

Unit 9

Definition of an Oligopoly

- An oligopoly is similar to both a monopoly and perfect competition, but with some major differences
- **Oligopoly**: a market with few sellers, each offering a product similar or the same to the other
- **Duopoly**: Oligopoly with only two sellers
 - These two sellers can work together to decrease production and raise prices, called **collusion**
 - **Cartel**: When two sellers are operating in collusion (together)
- If the two firms were to work together, they could follow the pricing and quantity of a monopoly
- Because each firm wants to earn more profit, it wants to produce more than the other firm. This causes the increasing firm to increase total market share and profits, while the other firm loses out.
- If the other firm were to ALSO increase production, both firms would be worse off compared to the original production quantities.
- **Nash Equilibrium**: a situation where firms choose their best strategy given that all of the other strategies have chosen
 - In other words, where neither firm wants to increase production because doing so would decrease both firm's profits
- ***When one firm chooses production to maximize profit, it chooses to produce at a quantity greater than that produced by a monopoly, but less than that of perfect competition. The oligopoly price is lower than that of the monopoly, but greater than that of the perfect competition***
- **The Output Effect**: Because the price of an oligopoly is above the marginal cost, selling the next unit will raise profit
- **The Price Effect**: Increasing the quantity willing and able to be sold will lower the price, and in turn lower the profit of all other units sold

Game Theory/Economic Cooperation

- **The Prisoner's Dilemma**: demonstrates why two "rational" individuals or firms might not cooperate, even though it is in their best interests to cooperate
- **Dominant Strategy**: When a strategy is the best to follow regardless of the strategies pursued by the other individual

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|---------------|----------------------|--|--|
| | Firm B | | |
| Firm A | | Work Together | Self Interest |
| | Work Together | A:6 B:6 (Both firms profit for working together) | A:1 B:10 (Firm B gets extra profit for working in self interest) |
| | Self Interest | A:10 B:1 (Firm A gets extra profit for working in self interest) | A:3 B:3 (Both firms lose out for not working together) |

- Because both firms want the extra profit, each one tries to work in self interest.
- This will lead to both firms suffering as shown in the table
- Examples of the Prisoners' Dilemma
 - Arms Race
 - Let's say that there are two countries, North Korea and South Korea. If both worked together to disarm weapons, neither country would be in danger. However, because one of the two countries is worried about what the other country would do, that country will work in its self interest. In this case, that country, let's say North Korea, has it in its best interest to work in self interest. If the other country, let's say South Korea, works together, North Korea will be stronger than South Korea. If South Korea chooses to work in self interest, then North Korea will be better off than if it chose to work in self interest (Dominant Strategy)
 - This leads both countries to work in Self Interest
 - Advertising
 - Common Resources
- Sometimes, these two firms will *work together*
 - This can occur after the prisoner's dilemma game has been played many times. If each party knows that the other party is going to work in self interest, the firms can instead agree to work together. To make sure this happens, penalties can be placed in case one firm disengages from the treaty.

Public Policy vs. Oligopolies

- Antitrust Laws

- As with monopolies, the government attempts to prevent oligopolies from happening
- Agreements between oligopolists from an unenforceable contract can be prosecuted as a criminal conspiracy
- Prevents two companies from working together to increase prices
- **Resale Price Maintenance:** a practice that requires retail stores to sell for a price higher than the original, to prevent competition.
 - This can prevent free riders, because retail stores must sell at higher prices
 - A cartel of retailers sells less than group of competitive retailers, so the original firm would lose profit if its retailers were a cartel
 - Although seeming to destroy competition, it can actually protect against negative externalities, like the free rider problem
- **Predatory Pricing:** firms will sometimes purposefully decrease prices so low that the other firm cannot sustain in the market. When the other firm leaves, the first firm will increase its prices again.
 - A company that has been accused of such action is Uber, because it has dropped its prices so low that other services, like the taxi or lyft, cannot compete
- **Tying:** often illegal, tying is where arranges so that in order to buy one product, you may also have to buy another product. This can increase profit for the firm.