Saarth
E-Journal of Research

ISSN NO: 2395-339X

Monopoly

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A monopoly exists when a specific person or enterprise is the only supplier of a particular commodity (this contrasts with a monopsony which relates to a single entity's control of a market to purchase a good or service, and with oligopoly which consists of a few entities dominating an industry).[2] Monopolies are thus characterized by a lack of economic competition to produce the good or service, a lack of viable substitute goods, and the existence of a high monopoly price well above the firm's marginal cost that leads to a high monopoly profit.[3] The verb "monopolise" refers to the process by which a company gains the ability to raise prices or exclude competitors. In economics, a monopoly is a single seller. In law, a monopoly is a business entity that has significant market power, that is, the power to charge overly high prices.[4] Although monopolies may be big businesses, size is not a characteristic of a monopoly. A small business may still have the power to raise prices in a small industry (or market).[4]

A monopoly is distinguished from a monopsony, in which there is only one buyer of a product or service; a monopoly may also have monopsony control of a sector of a market. Likewise, a monopoly should be distinguished from a cartel (a form of oligopoly), in which several providers act together to coordinate services, prices or sale of goods. Monopolies, monopsonies and oligopolies are all situations such that one or a few of the entities have market power and therefore interact with their customers (monopoly), suppliers (monopsony) and the other companies (oligopoly) in ways that leave market interactions distorted.

Monopolies can be established by a government, form naturally, or form by integration.

In many jurisdictions, competition laws restrict monopolies. Holding a dominant position or a monopoly of a market is often not illegal in itself, however certain categories of behavior can be considered abusive and therefore incur legal sanctions when business is dominant. A government-granted monopoly or legal monopoly, by contrast, is sanctioned by the

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E-Journal of Research
ISSN NO: 2395-339X

state, often to provide an incentive to invest in a risky venture or enrich a domestic interest group. Patents, copyright, and trademarks are sometimes used as examples of government granted monopolies. The government may also reserve the venture for itself, thus forming a government monopoly.

Market structures

In economics, the idea of monopoly will be important for the study of management structures, which directly concerns normative aspects of economic competition, and provides the basis for topics such as industrial organization and economics of regulation. There are four basic types of market structures by traditional economic analysis: perfect competition, monopolistic competition, oligopoly and monopoly. A monopoly is a structure in which a single supplier produces and sells a given product. If there is a single seller in a certain industry and there are not any close substitutes for the product, then the market structure is that of a "pure monopoly". Sometimes, there are many sellers in an industry and/or there exist many close substitutes for the goods being produced, but nevertheless companies retain some market power. This is termed monopolistic competition, whereas in oligopoly the companies interact strategically.

In general, the main results from this theory compare price-fixing methods across market structures, analyze the effect of a certain structure on welfare, and vary technological/demand assumptions in order to assess the consequences for an abstract model of society. Most economic textbooks follow the practice of carefully explaining the perfect competition model, mainly because of its usefulness to understand "departures" from it (the so-called imperfect competition models).

The boundaries of what constitutes a market and what doesn't are relevant distinctions to make in economic analysis. In a general equilibrium context, a good is a specific concept entangling geographical and time-related characteristics (grapes sold during October 2009 in Moscow is a different good from grapes sold during October 2009 in New York). Most studies of market structure relax a little their definition of a good, allowing for more flexibility at the identification of substitute-goods. Therefore, one can find an economic analysis of the market of

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E-Journal of Research
ISSN NO: 2395-339X

grapes in Russia, for example, which is not a market in the strict sense of general equilibrium theory monopoly.

Characteristics

Profit Maximizer: Maximizes profits.

Price Maker: Decides the price of the good or product to be sold, but does so by determining the quantity in order to demand the price desired by the firm.

High Barriers: Other sellers are unable to enter the market of the monopoly.

Single seller: In a monopoly, there is one seller of the good that produces all the output.[5] Therefore, the whole market is being served by a single company, and for practical purposes, the company is the same as the industry.

Price Discrimination: A monopolist can change the price and quality of the product. He or she sells higher quantities, charging a lower price for the product, in a very elastic market and sells lower quantities, charging a higher price, in a less elastic market.

Sources of monopoly power

Monopolies derive their market power from barriers to entry – circumstances that prevent or greatly impede a potential competitor's ability to compete in a market. There are three major types of barriers to entry: economic, legal and deliberate.

Economic barriers: Economic barriers include economies of scale, capital requirements, cost advantages and technological superiority.

Economies of scale: Monopolies are characterised by decreasing costs for a relatively large range of production.[8] Decreasing costs coupled with large initial costs give monopolies an advantage over would-be competitors. Monopolies are often in a position to reduce prices below a new entrant's operating costs and thereby prevent them from continuing to compete.[8] Furthermore, the size of the industry relative to the minimum efficient scale may limit the number of companies that can effectively compete within the industry. If for example the industry is large enough to support one company of minimum efficient scale then

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E-Journal of Research
ISSN NO: 2395-339X

other companies entering the industry will operate at a size that is less than MES, meaning that these companies cannot produce at an average cost that is competitive with the dominant company. Finally, if long-term average cost is constantly decreasing, the least cost method to provide a good or service is by a single company.

Capital requirements: Production processes that require large investments of capital, or large research and development costs or substantial sunk costs limit the number of companies in an industry. Large fixed costs also make it difficult for a small company to enter an industry and expand.

Technological superiority: A monopoly may be better able to acquire, integrate and use the best possible technology in producing its goods while entrants do not have the size or finances to use the best available technology. One large company can sometimes produce goods cheaper than several small companies.

No substitute goods: A monopoly sells a good for which there is no close substitute. The absence of substitutes makes the demand for the good relatively inelastic enabling monopolies to extract positive profits.

Control of natural resources: A prime source of monopoly power is the control of resources that are critical to the production of a final good.

Network externalities: The use of a product by a person can affect the value of that product to other people. This is the network effect. There is a direct relationship between the proportion of people using a product and the demand for that product. In other words the more people who are using a product the greater the probability of any individual starting to use the product. This effect accounts for fads, fashion trends, social networks etc. It also can play a crucial role in the development or acquisition of market power. The most famous current example is the market dominance of the Microsoft office suite and operating system in personal computers.

Legal barriers: Legal rights can provide opportunity to monopolise the market of a good. Intellectual property rights, including patents and copyrights, give a monopolist exclusive control of the production and selling of certain goods. Property rights may give a company exclusive control of the materials necessary to produce a good.

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E-Journal of Research
ISSN NO: 2395-339X

Deliberate actions: A company wanting to monopolise a market may engage in various types of deliberate action to exclude competitors or eliminate competition. Such actions include collusion, lobbying governmental authorities, and force (see anti-competitive practices).

In addition to barriers to entry and competition, barriers to exit may be a source of market power. Barriers to exit are market conditions that make it difficult or expensive for a company to end its involvement with a market. Great liquidation costs are a primary barrier for exiting. Market exit and shutdown are separate events. The decision whether to shut down or operate is not affected by exit barriers. A company will shut down if price falls below minimum average variable costs.

Monopoly versus competitive markets

While monopoly and perfect competition mark the extremes of market structures[14] there is some similarity. The cost functions are the same.[15] Both monopolies and perfectly competitive (PC) companies minimize cost and maximize profit. The shutdown decisions are the same. Both are assumed to have perfectly competitive factors markets. There are distinctions, some of the more important of which are as follows:

Marginal revenue and price: In a perfectly competitive market, price equals marginal cost. In a monopolistic market, however, price is set above marginal cost.

Product differentiation: There is zero product differentiation in a perfectly competitive market. Every product is perfectly homogeneous and a perfect substitute for any other. With a monopoly, there is great to absolute product differentiation in the sense that there is no available substitute for a monopolized good. The monopolist is the sole supplier of the good in question. A customer either buys from the monopolizing entity on its terms or does without.

Number of competitors: PC markets are populated by an infinite number of buyers and sellers. Monopoly involves a single seller.

Barriers to Entry: Barriers to entry are factors and circumstances that prevent entry into market by would-be competitors and limit new companies from operating and expanding within the market. PC markets have free entry and exit. There are no barriers to entry, or exit competition. Monopolies have relatively high barriers to entry. The

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E-Journal of Research
ISSN NO: 2395-339X

barriers must be strong enough to prevent or discourage any potential competitor from entering the market.

Elasticity of Demand: The price elasticity of demand is the percentage change of demand caused by a one percent change of relative price. A successful monopoly would have a relatively inelastic demand curve. A low coefficient of elasticity is indicative of effective barriers to entry. A PC company has a perfectly elastic demand curve. The coefficient of elasticity for a perfectly competitive demand curve is infinite.

Excess Profits: Excess or positive profits are profit more than the normal expected return on investment. A PC company can make excess profits in the short term but excess profits attract competitors, which can enter the market freely and decrease prices, eventually reducing excess profits to zero.[18] A monopoly can preserve excess profits because barriers to entry prevent competitors from entering the market.[19]

Profit Maximization: A PC company maximizes profits by producing such that price equals marginal costs. A monopoly maximises profits by producing where marginal revenue equals marginal costs.[20] The rules are not equivalent. The demand curve for a PC company is perfectly elastic – flat. The demand curve is identical to the average revenue curve and the price line. Since the average revenue curve is constant the marginal revenue curve is also constant and equals the demand curve, Average revenue is the same as price (AR = TR/Q = P x Q/Q = P). Thus the price line is also identical to the demand curve. In sum, D = AR = MR = P.

P-Max quantity, price and profit: If a monopolist obtains control of a formerly perfectly competitive industry, the monopolist would increase prices, reduce production, and realise positive economic profits.

Supply Curve: in a perfectly competitive market there is a well defined supply function with a one to one relationship between price and quantity supplied. In a monopolistic market no such supply relationship exists. A monopolist cannot trace a short term supply curve because for a given price there is not a unique quantity supplied. As Pindyck and Rubenfeld note, a change in demand "can lead to changes in prices with no change in output, changes in output with no change in price or both".[23] Monopolies produce where marginal revenue equals marginal costs. For a specific demand curve the supply "curve" would be the price/quantity

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ISSN NO: 2395-339X

combination at the point where marginal revenue equals marginal cost. If the demand curve shifted the marginal revenue curve would shift as well and a new equilibrium and supply "point" would be established. The locus of these points would not be a supply curve in any conventional sense.

The most significant distinction between a PC company and a monopoly is that the monopoly has a downward-sloping demand curve rather than the "perceived" perfectly elastic curve of the PC company. Practically all the variations mentioned above relate to this fact. If there is a downward-sloping demand curve then by necessity there is a distinct marginal revenue curve. The implications of this fact are best made manifest with a linear demand curve. Assume that the inverse demand curve is of the form x = a - by. Then the total revenue curve is TR = ay - by2 and the marginal revenue curve is thus MR = a - 2by. From this several things are evident. First the marginal revenue curve has the same y intercept as the inverse demand curve. Second the slope of the marginal revenue curve is twice that of the inverse demand curve. Third the x intercept of the marginal revenue curve is half that of the inverse demand curve. What is not quite so evident is that the marginal revenue curve is below the inverse demand curve at all points. Since all companies maximise profits by equating MR and MC it must be the case that at the profit-maximizing quantity MR and MC are less than price, which further implies that a monopoly produces less quantity at a higher price than if the market were perfectly competitive.

The fact that a monopoly has a downward-sloping demand curve means that the relationship between total revenue and output for a monopoly is much different than that of competitive companies. Total revenue equals price times quantity. A competitive company has a perfectly elastic demand curve meaning that total revenue is proportional to output. Thus the total revenue curve for a competitive company is a ray with a slope equal to the market price. A competitive company can sell all the output it desires at the market price. For a monopoly to increase sales it must reduce price. Thus the total revenue curve for a monopoly is a parabola that begins at the origin and reaches a maximum value then continuously decreases until total revenue is again zero. Total revenue has its maximum value when the slope of the total revenue function is zero. The slope of the total revenue function is marginal revenue. So the revenue maximizing quantity and price occur when MR = 0. For example

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E-Journal of Research
ISSN NO: 2395-339X

assume that the monopoly's demand function is P = 50 - 2Q. The total revenue function would be TR = 50Q - 2Q2 and marginal revenue would be 50 - 4Q.

A company with a monopoly does not experience price pressure from competitors, although it may experience pricing pressure from potential competition. If a company increases prices too much, then others may enter the market if they are able to provide the same good, or a substitute, at a lesser price. The idea that monopolies in markets with easy entry need not be regulated against is known as the "revolution in monopoly theory".

A monopolist can extract only one premium,[clarification needed] and getting into complementary markets does not pay. That is, the total profits a monopolist could earn if it sought to leverage its monopoly in one market by monopolizing a complementary market are equal to the extra profits it could earn anyway by charging more for the monopoly product itself. However, the one monopoly profit theorem is not true if customers in the monopoly good are stranded or poorly informed, or if the tied good has high fixed costs.

A pure monopoly has the same economic rationality of perfectly competitive companies, i.e. to optimise a profit function given some constraints. By the assumptions of increasing marginal costs, exogenous inputs' prices, and control concentrated on a single agent or entrepreneur, the optimal decision is to equate the marginal cost and marginal revenue of production. Nonetheless, a pure monopoly can – unlike a competitive company – alter the market price for its own convenience: a decrease of production results in a higher price. In the economics' jargon, it is said that pure monopolies have "a downward-sloping demand". An important consequence of such behaviour is worth noticing: typically a monopoly selects a higher price and lesser quantity of output than a price-taking company; again, less is available at a higher price.

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E-Journal of Research

ISSN NO: 2395-339X

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