

Market structures

[Finance](#), [Market](#)



When economists analyze the production decisions of a firm, they take into account the structure of the market in which the firm is operating. The structure of the market is determined by four different market characteristics: the number and size of the firms in the market, the ease with which firms may enter and exit the market, the degree to which firms' products are differentiated, and the amount of information available to both buyers and sellers regarding prices, product characteristics, and production techniques (Duffy, 1993.)

Economists distinguish among four different market structures, which they refer to as perfect competition, monopoly, monopolistic competition, and oligopoly. This paper will discuss the following market structures characteristics, how is the price determined, how is the output determined, if there are any barriers and what role does each market structure play in the economy. Based on the differing outcomes of different market structures, economists consider some market structures more desirable, from the point of view of the society, than others.

The difficulty or ease with which new firms can enter the market for a product is also a characteristic of market structures. New firms can enter market structures classified as perfect competition or monopolistic competition relatively easily. In these cases, barriers to entry are considered low, as only a small investment may be required to enter the market. In oligopoly, barriers to entry is considered very high—huge amounts of investment, determined by the very nature of the product and the production process, are needed to enter these markets. Once again, monopoly constitutes the extreme case where the entry of new firms is

blocked, usually by law. If for whatever reasons, new firms are allowed to enter a monopolistic market structure, it can no longer be termed a monopoly.

Perfect competition is an idealized version of market structure that provides a foundation for understanding how markets work in a capitalist economy. The other market structures can also be understood better when perfect competition is used as a standard of reference. Even so, perfect competition is not ordinarily well understood by the general public. For example, when business people speak of intense competition in the market for a product, they are, in all likelihood, referring to rival suppliers, about whom they have quite a bit of information. However, when economists refer to perfect competition, they are particularly referring to the impersonal nature of this market structure. The impersonality of the market organization is due to the existence of a large number of suppliers of the product—there are so many suppliers in the industry that no firm views another supplier as a competitor. Thus, the competition under perfect competition is impersonal.

The extent to which an individual firm exercises control over the price of the product it sells is another important characteristic of a market structure. Under perfect competition, an individual firm has no control over the price of the product it sells. A firm under monopolistic competition or oligopoly has some control over the price of the product it sells. Finally, a monopoly firm is deemed to have considerable control over the price of its product.

The study of the idealized version of perfect competition leads to some important conclusions regarding solutions to key economic problems, such

as quantity of the relevant product produced, price charged, the mechanism of adjustment in the industry.

In addition, the total output produced under perfect competition is larger than, for example, under monopoly. To understand this, we should look at the mechanics of maximizing profit, the guiding force behind a supplier's output decision. In order to maximize profits, a supplier has to look at cost and revenue. Usually, it is assumed that a supplier's marginal cost (the cost of producing an additional unit of the product under consideration) rises ultimately.

The producer then, in making the output decision, must compare the cost of producing an additional unit of the product with the revenue the sale of that additional unit (called the marginal revenue) brings to the firm. So long as the marginal revenue from the sale exceeds the marginal cost, there is a gain from producing that additional unit—the unit adds more to revenue (proceeds) than to costs. The supplier will continue producing while the process is profitable (i. e., it increases profits or reduces loss).

The firm will stop production where marginal revenue equals marginal cost—this output level maximizes profits (or minimizes loss). In the case of a perfectly competitive firm, the market price for the product is also the marginal revenue. Since the firm is a price taker and supplies an insignificant portion of the total market supply of the product, it can sell as many units of the product as it desires at the going price. We will later show that this is not the case with a monopolist, for example. A monopolist stops production of

the product before reaching the point where marginal cost of the product equals the market price of the product.

Perfect competition is considered desirable for society for at least two reasons. First, the price charged to individual's equals the marginal cost of production to each firm. In other words, one can say sellers charge buyers a reasonable or fair price. Second, in general, output produced under a perfectly competitive market structure is larger than other market organizations. Thus, perfect competition becomes desirable also for the amount of the product supplied to consumers as a whole.

These are two reasons why a capitalist society adores the virtues of perfect competition. In fact, to maintain a reasonable amount of competition in a market is generally considered a goal of government regulatory policies. No single firm dominates the market under perfect competition; this parallels the status of an individual citizen in a democracy, a widely practiced form of government in capitalist countries.

As pointed out above, industries in the real world rarely satisfy the stringent conditions necessary to qualify as perfectly competitive market structures. The world in which we live is invariably characterized by competition of lesser degrees than stipulated by perfect competition. Many industries that we often deal with have market structures that are monopolistic competition or oligopoly. Apparel retail stores (with many stores and differentiated products) provide an example of monopolistic competition.

As in the case of perfect competition, monopolistic competition is characterized by the existence of many sellers. Usually, if an industry has 50 or more firms (producing products that are close substitutes of each other), it is said to have a large number of firms. However, the number of firms must be large enough that each firm in the industry can expect its actions go unnoticed by rival firms.

In addition to the existence of a large number of firms and product differentiation, relative ease of entry into the industry is considered another important requirement of a monopolistically competitive market organization. Also, there should be no collusion among firms in the industry, like price fixing or agreements regarding the market shares of individual companies. With the large number of firms that monopolistic competition requires, collusion is generally difficult, though not impossible.

The above-mentioned characteristics of monopolistic competition basically yield a market form that is very competitive, but probably not to the extent of perfect competition.

As in the case of perfect competition, a firm under monopolistic competition decides about the quantity of the product produced on the basis of the profit maximization principle—it produces the quantity that maximizes the firm's profit. Also, conditions of profit maximization remain the same—the firm stops production where marginal revenue equals marginal cost of production.

But unlike perfect competition, a firm under monopolistic competition has some control over the price it charges, as the firm differentiates its products from those of others. However, this price making power of a monopolistically competitive firm is rather small, since there are a large number of other firms in the industry with somewhat similar products. Remember that a perfectly competitive firm has no price making power—each firm is a price taker, as it produces a product identical to those produced by a large number of other firms in the industry.

An important consequence of the price making power of a monopolistically competitive firm is that when such a firm reduces price, it can attract customers buying other "brands" of the product. The opposite is also true when the firm increases the price it charges for its product. Because of this, price charged for a product is different from the marginal revenue for the product (marginal revenue refers to the increase in total revenue as a result of selling one more unit of the product under consideration). To understand this, consider, for example, that a firm reduces the price for its product. The firm must now sell all units at this lower price. Because the lower price applies to all units sold, not just the last or the marginal unit, price for the product is higher than the marginal revenue at each level of sale. It should be noted that as there are a large number of firms under monopolistic competition, individual firms in the industry are not appreciably affected by a particular firm's behavior.

As mentioned above, a monopolistically competitive firm stops production where marginal revenue equals marginal cost of production—the output

level that maximizes its profits (often called the equilibrium output for the firm).

Aforementioned profit maximizing behavior of a monopolistically competitive firm implies that now the price associated with the product (at the equilibrium or the profit maximizing output) is higher than marginal cost (which equals marginal revenue). Thus, the production under monopolistic competition does not take place to the point where price equals marginal cost of production. Remember that, with increased production, price charged (which is higher than marginal revenue at every level of output) is successively falling while the marginal cost of production is rising.

Therefore, if a monopolistically competitive firm were to stop production where price is equal to marginal cost (a condition met under a perfectly competitive market structure), output produced would be greater than when it stops production where marginal revenue equals marginal cost (its profit maximizing output). The net result of the profit maximizing decisions of monopolistically competitive firms is that price charged under monopolistic competition is higher than under perfect competition. In addition, quantity of the commodity produced under monopolistic competition is simultaneously lower. Thus, both on the basis of price charged and output produced, monopolistic competition is less socially desirable than perfect competition.

Oligopoly is a fairly common market organization. In the United States, both the steel and auto industries (with three or so large firms) provide good examples of oligopolistic market structures.

An important characteristic of an oligopolistic market structure is the interdependence of firms in the industry. The interdependence, actual or perceived, arises from the small number of firms in the industry. However, unlike monopolistic competition, if an oligopolistic firm changes its price or output, it has perceptible effects on the sales and profits of its competitors in the industry. Thus, an oligopolistic firm always considers the reactions of its rivals in formulating its pricing or output decisions.

There are huge, though not insurmountable, barriers to entering an oligopolistic market. These barriers can involve large financial requirements, availability of raw materials, access to the relevant technology, or simply patent rights of the firms currently in the industry. Several industries in the United States provide good examples of oligopolistic market structures with obvious barriers to entry.

The U. S. auto industry provides an example of a market where financial barriers to entry exist. In order to efficiently operate an automobile plant, one needs upward of half a billion dollars of initial investment. The steel industry in the United States, on the other hand, provides an example of an oligopoly where barriers to entry have been created by the ownership of raw materials needed for producing the product. In this industry, a few huge firms own most of the available iron ore, a necessary raw material for steel production.

An oligopolistic industry is also typically characterized by economies of scale. Economies of scale in production imply that as the level of production rises the cost per unit of product falls for the use of any plant (generally, up to a

point). Thus, economies of scale lead to an obvious advantage for a large producer. Once again, the automobile industry provides an example of a market structure where firms experience economies of scale. It should be noted that there may exist economies of scale in promotion just as there exist economies of scale in production. In the automobile industry, the promotion cost per unit of product falls as sales increase since promotion costs rise less than proportionately to sales.

There is no single theoretical framework that provides answers to output and pricing decisions under an oligopolistic market structure. Analyses exist only for special sets of circumstances. For example, if an oligopolistic firm cuts its price, it is met with price reductions by competing firms; however, if it raises the price of its product, rivals do not match the price increase. For this reason, prices may remain stable in an oligopolistic industry for a prolonged period of time.

It is hard to make concrete statements regarding price charged and quantity produced under oligopoly. However, from the point of view of the society, one can say that an oligopolistic market structure provides a fair degree of competition in the market place if the oligopolistic in the market do not collude. Collusion occurs if firms in the industry agree to set price and/or quantity. In the United States, there are laws that make collusion illegal.

Monopoly can be considered the opposite of perfect competition. It is a market form in which there is only one seller. While at first glance a monopoly may appear to be a rare market structure, it is not so. Several

industries in the United State have monopolies. Some utility companies provide examples of a monopolist.

There are many factors that give rise to a monopoly. For example, in the United States the inventor of an item has the exclusive right to produce that product for 17 years. Thus, a monopoly can exist in an industry because its inventor obtained a patent for a product. The United Shoe Machinery Company held such a monopoly in certain important shoe making equipment until 1954, when the monopoly was broken under the antitrust laws. A monopoly can also arise if a company owns the entire supply of a necessary material needed to produce a product.

The Aluminum Company of America exercised such power until 1945, when its monopoly was also broken under provisions of the antitrust laws. A monopoly can be legally created by a government agency when it sells a market franchise a particular product or service. Often a monopoly so established is also regulated by the appropriate government agency. Provision of local telephone service in the United States provides an example of such a monopoly.

Finally, a monopoly may arise due to declining cost of production for a particular product. In such a case the average cost of production falls and reaches a minimum at an output level that is sufficient to satisfy the entire market. In such an industry, rival firms will be eliminated until only the strongest firm (now the monopolist) is left in the market. This is often called a case of natural monopoly. A good example of a natural monopoly is the electricity industry. The electric power industry reaps benefits of economies

of scale and yields decreasing average cost. The government usually regulates a natural monopoly.

Generally speaking, price and output decisions of a monopolist are similar to those of a monopolistically competitive firm, with the major distinction of a large number of firms under monopolistic competition and only one firm under monopoly. Thus, one may technically say that there is no competition under monopoly. This is not strictly true, as even a monopolist is threatened by indirect and potential competition.

Like monopolistic competition, a monopolistic firm also maximizes its profits by producing up to the point where marginal revenue equals marginal cost. As the monopolist is a price maker and can increase the amount of sales by lowering the price, a monopolist does not lure consumers away from rivals, rather he or she induces them to buy more. Nevertheless, at any output level, the price charged by a monopolist is higher than the marginal revenue. As a result, a monopolist also does not produce to the point where price equals marginal cost (a condition met under a perfectly competitive market structure).

An industry characterized by a monopolistic market structure produces less output and charges higher prices than under perfect competition (and presumably under monopolistic competition). Thus, on the basis of price charged and quantity produced, a monopoly is less desirable socially. However, a natural monopoly is generally considered desirable if the monopolist's price behavior can be regulated.

Industry in the real world is rarely characterized by perfect competition. In certain circumstances, society has to tolerate monopoly (say, the case of a natural monopoly or a monopoly due to patent rights). However, the idea of competition is very deeply ingrained in society. So long as there is a reasonable degree of competition (as in the case of monopolistic competition or oligopoly), society feels reasonably secure with respect to the working of its markets.