Chapter 13

Oligopoly: Firms in Less Competitive Markets

Chapter Outline

13.1 LEARNING OBJECTIVE

13.1 Oligopoly and Barriers to Entry

Learning Objective 1  Show how barriers to entry explain the existence of oligopolies.

Oligopolies are industries with only a few firms. One measure of the extent of competition in an industry is the concentration ratio. Four-firm concentration ratios measure the fraction of an industry’s sales accounted for by its four largest firms. Most economists believe that a four-firm concentration ratio of 40 percent indicates an industry is an oligopoly. The ratios do not include sales in the United States by foreign firms and are calculated for the national market, even though competition in some markets is mainly local. Despite their shortcomings, concentration ratios provide a general idea of the extent of competition in an industry.

A. Barriers to Entry

New firms have difficulty entering an oligopoly because of barriers to entry. A barrier to entry is anything that keeps new firms from entering an industry in which firms are earning economic profits.

The most important barrier to entry is economies of scale. Economies of scale exist when a firm’s long-run average costs fall as it increases output. Another type of entry barrier is ownership of a key input. A third type of barrier to entry is a government-imposed barrier. Firms sometimes employ lobbyists to convince state and national legislators to pass laws favorable to their economic interests. Examples of government-imposed barriers are patents, licensing requirements, and barriers to international trade. A patent gives the exclusive right to a product for a period of 20 years from the date the product was invented. The government also restricts competition through occupational licensing. The justification of these laws is to protect the public from incompetent practitioners, but by restricting the numbers of people who can enter licensed professions the laws also raise prices. Governments also impose barriers by imposing tariffs and quotas on foreign competition.

13.2 LEARNING OBJECTIVE

13.2 Using Game Theory to Analyze Oligopoly

Learning Objective 2  Use game theory to analyze the strategies of oligopolistic firms.
Game theory is the study of how people make decisions in situations in which attaining their goals depends on their interactions with others. In business situations, the rules of the game include not just the laws that a firm must obey but also matters beyond a firm’s control. A business strategy is a set of actions by a firm to achieve a goal, such as maximizing profits. Game theory uses a payoff matrix to help explain the behavior of firms.

A. A Duopoly Game: Price Competition between Two Firms

A payoff matrix is a table that shows the payoffs that each firm earns from every combination of strategies by the firms. One strategy firms may use is to collude. Collusion is an agreement among firms to charge the same price or otherwise not to compete. Collusion is against the law in the United States. A dominant strategy is a strategy that is the best for a firm, no matter what strategies other firms use. A Nash equilibrium is a situation in which each firm chooses the best strategy, given the strategies chosen by other firms.

B. Firm Behavior and the Prisoners’ Dilemma

Sometimes an equilibrium reached between two firms is not satisfactory. Cooperation may result in a better outcome. A cooperative equilibrium is an equilibrium in a game in which players cooperate to increase their mutual payoff. A noncooperative equilibrium is an equilibrium in a game in which players do not cooperate but pursue their own self-interest. A prisoners’ dilemma is a game where pursuing dominant strategies results in noncooperation that leaves everyone worse off.

C. Can Firms Escape the Prisoners’ Dilemma?

The prisoners’ dilemma seems to show that cooperative behavior breaks down, but that is because it assumes the game is played only once. Most business situations are repeated; a repeated game is a game in which players can employ retaliation strategies against those who don’t cooperate. Price leadership is a form of implicit collusion where one firm in an oligopoly announces a price change which is matched by the other firms in the industry.

D. Cartels: The Case of OPEC

In the United States, firms cannot legally meet to agree on what prices to charge and how much to produce. But the example of the Organization of Petroleum Exporting Countries (OPEC), an 11 member cartel, suggests that collusion is not always successful. A cartel is a group of firms that colludes by agreeing to restrict output to increase prices and profits. OPEC has had difficulty sustaining high oil prices. Once the price has been driven up, each OPEC member has an incentive to stop cooperating and to earn higher profits by increasing output beyond its quota.

13.3 Learning Objective

Use sequential games to analyze business strategies
In many business situations, one firm will make a decision and other firms will respond. These situations can be analyzed by using sequential games. Sequential games can be used to analyze strategies designed to deter entry by new firms and bargaining between firms.

A. Deterring Entry

We can analyze a sequential game by using a decision tree, which uses decision nodes. Decision nodes are points when firms must make decisions. Terminal nodes show the results of decisions made by firms.

B. Bargaining

The success many firms have depends on how well they bargain with other firms, such as their suppliers. Managers use decisions trees to provide a systematic way of thinking through the implications of a strategy and of predicting the reactions of rivals.

13.4 The Five Competitive Forces Model

Learning Objective 4  Use the five competitive forces model to analyze competition in an industry.

Michael Porter of the Harvard Business School has developed a model that shows how five competitive forces determine the level of competition in an industry.

A. Competition from Existing Firms

When there are only a few firms in a market, it is easier for them to collude and to charge a price close to the monopoly price. Competition can be in the form of advertising, better service, or longer warranties.

B. The Threat from Potential Entrants

Firms face competition from firms that might enter the market. Managers often take actions aimed at deterring entry.

C. Competition from Substitute Goods or Services

Firms are vulnerable to competitors that introduce a new product that fills a need better than the current product does.

D. The Bargaining Power of Buyers

If buyers have enough bargaining power, they can insist on low prices and higher quality products. Large retailers such as Wal-Mart have required their suppliers to alter their distribution systems.

E. The Bargaining Power of Suppliers

When there are only a few suppliers of a product, the purchasing firm may be forced to pay a high price.