Chapter 17: Oligopoly
Principles of Economics, 6th Edition
N. Gregory Mankiw
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1. Introduction:
   a. The key to oligopoly–an industry with few sellers--is the interdependence of the firms.
   b. Because it is much more dependent on the personalities of the players, it is more difficult to model.
   c. To the extent possible, oligopolistic firms will avoid price competition because it can be so easily matched.
   d. There are incentives of collude, which is illegal, but the largest gains will go to the party who cheats first on any agreement so any agreements are very fragile.
   e. Oligopoly is a market structure in which only a few sellers offer similar or identical products. P. 349
   f. Game theory is the study of how people behave in strategic situations. P. 349

2. Markets with Only a Few Sellers
   a. A key feature of oligopoly is the tension between cooperation and self-interest.
   b. A Duopoly Example
      i. A duopoly consists of two sellers.
      ii. **Table 1: The Demand Schedule for Water. P. 351**
   c. Competition, Monopolies, and Cartels
      i. What are the outcomes that we might expect from our duopoly?
      ii. Def: Collusion is an agreement among firms in a market about quantities to produce or prices to charge. P. 351
      iii. Def: Cartel is a group of firms acting in unison. P. 351
         (1) *Cartels seldom work because of the incentives to cheat.*
         (2) In the News: Public Price Fixing, P. 352
d. The Equilibrium for an Oligopoly
      i. Here the assumption is that one seller assumes that the other will keep its output constant.
      ii. Usually results in an outcome between monopoly and competition.
         (1) Def: Nash equilibrium is a situation in which economic actors interacting with one another each choose their best strategy given the strategies that all the other actors have chosen. P. 353
         (2) John Nash's life was presented in the book and movie, A Beautiful Mind, which present different perspectives on him.
         (3) Nash won the Nobel in Economics for his work on game theory.
      iii. When firms in an oligopoly individually choose production to maximize profit, they produce a quantity of output greater than the level produced by monopoly and less than the level produced by competition.
      iv. The oligopoly price is less than the monopoly price but greater than the competitive price (which equals marginal cost).
   d. How the Size of an Oligopoly Affects the Market Outcome
      i. In making decisions, the seller weights two effects:

(1) The output effect as selling more increases profits.
(2) The price effect as selling more reduces the price.
(3) As the number of sellers increases, the output effect dominates the price effect.
ii. As the number of sellers in an oligopoly grows larger, an oligopolistic market looks more and more like a competitive market.
iii. The price approaches marginal cost, and the quantity produced approaches the socially efficient level.

3. The Economics of Cooperation
- *a.* *Game theory is more useful to describe what happened than to predict what will happen because it requires much more information than is commonly available.*
- b. The prisoners' dilemma is a particular "game" between two captured prisoners that illustrates why cooperation is difficult to maintain even when it is mutually beneficial. P. 355
  - i. Def: Dominant strategy is a strategy that is best for a player in a game regardless of the strategies chosen by the other players. P. 356
    - (1) Here it is for both of them to confess.
  - ii. **Figure 1: The Prisoners' Dilemma. P. 356**

		Bonnie's Decision	
		Confess	Remain Silent
Clyde's Decision	Confess	8 each	B-20, C-free
	Remain Silent	B-free, C-20	1 year

- c. Oligopolies as a Prisoners' Dilemma
  - i. **Figure 2: Jack and Jill's Oligopoly Game. P. 357**
  - ii. Based on production levels.
- **d. Case Study: OPEC and the World Oil Market, P. 358**
  - *i.* *Members create and many do not belong.*
- *e.* Other Examples of the Prisoners' Dilemma
  - i. Arms Races
    - *(a)* **Figure 3: An Arms Race Game. P. 359**
  - ii. Advertising can be another example of prisoners' dilemma.
  - iii. Common Resources
    - (a) **Figure 4: A Common Resources Game. P. 360**
- f. The Prisoners' Dilemma and the Welfare of Society
  - i. Sometimes co-operation is good and sometimes it is bad.

- g. Why People Sometimes Cooperate
  - i. Because of repeat games and penalties
- **h. Case Study: The Prisoners' Dilemma Tournament, P. 361**
  - i. The winner was a tit for tat strategy.

1. Public Policy Toward Oligopolies
   - a. Restraint of Trade and the Antitrust Laws
     - i. **Case Study: An Illegal Phone Call, P. 363**
   - b. Controversies over Antitrust Policy
     - i. Resale Price Maintenance
       - (1) *It would normally be irrational for a wholesaler to want a high retail price.*
       - (2) It will encourage non-price competition.
     - ii. Predatory Pricing
       - (1) *To drive others out of market, the predatory has to price below average variable cost.*
       - (2) The predator incurs the highest losses.
       - (3) *To recoup its losses, even if successful in driving out existing firms, a concern is the ability to keep out new entrants.*
     - *iii.* Tying
       - *(1) The book presents an example from the movie industry.*
       - *(2) Another example of price discrimination occurs when a machine is leased and the supplies are priced above marginal cost.*
         - *(a) The user with strong demand pays more than those with weak demand.*
   - c. **Case Study: The Microsoft Case, P. 365**
   - d. **In the News: The Next Big Antitrust Target?, P. 367**

2. Conclusion

3. Summary