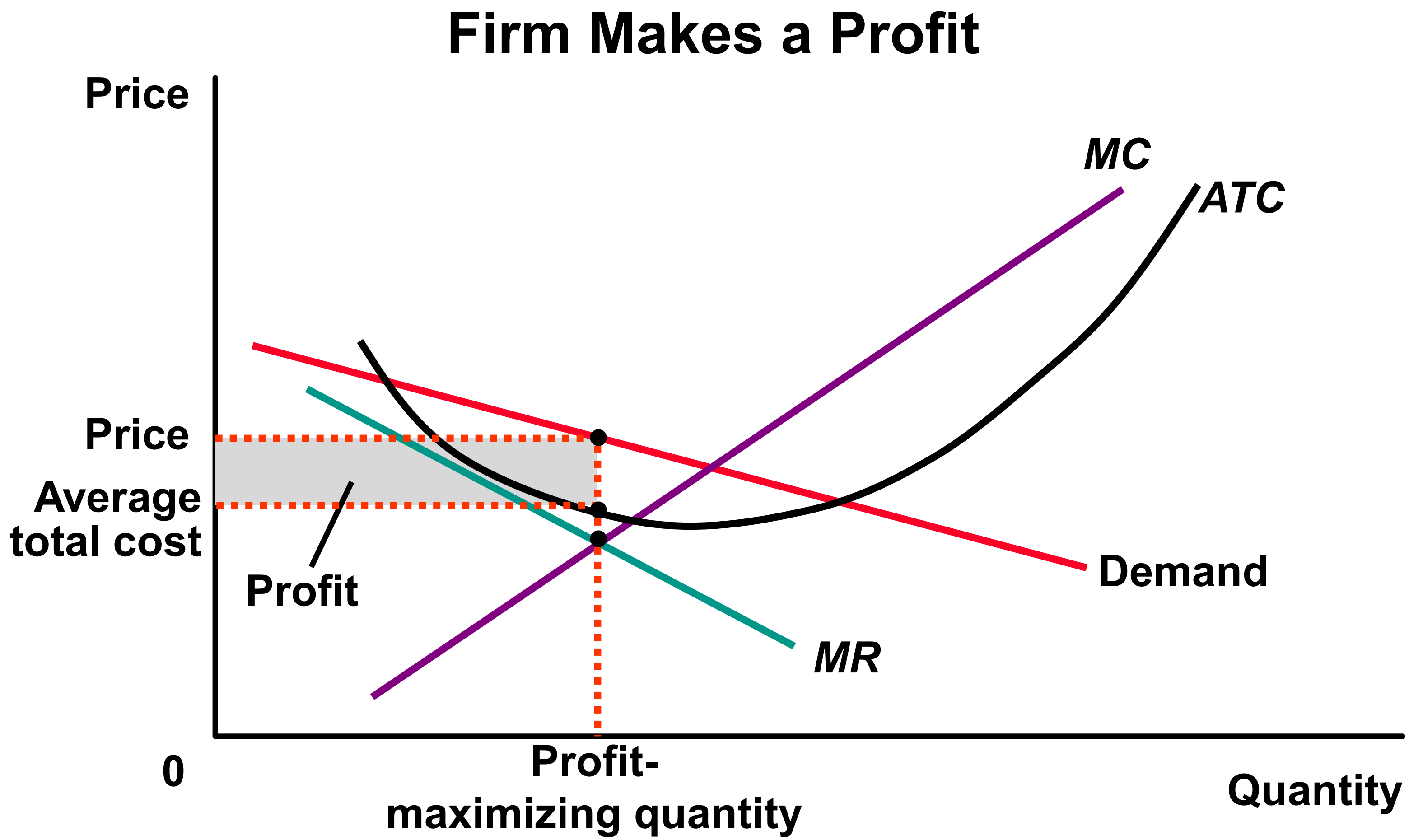
PRODUCT DIFFERENTIATION

Each firm produces a product that is at least slightly different from those of other firms.

Product differentiation gives firm some monopoly power *even though there are many competing firms*.

The firm faces a downward sloping demand curve like monopoly.

MONOPOLISTIC COMPETITORS IN THE SHORT RUN…



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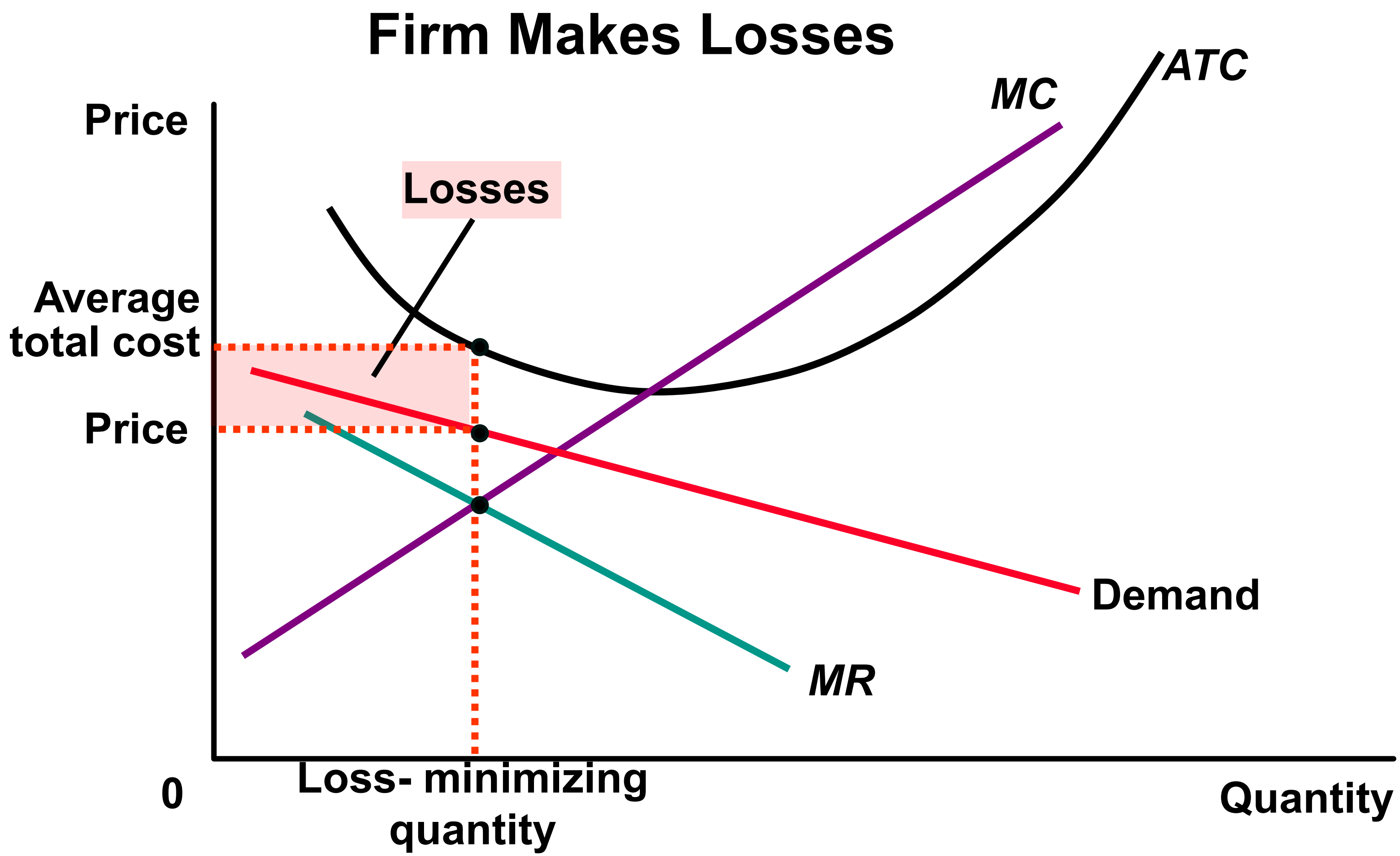
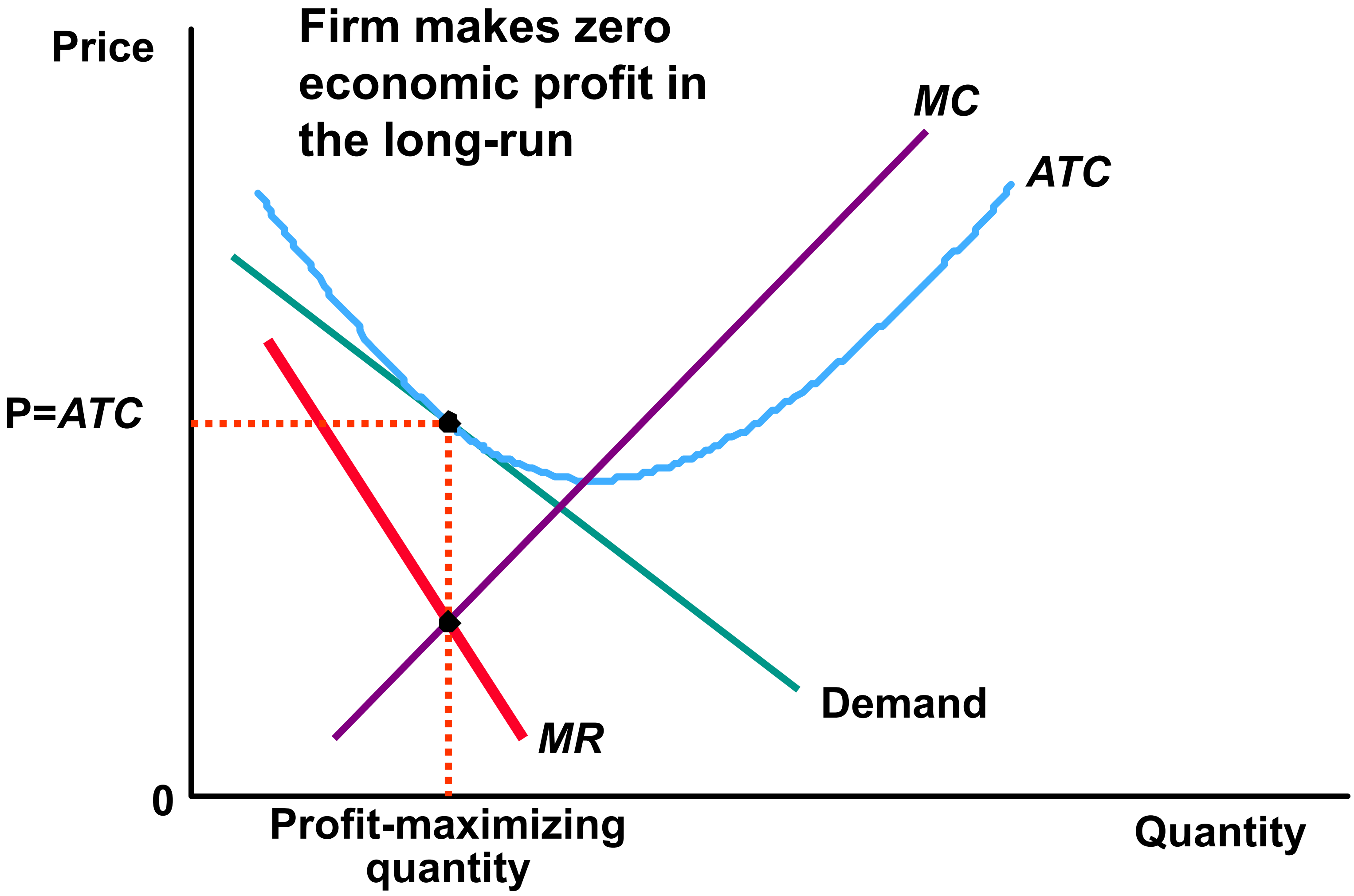
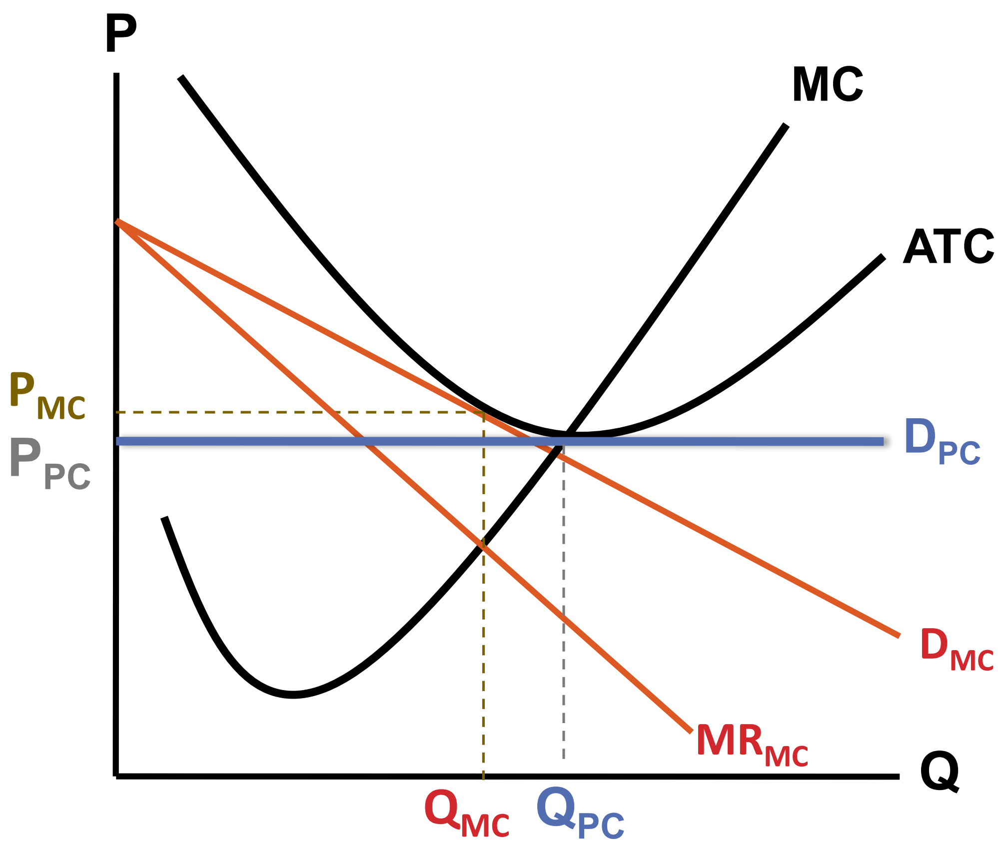


A MONOPOLISTIC COMPETITOR IN THE LONG RUN…



MONOPOLISTIC COMPETITION VS. PERFECT COMPETITION



- In **monopolistic competition** in the long run, P > min ATC,
- In **perfect competition** in the long run, P = min ATC

Outcome:
Monopolistic competition *output is lower* and *price is higher* than perfect competition

OLIGOPOLY

Oligopoly -- derived from the Greek word, "olig," meaning "few" or "a small number."

- The key characteristic of Oligopoly is that the market is dominated by a few dominant sellers
- Products may be differentiated or identical – e.g. Automobiles or oil.
- Barriers to entry

OLIGOPOLY

There is no single model of Oligopoly behavior.

1. Cartel Model
   - Group of sellers of a product join together to control production, sales, and price and to act like a monopoly
2. Price leadership and tacit collusion
   - Tacit collusion: collusion that is not explicit.
   - Price leadership: leader sets the price and the others follow

OLIGOPOLY

3. Strategic interaction and Game theory
    - Since firms operate in the same market, decisions are interdependent
    - If Firm X decides to cuts its price, needs to consider how Firm Y will respond
    - Tactics, strategies, moves, and countermoves matter

THE CARTEL MODEL

A cartel model of oligopoly is a model that assumes that oligopoly firms act together as if they were a monopoly.

- Requires collusion among firms to set price and output levels.
- Firms also may act together to prevent entry of other firms into the industry.

COLLUSION

- **Explicit (formal) collusion** is illegal in the U.S.

- **Implicit price collusion** exists when multiple firms make the same pricing decisions even though they have not consulted with one another. Implicit price collusion is not illegal.

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

GAME THEORY AND STRATEGIC BEHAVIOR

Because the number of firms in an oligopolistic market is small, each firm must act strategically.

Each firm knows that its profit depends not only on how much it produces but also on how much the other firms produce.

GAME THEORY AND STRATEGIC BEHAVIOR

Game theory is the study of how people behave in strategic situations.

Strategic decisions are those in which each person, in deciding what actions to take, must consider how others might respond to that action.

THE PRISONERS' DILEMMA

The prisoners' dilemma provides insight into the difficulty in maintaining cooperation.

Often people (firms) fail to cooperate with one another even when cooperation would make them better off.

PRISONER'S DILEMMA

Bonnie and Clyde have been charged with bank robbery. But without a confession, the DA can only get a "reckless endangerment" charge to stick. So the police play one suspect off against the other.

LET'S MAKE A DEAL


What will
Bonnie
do?

THE PAYOFF MATRIX

Bonnie's Decision

Clyde's Decision	Confess	Remain Silent
Confess	Bonnie gets 8 years Clyde gets 8 years	Bonnie gets 20 years Clyde goes free
Remain Silent	Bonnie goes free Clyde gets 20 years	Bonnie gets 1 year Clyde gets 1 year

CARTEL BEHAVIOR AS A PRISONERS’ DILEMMA

		Iraq’s Decision	
		High Production	**Low Production**
Iran’s Decision	**High Production**	Iraq gets $40 billion Iran gets $40 billion	Iraq gets $30 billion Iran gets $60 billion
	Low Production	Iraq gets $60 billion Iran gets $30 billion	Iraq gets $50 billion Iran gets $50 billion

CARTEL BEHAVIOR AS A PRISONERS' DILEMMA

OPEC is an international oil cartel currently composed of 14 member countries. The oil is controlled by the governments -- i.e. the oil industry is nationalized. Thus, OPEC is an organization of countries – rather than an organization of oil companies.

The goal of OPEC is to maximize oil revenues. Demand for oil is inelastic, therefore lowering price will decrease revenues rather than increase them.

Hence, the strategy of OPEC in the past has been to keep price high by limiting production. This requires all countries to agree to limit production.

Founding OPEC Members

Iran
Iraq
Kuwait
Saudi Arabia
Venezuela

Other Members

Algeria
Angola
Congo
Ecuador
Equatorial Guinea
Gabon
Libya
Nigeria
United Arab Emirates

AN ARMS-RACE GAME

Decision of the United States (U.S.)

Decision of the Soviet Union (USSR)	Arm	Disarm
Arm	U.S. at risk USSR at risk	U.S. at risk and weak USSR safe and powerful
Disarm	U.S. safe and powerful USSR at risk and weak	U.S. safe USSR safe

AN ADVERTISING GAME

		Marlboro's Decision	
		Advertise	**Don't Advertise**
Camel's Decision	**Advertise**	Marlboro gets $3 billion profit Camel gets $3 billion profit	Marlboro gets $2 billion profit Camel gets $5 billion profit
	Don't Advertise	Marlboro gets $5 billion profit Camel gets $2 billion profit	Marlboro gets $4 billion profit Camel gets $4 billion profit

A COMMON-RESOURCES GAME

		Exxon's Decision	
		Drill Two Wells	**Drill One Well**
Arco's Decision	**Drill Two Wells**	Exxon gets $4 million profit Arco gets $4 million profit	Exxon gets $3 million profit Arco gets $6 million profit
	Drill One Well	Exxon gets $6 million profit Arco gets $3 million profit	Exxon gets $5 million profit Arco gets $5 million profit

THE PRISONERS' DILEMMA

The dominant strategy is the best strategy for a player to follow regardless of the strategies pursued by other players.

THE PRISONERS' DILEMMA

Cooperation is difficult to maintain, because cooperation is not in the best interest of the individual player.

OLIGOPOLIES AS A PRISONERS' DILEMMA

Self-interest makes it difficult for the oligopoly to maintain a cooperative outcome with low production, high prices, and monopoly profits.

WHY PEOPLE SOMETIMES COOPERATE

Firms that care about future profits will cooperate in repeated games rather than cheating in a single game to achieve a one-time gain.

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