BARRIERS TO ENTRY

Entry or potential entry of new firms into a market can erode the market power of existing firms by increasing the number of substitutes. Therefore, as a general case, a firm can possess a high degree of market power only when strong barriers to the entry of new firms exist. A **strong barrier to entry** exists when it is difficult for new firms to enter a market where existing firms are making an economic profit. Strong barriers to entry hinder the introduction of new, substitute products and protect the profits of firms already in the market.

**strong barrier to entry**

A condition that makes it difficult for new firms to enter a market in which economic profits are being earned.

An example of a strong barrier to entry is a cable TV franchise granted by a city government to only one cable company. This fortunate company is protected from other firms’ competing away any economic profits and is close to being a monopoly. Note that we said “close” to being a monopoly because the cable company has some outside competition even though it is the only cable company in town. Possible substitutes, though certainly not perfect ones, might be regular broadcast television, satellite dishes, radio, books and magazines, rental movies, and so on. Thus the firm would be a monopoly if the cable TV market is the relevant market but not a monopoly if the entertainment market is the relevant market. We should note that in cases in which a government body protects a firm from entry by other firms into a market, it typically regulates the protected firm. Weak barriers to entry generally exist in most retail markets. Retail stores typically do not have much market power because entry by other firms into the market is easy and there are good substitutes for the products of firms selling in the market. The products are not perfect substitutes, however, because other firms cannot sell identical products in the identical location. Nonetheless, firms can produce close substitutes. Therefore, no retail firm has much market power because it cannot raise its price much above its rivals’ without a substantial loss of sales. In this chapter we will focus on structural entry barriers, which are barriers arising from cost and/or demand conditions in the market. Later in Chapter 13 we will examine some strategic entry barriers, which are barriers created by altering the way potential rivals view the profitability of entering.

**Barriers Created by Government**

Possibly the most effective and durable kind of entry barrier is created when a government agency or commission limits the number of firms that can legally operate in a page 465particular market. Typically this is accomplished by requiring firms to hold government-issued licenses or permits in order to legally supply goods or services in a specific market. Then, by strictly limiting the number of these licenses and permits, government can restrict supply in the protected market and effectively keep prices artificially high. The reasons government agencies give for restricting entry into markets frequently emphasize the need for government to promote consumer safety, quality of the environment, working conditions for labor, or employment of efficient production processes and technology. Some examples of barriers created by government include the Federal Communications Commission (FCC) granting operating licenses to radio and television stations, and local governments granting exclusive franchises for various types of utility services such as electricity, water, cable television, and local telephone service. When government creates a monopoly franchise, such as a public utility, the monopolist is nearly always subject to price regulation by a government agency. In other examples of licensing and permitting—such as barbershops, nail salons, chiropractors, home builders, and taxicabs—a large number of firms will be granted licenses, and government then relies on competition among rival licensees to keep prices “fair” rather than directly regulating prices. As you would expect, when government entry barriers create a high degree of market power, the resulting future stream of protected profit will drive up the price that new firms would be willing to pay for the right to operate in such a market. Illustration 12.2 examines the regulation of taxicabs in New York City to show you how the value of a government license to operate can be undermined by changes in rules that allow new competitors to enter a protected market. Another potentially effective government barrier to competition lies in the patent laws. These laws make it possible for a person to apply for and obtain the exclusive right to manufacture a specific type of product (a product patent) or to manufacture a good or service by means of a specified process that provides an absolute cost advantage (a process patent). Holding either type of patent, however, does not necessarily create substantial or durable market power because patents do not prevent rival firms from developing closely related substitute goods in the case of product patents and developing virtually identical production processes in the case of process patents. Many years ago International Business Machines (IBM) possessed the exclusive right to produce its patented personal computer. IBM PCs were the de facto standard for buyers of personal computers, making IBM the dominant PC manufacturer (but not a pure monopolist). The economic value of IBM’s patented PC architecture was rapidly eroded by rival manufacturers of so-called “IBM clones” that employed superficially different circuits that circumvented patent laws and yet operated all software applications just like an IBM PC. As the PC market became saturated with IBM-compatible machines from dozens of rival manufacturers, IBM’s profits from PCs declined and eventually IBM quit making personal computers. The patented architecture did not create a durable monopoly position for IBM, but the patents held by IBM certainly slowed the entry of rivals and also gave some buyers a reason to pay the somewhat higher price that IBM could charge.

**Economies of Scale**

Economies of scale can create a barrier to entry when the long-run average cost curve of a firm decreases over a wide range of output, relative to the demand for the product. Consequently, a new firm that wishes to enter this type of market must enter on a large scale to keep its costs as low as the large-scale firm or firms already operating in the market. The necessity of entering on a large scale is usually not a barrier to entry by itself, but when it is coupled with relatively small product demand, a strong barrier to entry can be created. Consider an industry where four existing firms each produce about 200,000 units annually to take advantage of substantial economies of scale. At the current price of the product, annual sales are running at about 800,000 units per year. While many entrepreneurs could obtain the financial backing to enter this industry with a large-scale plant capable of producing 200,000 units, there is no room in the industry for a fifth large-scale producer without a significant decline in the price of the product. Even though a fifth firm could enter the industry producing perhaps 50,000 units annually, the per-unit production costs would be much higher than competitors’ costs because of the substantial economies of scale. There just isn’t room for a new firm to enter this industry on a scale big enough to enjoy costs as low as those of its rivals. In such situations, economies of scale create a barrier to entry.

**Essential Input Barriers**

An important source of market power, primarily one of historical importance, is a firm’s ability to gain control of supplies of essential raw materials. If one firm (or perhaps a few firms) controls all the known supply of a necessary and essential ingredient for a particular product, the firm (or firms) can refuse to sell that ingredient to other firms at a price low enough for them to compete. When no others can produce the product, monopoly results. For many years the Aluminum Company of America (Alcoa) owned almost every source of bauxite, a necessary ingredient in the production of aluminum, in North America. The control of resource supply, coupled with certain patent rights, provided Alcoa with an absolute monopoly in aluminum production. It page 468was only after World War II that the federal courts effectively broke Alcoa’s monopoly in the aluminum industry. There have been other such historical examples, but at the present time there are few cases of firms with considerable market power because of exclusive control of a raw material. Now try Technical Problem 2.

**Brand Loyalties**

On the demand side, older firms may have, over time, built up the allegiance of their customers. New firms can find this loyalty difficult to overcome. For example, no one knows what the service or repair policy of a new firm may be. The preference of buyers can also be influenced by a long successful advertising campaign; established brands, for instance, allow customers recourse if the product should be defective or fall short of its advertised promises. Although technical economies of scale may be insignificant, new firms might have considerable difficulty establishing a market organization and overcoming buyer preference for the products of older firms. A classic example of how loyalty preserves monopoly power can be found in the concentrated-lemon-juice market. ReaLemon lemon juice successfully developed such strong brand loyalties among consumers that rival brands evidently could not survive in the market. The situation was so serious that the courts forced ReaLemon to license its name to would-be competitors. The role of advertising as a barrier to entry has long been a source of controversy. Some argue that advertising acts as a barrier to entry by strengthening buyer preferences for the products of established firms. On the other hand, consider the great difficulty of entering an established industry without access to advertising. A good way for an entrenched monopoly to discourage entry would be to get the government to prohibit advertising. The reputation of the old firm would enable it to continue its dominance. A new firm would have difficulty informing the public about the availability of a new product unless it was able to advertise. Thus advertising may be a way for a new firm to overcome the advantages of established firms. The effect of advertising on entry remains a point of disagreement among economists.

**Consumer Lock-In**

For some products or services, consumers may find it costly to switch to another brand—either an existing rival’s brand or a new entrant’s brand of product or service. Some of the kinds of switching costs incurred by consumers include things such as installation or initiation fees, search costs to learn about availability and prices of substitutes, and costs of learning how to use a new or different product or service. When high switching costs make previous consumption decisions so costly to alter that rivals do not believe they can induce many, if any, consumers to change their consumption decisions, then a situation known as consumer lock-in results. Consumer lock-in, of course, discourages new firms from entering a profitable market, and thus protects incumbent firms from new competition. High switching costs may arise naturally, or firms may strategically design products and services to have high switching costs to create a consumer lock-in barrier to entry.

switching costs Costs consumers incur when they switch to new or different products or services.

consumer lock-in High switching costs make previous consumption decisions very costly to change.

While consumer lock-in can certainly create a strong barrier to entry, high monopoly profits nonetheless create a strong incentive for potential entrants to find ways to overcome a lock-in barrier. For example, when Microsoft decided to enter the market for household financial software with its Money program, Quicken had already established a virtual monopoly, and satisfied consumers seemed unwilling to incur the costs of switching from Quicken to Money. Microsoft, however, overcame this consumer lock-in barrier by designing its Money program to accept financial data files stored in Quicken’s proprietary format so that switchers would not need to reenter their financial data. Microsoft also employed similar commands for its software and provided specialized help menus for users making the switch from Quicken. Thus, by lowering the switching costs facing consumers, Microsoft overcame a consumer lock-in barrier to entry and successfully ended Quicken’s monopoly.

**Network Externalities (or Network Effects)**

For most goods, the utility you get from consuming the good does not depend on how many other people consume the good. The value or benefit you receive is the same whether the good is purchased by 10 other people or 10 million other people. In contrast to this “normal” situation, however, there are a few special goods and services for which your utility varies directly with the total number of consumers of the good. In other words, a larger number of consumers buying a product will enhance the value you get from that product.2 Such goods are characterized by network externalities (network effects). Some examples of goods or services believed to experience network effects include cellular phones, Internet access services, computer operating systems (such as Microsoft Windows or Apple OS X), e-mail, job search or dating service companies, and online auction websites (such as eBay). network externalities (network effects) When the benefit or utility a consumer derives from consuming a good depends positively on the number of other consumers who use the good. There are two possible reasons why network externalities arise. First, network externalities are likely to characterize products and services when the usefulness of the product requires connecting consumers. For example, your utility from having a cell phone increases as the number of other people who have cell phones in the cellular network increases. Most people carry a cell phone to make and receive calls to and from many people, so the value of having a cell phone grows with the size of the network of people you can reach. An online dating service will be more valuable to single individuals looking for a companion if the dating service has a large membership. A large electricity transmission grid may be more valuable to individual homeowners than a small grid because a large grid will be more quickly restored to operation should it fail or be knocked out by a natural disaster of any kind (e.g., hurricane, wild fire, flood, etc.) Second, network externalities arise if complementary goods are important to users of the network good. For example, For example, page 470software applications are important complements to computer operating systems. As the number of Apple computer users increases, software companies will write more software for Apple computers, making ownership of Apple computers more satisfying, and in turn increasing demand for Apple computers. Repair service or troubleshooting can be extremely valuable for many products. Consumers may believe that manufacturers will provide better service or phone support when there are many users of a good. A computer “bug” in Microsoft Word is likely to get fixed much sooner than the same bug would be fixed in Corel’s WordPerfect because the network of users is larger. And, even if Microsoft is slow to fix bugs, a large network of bloggers who use MS Word can offer free “work-arounds” on the Internet. Our primary interest in network externalities in this textbook concerns barriers to entry. Network effects can make it difficult for new firms to enter markets where incumbent firms have established a large base or network of buyers. Because the value of the good depends on the number of users, it will be difficult to enter and compete as a small-size firm. Buyers want to be part of the large network of consumers held by the established incumbent. As you may recall from our discussion in Chapter 1 (and also in Illustration 1.4) of common mistakes managers make, we strongly warned against making decisions for the purpose of gaining market share. As a general rule, maximizing market share is not equivalent to maximizing profit and the value of the firm. However, we also pointed out that network externalities can present an exception to this rule. In a network industry, a price cut by Firm A, which causes a number of buyers to switch from rival firms to Firm A, can set in motion a self-reinforcing or snowball process. The initial gain in Firm A’s market share adds to its network size, causing even more buyers to switch from rivals, in turn further increasing Firm A’s network size and so on until the market tips all the way to Firm A. In this scenario, the profit-maximizing price is lower than it would be if there were no network externalities. Gaining market share can lead to higher profit under these circumstances. It follows that when network externalities are significant, an incumbent firm possessing a large number of consumers may enjoy a formidable barrier to entry. Buyers value the incumbent firm’s large network and will be reluctant to switch to an entering firm’s product for which the network of other consumers is too small to be attractive.

**Sunk Costs as a General Barrier to Entry**

The last structural barrier to entry we wish to discuss—sunk costs—can be viewed as a general type of entry barrier that can include the other entry barriers we have discussed above. You will find it helpful to think of managers as making two decisions. The first decision is whether to enter the market, and the second decision, if the manager chooses to enter, is how to set price and output to maximize profit in the market after entering. When a firm must incur “setup costs” to enter a market, these costs are sunk costs the firm must pay to enter and must be treated as the costs of entry. In other words, the costs of entering a market are the sunk costs incurred by making the decision to enter a market. These entry costs, because they are sunk costs, are not costs of doing business once a firm is an incumbent page 471firm—that is, after a firm has entered. All sunk costs of entry should be ignored because they do not affect post-entry profit. However, entry costs can serve as a barrier to entry if they are so high that the manager cannot expect to earn enough future profit in the market to make entry worthwhile. A clarifying example will be helpful here. Consider a market in which the incumbent firms are making $1,200 of profit each month in long-run equilibrium. You would like to enter this market because, after you enter and a new long-run equilibrium is established, your firm and the other firms in the market will each earn $1,000 of monthly profit. When there are no sunk costs of entry, you would certainly want to enter this profitable market because you can always exit the market later should market conditions sour causing monthly profit to become negative. Alternatively, suppose you must incur a lump sum cost of $50,000 to enter and this cost is sunk; that is, you cannot recover any of the $50,000 if you later decide to exit the market. What should you do now that entry involves a sunk cost? Let’s keep things simple and ignore time value of money by assuming your discount rate is zero. You should choose to enter this market only if you expect that operating in this market will generate at least $50,000 of future profit. If you are reasonably sure that you can earn $1,000 of profit for at least 50 months, then you would want to enter this market.3 Alternatively, if you predict that other firms will enter the market and profit will fall to zero after only 12 months, then you will not want to enter this market. As you can see in this simple example, the higher the sunk costs of entry, the greater market profitability must be in order to make entry worthwhile. Now you can see why high sunk costs relative to the profitability of entry can serve as a barrier to entry. As it turns out, all of the other entry barriers discussed previously will require an entering firm to incur some amount of sunk costs to enter the market. Economies of scale can create a barrier to entry if sunk set-up costs must be incurred in order to acquire a larger plant or production facility. For example, you may need to pay a sunk cost for an environmental impact study before you can expand your plant. In general, when patents, licenses, advertising, switching costs, network externalities, or restricted access to essential inputs exist, a firm that wishes to enter must frequently incur sunk costs to overcome these barriers. If the costs of overcoming one or more of these barriers are sunk and large relative to the profitability of entering the market, then these sunk costs will serve as a barrier to entry. page 472 Despite the existence of barriers to entry, firms can and do lose their positions of extensive market power. Even quite strong barriers to entry can be overcome. A monopolist can become complacent in its protected position and allow inefficiencies to enter the production process. This raises the cost, and hence the price, and allows new, more efficient firms to enter the market. Some potential entrants are ingenious enough to find ways to lower cost, or (as noted earlier) get around patent protection, or overcome brand loyalty to the established firm. Thus barriers to entry cannot completely protect the established firm with great market power. Despite the existence of barriers to entry, firms can and do lose their positions of extensive market power. Even quite strong barriers to entry can be overcome. A monopolist can become complacent in its protected position and allow inefficiencies to enter the production process. This raises the cost, and hence the price, and allows new, more efficient firms to enter the market. Some potential entrants are ingenious enough to find ways to lower cost, or (as noted earlier) get around patent protection, or overcome brand loyalty to the established firm. Thus barriers to entry cannot completely protect the established firm with great market power.

Reference

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