Chapter 7

Market Classification

Abstract

In this chapter concepts of markets are given in detail. Further, essentials and its types- based on regulation, end users, products traded and coverage are given. Market margin, price ceilings and floors, and glimpse on the efficiencies of marketing system are also given. Markets comprises whole actions from producer to end user, involving value addition and distribution systems. Objectives of marketing change from time to time and from location to location. Important undertaking can be, expanding distribution of income among segments of the economy and to sustain solidity of supply and demand for marketable items. Markets may be classified as competitive (many buyers and sellers), oligopolistic (few firms), monopolistic (a single firm). Another category, which is mostly in practice, is monopolistic competition, many firms sell similar but differentiated products. Other market or product characteristics besides the number of seller and buyers, which may affect pricing decisions, include the durability of the commodity, the adequacy of grade descriptions (where relevant), bulkiness of the product relative to its value, the ratio of fixed to variable costs in the industry, and the continuity and length of the production process.

Keywords: market margin, oligopoly, monopolistic competition, monopoly, seller, buyer

7.1. Market

The term market has taken from Latin word 'marcatus' that means merchandise or trade. Market is such a type of place where seller and buyer meet with one another and transactions take place. Here customers have some wealth to exchange to make potential transaction. Market is also taken as the boundary within which price defining forces function. It is a place where price is determined though forces of demand and supply. Economists consider these places not specific in which merchandises and services are traded but the all area in which trades, consumer and producer make contact and transactions.

7.2. Essentials of a Market

Essentials of a matket consists of (i) the presence of items for exchange, (ii) availability of consumer (buyers) and producer, (iii) interactions of concerned

stakeholders in the markets, and (iv) differentiation of particular area, such as place, region, country.

7.3. Types of Markets

Markets can be categorized into various groups based on their location, product and consumers etc. Classification of markets, as described by Mohy-Ud-Din and Badar (2011), are is given in the following lines.

7.3.1. On the Basis of Location

7.3.1.1. Primary Markets

These are markets at primary level such as a village market, roadside market and small town market. The farmers bring their produce to these markets and sell it to itinerant dealer, a village shopkeeper, a broker representing some commission agent or a representative of a processor or manufacturer. The main reasons for his selling in these markets are small stock of produce, urgent need of cash and non-availability of transport facilities.

7.3.1.2. Secondary or Wholesale Markets

Secondary or wholesale markets carry out the function of assembling agricultural produce and disposing off it to consumers. These may be located at tehsil, town and district level to assemble marketable agricultural produce of the surrounding areas. In these markets, agricultural produce is brought mostly by local traders who have purchased it in the primary market. Some farmers also market their produce through these markets to obtain relatively a higher price. The product is usually sold through auction to wholesalers and retailers for onward transmission to the ultimate consumers. These markets exist for different products like food grains, fruit and vegetable, livestock and poultry etc.

7.3.1.3. Retail Markets

The small shopkeepers and street vendors who purchase agricultural produce from primary and secondary markets in bulk and sell it in small quantities to the consumers through their shops or other means constitute the retail markets. The markets are the last step in the chain through which agricultural produce is passed on from the producer to the consumer.

7.3.1.4. Terminal Markets

A market, which is mainly involved in the export of commodities, is called terminal market. These are generally situated in large urban centers. Terminal markets generally have dry port or sea port facilities and act as import and export trade centers through which the surpluses are exported and deficit products are imported. Karachi with sea port and Lahore, Peshawar, and Faisalabad with dry port facilities are examples of terminal markets.

7.3.2. On the Basis of Regulation

7.3.2.1. Free Market

Free market is a market where forces of demand and supply operate freely and, hence, perfect competition prevails in that market. There is no restriction on price setting mechanism.

7.3.2.2. Regulated Market

A market managed by an elected committee or local authorities is known as a regulated market.

7.3.3. On the Basis of Nature of Competition

7.3.3.1. Perfect Market

A market where following four conditions prevail;

1) Lot of buyers and sellers,
2) Similar output
3) No constraint on entry or exit: and,
4) Producer as price taker.

In perfect markets, all the possible merchants and consumers are promptly know the quality ranks, the prices at which transactions take place and all the bids made by other merchants and purchasers. Under such conditions, the price of a commodity tends to remain same all over the market and every quality of the commodity is regarded as a separate commodity.

7.3.3.2. Imperfect Market

It is market that has one or more conditions of perfect competition is lacking in the market. In imperfect markets, several producers and consumers or both do not know about the offers made from others and various prices are being charged or paid for the same commodity at the same time in a market. Imperfect markets may be monopolistic competitive, oligopolistic or monopolistic type of markets.

7.3.4. On the Basis of End Users

7.3.4.1. Consumer markets

These markets consist of individuals and households who buy products for their direct/ultimate consumption.

7.3.4.2. Industrial/Business Markets

Industries and institutions that buy products for further processing form industrial markets.

7.3.5. On the Basis of Products Traded

7.3.5.1. Factor (Input) Markets

These are the markets where factors (inputs) used for agricultural production are bought and sold. Pesticide, fertilizer, seed, farm machinery and labour markets are examples of factor markets.

7.3.5.2. Product (Output) Market

In product markets, agricultural produce is traded. For example, grain markets, fruit markets, vegetable markets etc.,

7.3.6. On the Basis of Coverage

7.3.6.1. Domestic Markets

Domestic markets provide goods and services to the domestic consumers only. Only those items are traded which are in consonance with the domestic socio-cultural and economic requirements. Domestic markets include local, regional, and national markets.

Table 7.1 Comparative Characteristics of Markets

	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Number and nature of sellers	• Many (small sellers) • Independent	Many (small to medium)	• Few(large) • Inter -dependent	One
Price	No control	Some control	Considerable control	Absolute control
Nature of product	Homogeneous (no differentiation)	Some differentiation	Some times But not always	No substitutes
Barriers to entry	None	Low	Considerable	Entry is blocked
Profit potential	Normal profits in LR	Some profits in SR and LR	Considerable Profits in SR and LR	Large Profits in SR and LR
Product promotion and advertising	None or minimal	Considerable	Heavy	Some but not directed to competition, but to increase sales

7.3.6.2. International Markets

International markets serve the foreign consumers and are characterized by intense competition in terms of price and quality. Producers market their products considering the requirements of foreign buyers.

7.4. Market Margin (MM)

Market margins are basically the difference between the price received by the producer and that paid by the consumers (Tomek and Robinson 1981). A margin is the variance amid two values or sums of money. Marketing includes a company's effort to inform possible customer of product, drawing consideration to it in such a way that an audience will be willing to buy it. MM applies to a corporation that purchase an item with the intent to resell it. In developing countries like Pakistan, high marketing margins are generally attributed to inefficiencies in the institutional framework. Brokers are normally liable for small share of farmers in the consumer rupee and blame to take advantage to farmers. Government normally insisted to abolish or reduce the place of middleman from market chain to increase the welfare of both consumers and producers.

This assumption is most probably an outcome of the predominance of the profit element in the total marketing margin. As the profit element is the major component of the marketing margins in the developing countries, any increase in the number of intermediaries will have a strong effect on the size of the aggregate margin. The profit element is a raising function of the number of intermediaries in the distribution of both perishable and non-perishable agricultural commodities. The high profits are alleged to be taken by market intermediaries who are completely unnecessary and others who are exploitative.

The existence of unnecessary/redundant intermediaries between a necessary middleman and the consumer or between two necessary middlemen may be contended. Hence, the pertinent question arises that why these superfluous intermediaries are not by-passed by those who they exploit. In theory, the services of an intermediary will be utilized only if the margin he claims is less than the value his customers set on services provided by him. This means that any intermediary asking for an extra margin will eventually be eliminated. The importance or need of middleman cannot be neglected or ignored in the institutions. The key difficulty is due to two reasons i.e. multiplicity of middlemen and abnormal profits. In Pakistan's agriculture system, the occurrence of brokers is greater than the required level (Mohy-Ud-Din and Badar 2011).

7.4.1. Use of Market Margin

Corporations use MM as a method of earning profits. Large MM shows a lot of profits. It shows a high level of business stability, it reflects that business has the capability to pay for unforeseen obligations. Further, high MM indicate that corporation has capability to reply to new contestants' prices reductions.

7.4.2. Limitations of Market Margin

As a dimension of profitability, MM is limited in its capability to account for the effects of upcoming company's transactions. It shows recent profitability at prevailing prices, an estimation of MM does not precisely manifest profitability as a

business grows. This is because corporations that deal in larger volumes can also buy wholesale items at lower prices, thus increasing the per-unit MM.

7.5. Price Ceilings and Floors

These both are the methods for markets correction so that it can work normally. Occasionally, markets are not permitted to work in their proper position. This shows that market prices are not permitted to move to its actual position.

7.5.1. Price Ceilings

One form of market intervention is the price ceiling and it is done by restricting price level artificially restricted below the equilibrium price and did not allow to increase. The examples of price ceiling are rent control the optimal sector agency is optimal rate. The rent can increase at a certain fixed rate each year with relevance to inflation. The rent is below the equilibrium market rents.

7.5.2. Price Floors

In floor prices the price level is fixed by government at a higher level than the market equilibrium price level fixed by market demand and supply forces. The main reason of floor prices is to protect the domestic markets and higher cost of productions, in Pakistan the agricultural prices are set by governments to ensure food security.

In some cases, the private firms will keep the floor price and most of the time the government will fixed the floor price. One price floor that was kept by the private organizations used to be called “fair trade”. In the case of fair trade, producer set up the product’s price higher than equilibrium price. The producer then said the retail stores that the price could not be let down or the store would not be capable to sell any of the manufacturer's products. Price floors all the time create surpluses.

7.6. Purely Competitive Market

It is the market in which the following conditions prevail (these conditions lead to what is sometimes referred to, alternatively, as atomistic competition (Dorfman 1964):

1) The number of sellers and buyers are sufficiently large so that no individual can perceptibly influence price by his or her decision to buy or sell.
2) The product is sufficiently homogeneous so that the product of one firm is essentially a perfect substitute for that of another firm.
3) There are no artificial restrictions on demand, supply, or prices such as governmental intervention or collusion among forms.
4) Mobility of resources and products exist in the economy; e.g., a new firm should be free to enter the industry.

In a purely competitive market, it is assumed that every producer-seller seeks to maximize profits by selling at as high a price as possible and that every buyer seeks to maximize utility by obtaining the product at as low a price as possible. The collective action of buyer and seller determine the price. To simplify theoretical analysis, economists use the concept of a perfectly competitive market. In addition to large numbers and product homogeneity, the term "perfect" implies perfect by buyers and sellers, complete divisibility of the product and perfect mobility of the product within the market. With these assumptions, we can talk about the price for a product in a market (Breimyer 1976).

Under competitive conditions, the supply and demand relations faced by the individual differ greatly from the market supply and demand functions. Since, each buyer and seller cannot perceptibly influence price, the demand and supply relations appear horizontal to the respective individuals. For instance, the individual typically views the (derived) demand function for his product as being perfectly horizontal.

7.6.1. The Firm as Price Taker

A single firm takes its price from industry and referred as price taker. Industry includes all the firms in an industry and market price is that price where market demand and supply both are equal. All the firms in the industry charge the same price and cannot deviate from it.

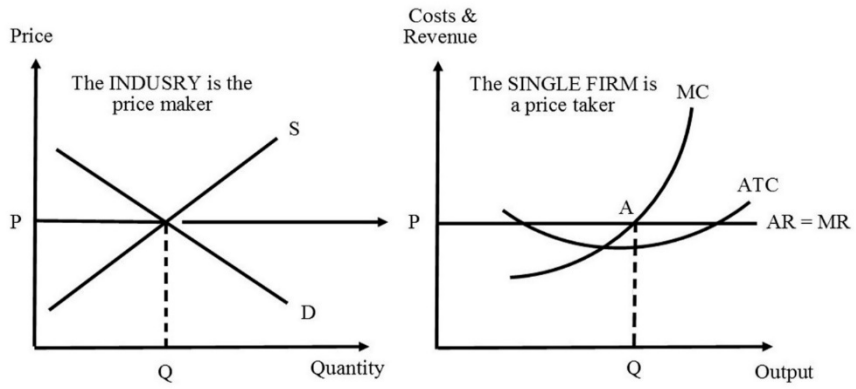


Fig. 7.1 Firm as price taker

7.6.2. Equilibrium in Perfect Competition

7.6.2.1. The short run

In perfect competition, firms earn abnormal (super normal) profits or losses.

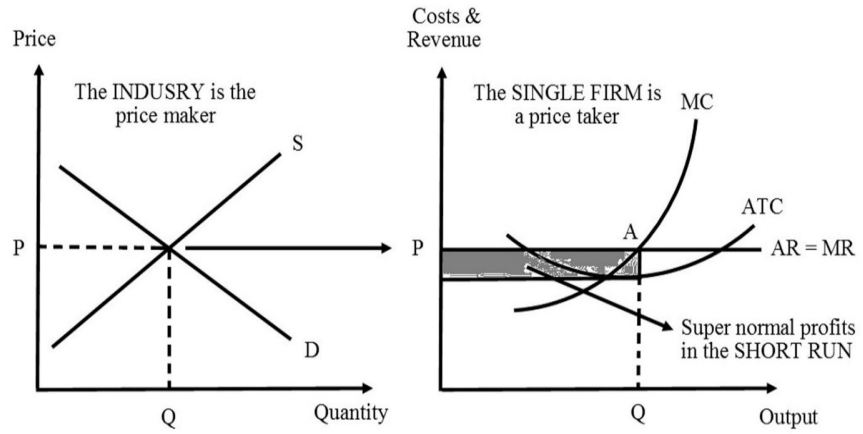


Fig. 7.2 Equilibrium in Perfect Competition in short run

7.6.2.2. The Long Run

However, firms are attracted towards industry in the long run, if existing firms earn supernormal profit. The reason is perfect knowledge and no barrier of entry and exit of firms. It causes shift of the supply curve to the rightward. Due to which price comes down and firms earn normal profit instead of supernormal profit. If firms facing loses, they leave the industry and supply curve again shifts to leftward. Remaining firms in the industry again earns normal profit.

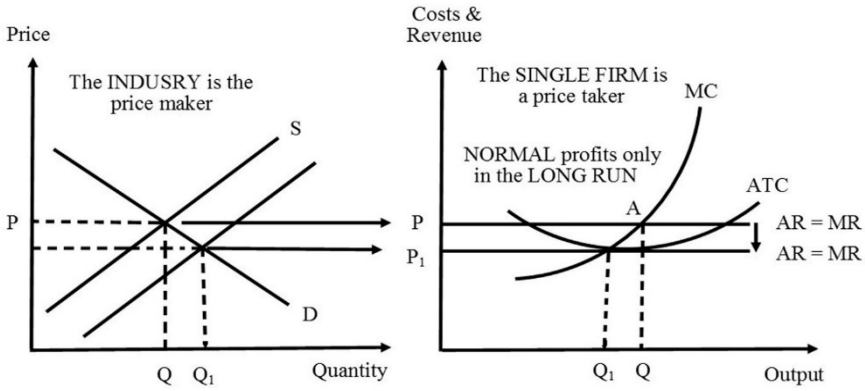


Fig. 7.3 Equilibrium in Perfect Competition in long run

Supernormal profit earned by firms in short run attract new firms to enter in the market, due to which supply increases and price level comes down till normal profit is made.

Box 7.1 Pakistan Tele communication Industry one of the Best Cases of Perfect Competition

"The overall consensus of industry analysts is that Pakistan is one of the countries with a huge untapped potential for telecom growth and an attractive investment environment. Recently Business Monitor International (BMI) ranked Pakistan as a key destination for telecom growth. The BMI rankings take into account a number of factors including industry situation growth potential, competitive landscape and economy and political risks etc. The sudden growth in subscriber base in Pakistan has caused network congestion and service quality problems. The major operators are responding to this problem by upgrading their networks. These multibillion dollar improvements, along with a regulatory effort to introduce Mobile Number Portability (MNP) next year, should maintain the stiff competition in Pakistan mobile market. Pakistan is still an unsaturated market and with the falling cost of handsets there are plenty of new subscribers to compete for, especially in the rural areas. But eventually, as in saturated markets, if mobile operators want to avoid simply competing on price, they will have to compete on superior service, innovative features and ease-of-use. As an example of new trends there were so many text messages (SMS) sent on this Eid that the networks of all 6 companies were kept extremely busy".

Source: *Nazir (2008)*

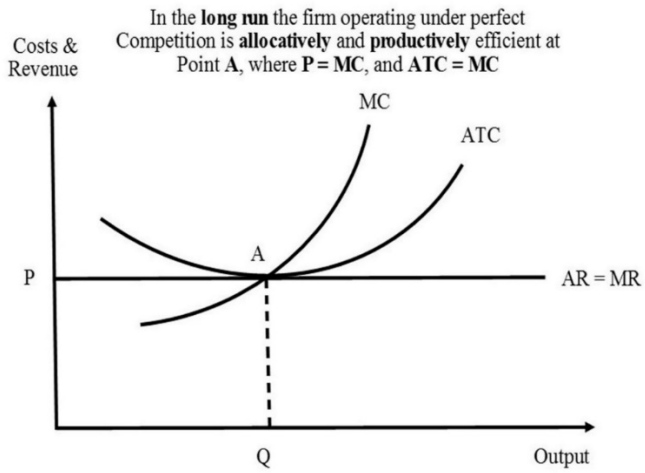
7.6.3. The Benefits

Perfect competition has the following benefits,

1) Perfect knowledge about market, no failure of information and knowledge is evenly shared between participants.
2) There is free entry and exit, so no firm can create monopoly power.
3) Producers just cover opportunity cost. Therefore, only normal profit is earned.
4) Firms can produce and sell their products without using any advertising source because of perfect knowledge about market.
5) There is maximum possible economic welfare and consumer surplus.
6) Firms have maximum productive and allocative efficiency.
7) Equilibrium will take place where, P = MC (allocative efficiency).

8) But in long run, equilibrium occur, where MC = ATC (see Figure 7.4)
9) Consumer takes maximum choices regarding purchases.

Fig. 7.4 Benefits to firm operating under perfect competition in the long run



7.6.4. How Realistic is the Model?

In the real world, very few markets or industries are perfectly competitive. For example, how identical the output of firms, as the smaller firms trying to differentiate their product.

Although, the model is unrealistic, it is useful in two aspects. Firstly, many commodity and primary markets, like coffee and tea, shows many of the features of perfect competition, where lot of producers cannot influence the price. Secondly, it helps the economists to make judgment about the competition exists between the real markets (Markovits 2008).

7.7. Monopoly

Second type of market at the opposite extreme from the perfect competitive is that designated as absolute monopoly. The distinguishing characteristic of this type of market structure is a single seller (Baumol 1977). The firm's demand schedule coincides with the industry demand schedule. Product differentiation is implicit in this definition, since monopoly could not exist unless the firm's products were substantially different from the products of other firms.

Box 7.2 Murree Brewery Co Maintains its Monopoly

"Murree Brewery Co Ltd, the only licensed alcohol manufacturer in Pakistan, produces good quality beer, wine and spirits, and is making the most of its monopoly by further improving its products. The company's brands have always created strong demand because of their flavour and low prices, factors which have hitherto discouraged the purchase of illegally imported products. The forecast period is anticipated to witness steady growth in volume sales of alcoholic drinks each year, since little change is expected in the Government's stance regarding the legal issues surrounding the sale of alcohol. Furthermore, expansion is predicted due to people's rapidly growing adoption of Western culture. Nevertheless, sales volume growth will continue to face a challenge from the increased supply of cheap contraband and locally produced alcohol which is expected to remain much in demand within Pakistan. It is also evident from their financial statements that there is rapid growth in the sales of liquors.

- Monopsony

The best example of monopsony in Pakistan is post office. The post office is a monopsony employer of postal workers. There is just a single employer and a large number of employee. In Pakistan the defense 'industry' is by far perhaps the BEST example. The federal gov't is primarily the only one that buys all those rockets, bombs, planes, etc".

Source: *Nazir (2008)*

7.7.1. Short Run Monopoly Equilibrium

In the analysis of price output determination, a monopolist firm constantly adjust the output with respect to the existing and expected sales and cost of production incurred on output, and then monopolist set market price. Therefore, monopolist does not discriminate between short period and market period (Tomek and Robinson 1981). But, it is more significant to differentiate between long run and short run. In short run, monopolist is not able to alter his plan size. Monopolist can change his output by changing variable factors.

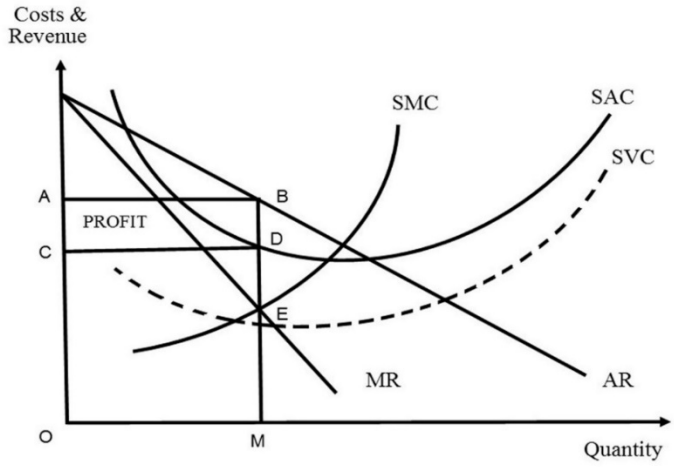
Conditions for short run under monopoly is as follows,

1) Where MC = MR.
2) Short run marginal cost curve (SMC) cuts the short run marginal revenue curve (SMR) from below side.

7.7.1.1. Short-Run Equilibrium (with Profit) under Monopoly

Principle objective of monopoly is the profit maximization. Equilibrium is shown in Figure 7.5. When marginal revenue exceeds from marginal cost, monopolist will produce extra units. Monopolist earn maximum profit and will attain equilibrium where its marginal revenue equates with marginal cost.

Fig. 7.5 Monopoly equilibrium



When elasticity of demand is less than one monopolist will not be in equilibrium at that point. In other words, monopolist will not set his level of productivity at which elasticity of demand or average revenue curve is less than one. It is derived from relationship between AR, MR and elasticity is that when value of elasticity is less than one, value of marginal revenue is negative.

Equilibrium of monopoly is shown in Figure 7.5 illustrates; producer will raise its production level when marginal revenue is greater than marginal cost. Producer does it because production of additional unit is profitable for him. At point OM, marginal revenue is equal to marginal cost. If monopolist increases his level of output beyond OM, marginal cost is greater than marginal revenue. Therefore, monopolist will face loss. OA or MB is the equilibrium price in the above diagram. Marginal cost cannot be equal to price in monopoly. As we know that,

$$\text{Price} = \text{MR}\ (e/e^{-1})$$

At equilibrium point, MR=MC Therefore, Price =MC (e/e^{-1})

Since e/e^{-1} is more than one for a given value of elasticity, it is obvious that under monopoly,

$$\text{Price} > \text{MC}$$

The extent to which price will be greater than marginal cost, will be given by the expression e/e^{-1}.Therefore, monopoly price is a function of elasticity of demand and marginal cost. Super normal profit earned by a monopolist depicted from the diagram is obtained by taking the difference of average revenue and average cost. ABCD area

shows the total profit of monopolist. The producer producing the output until marginal revenue value exceeds from marginal cost. Because, it is profitable for producer. In Figure 7.4, marginal revenue and marginal cost are equal to each other at OM level of output. If monopolist increases his level of output beyond OM, marginal revenue will be less than marginal cost and monopolist face loss. Equilibrium price is OA or MB and profit area is ABCD.

In perfect competition, MC associated with supply curve and supply curve is derived from MC curve. This curve above price line is named as supply curve of a firm. In monopoly, economic profit exists and price is higher than MC, and supply curve is not derived from MC. Monopolist will select a price level, where demand elasticity is positive and will not produce, where elasticity of demand is negative.

7.7.1.2. Short Run Equilibrium (with Losses) under Monopoly

It is presumed that monopolist always earn profit, but it is not a universal rule, the monopoly profit can be negative, if the demand for product is very low, it is also a reason of recession and depression or crises in the market and economy and monopolist bear the losses in this conditions. The monopolist can also leave the market, if the losses pertained for longer time periods. He continues his production as its price is higher than AVC in the SR. If VC is not being recovered than he left the market.

7.7.2. Long Run Equilibrium under Monopoly

LR equilibrium of firm under monopoly is explained with the help of the following Figure.7.6. All the factors of production are variable in LR. Firm will earn maximum profit at a point where MC = MR and LMC curve cuts the MR curve from below side. In the Figure 7.5, point E shows the firm's equilibrium, where LMC = MR and LMC cuts MR curve from below. Equilibrium price and quantity is OP and OQ.

At OQ level of output, the cost per unit is QH (LAC), whereas the price per unit of the good is QP. HP represents the per unit super normal profit. KPHN area indicates the super normal profit. At here, it is noted that plant is not fully utilized at equilibrium output OQ (LAC) long run average cost is not minimum at this level of output OQ. Firm will make optimal production only if demand of product increases. The monopolist is at OS level of output and OP price. In this case, price is greater than the average cost and monopolist face loss shown by area ABCD in the figure. Monopolist will continue its production as variable cost is not being covered. We can conclude from the above discussion that product's demand plays a vital role in determining, whether he will earn profit or loss.

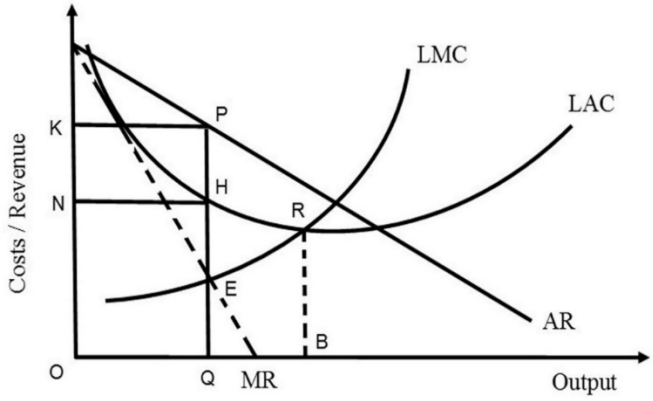


Fig. 7.6 Equilibrium of a monopoly in long run

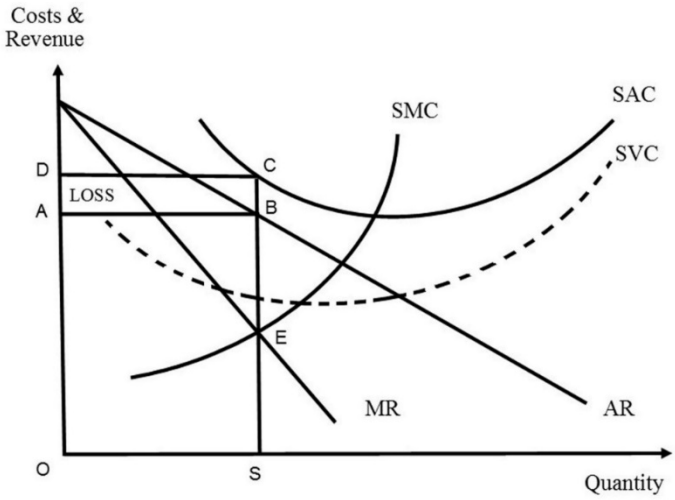
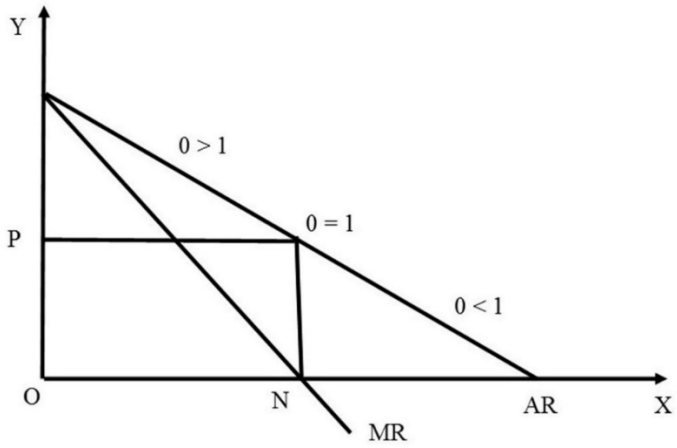


Fig. 7.7 Role of demand in determining monopolist profit

7.7.2.1. Monopoly Equilibrium: Zero Marginal Cost Case

This is a case where cost of production of an additional unit is zero. For example, mineral spring water or sand from the river bank, where the production cost is either zero or considered irrelevant. In these types of cases, monopolist set its equilibrium at that point where elasticity of demand is equal to one. And monopolist adjusts its output where total revenue is maximum.

Fig. 7.8
Monopolist Equilibrium



Monopolist equilibrium is where the output level is ON and price is OP as shown in the Figure 7.8. The optimal total revenue is ON and beyond this MR is negative and it causes total revenue to diminish. If production cost is zero, the revenue equals profit. At maximum level of profit the marginal revenue become zero and demand elasticity is unity. If the value of MC is positive, monopolist will attain equilibrium at a point, where value of elasticity of demand is greater than one.

7.7.3. Natural Monopolies

It is distinct type of monopoly which may arise when FC is very high and to ensure supply, and large scale infrastructure is required. In such cases, try to raise competition by inspiring new entrants in the market creates a potential loss of efficiency. Monopoly is a situation where a single firm has a complete control over the market but in contrast natural monopoly is a situation on the cost technology of an industry whereby it is most efficient for production to be concentrated in a single firm. Sometimes, it gives the largest supplier in the industry mostly to first supplier in the market and gets advantage over the actual and potential competitors.

7.8. Monopolistic Competition

In this type of market in which number of sellers offer differentiated product. These goods are probably close substitutes but the individual sellers can differentiate their product on the basis of a trade name, style, quality, service, location or other factors. Consequently, the firm has some influence on price but the number of substitutes are likely to limit the firm's discretion in pricing. The demand relation faced by the individual firms, while not perfectly elastic, is likely to be quite elastic in the prevailing range of prices.

7.8.1. Characteristics

Monopolistic competition contains the following characteristics,

1) Every firm take independent decision regarding output and price, based on product, cost of production and its market.
2) Knowledge is spread-out between contributors, but it is unlikely perfect. For example, before dining, a diner can check all the menus available from the restaurant. Before ordering he will check the menu again. However, the diner could not appreciate the meal or restaurant until dined. The entrepreneur has a more significant role than in firms that are perfectly competitive because of the increased risks associated with decision making.
3) Every firm can enter or exit from market, because there is no such a major barrier on entry and exit
4) Product differentiation is a central feature of monopolistic competition. It has four types of differentiations,
   a) In Physical product differentiation, firms use design, size, color, performance and other features that helps to differentiate their product. For example, consumer electronics can differentiate easily.
   b) Product is differentiated from other products through promotional techniques and packaging. For example, breakfast cereals are differentiated from each other through packaging.
   c) Human capital differentiation is that which a firm creates discriminations through skills of workers, distinctive uniform and so on.
   d) Differentiation with the help distribution, which includes distribution through mail or via internet shopping, like Amazon.com, etc.
5) All the firms in the industry are price maker and have a downward slopping demand curve. Because, every firm produces a unique product, it may charge lower or higher price than its competitors. Each firm set his own price and not to take it from industry price may be a guide line or a constraint through industry. It also depicts that demand will slopping downward.
6) Under monopolistic competition firms are mostly engaged in advertising. Because of similar product or service firms have competition with one another, and advertise on local basis for knowhow of consumer about the product. The most common methods used for advertisement are local press, Media, leaflets, etc.
7) Firms are assumed to be profit maximizer, because small firms are evolved in managing business.
8) Usually, there are large number of firms to compete in the market.

7.8.2. Equilibrium under Monopolistic Competition

In SR, firm can earn supernormal profit but in LR, new entrants are attracted towards the industry due to knowledge, little barrier for new firms and have opportunity of differentiation.

Profit maximization point under monopolistic competition in SR is where, MC = MR and price is P and output Q (see Figure 7.9). Given that average revenue curve is higher than the average total cost at point Q, so supernormal profit is possible i.e (area PABC).

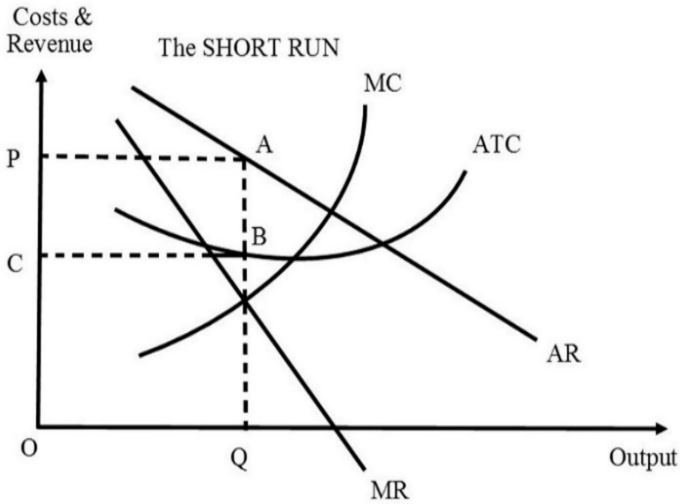


Fig. 7.9 Monopolistic competition in the short run

When new firms enter the industry, demand of old firm's goods become more elastic and demand curve shifts leftward. Due to which, price comes down and super normal profit is converted into normal profit.

7.9. Monopolistic competition in the long run

In long run, firms will be in equilibrium, where supernormal profit is converted into normal profit (see Figure 7.10 for details). This is because new firms are attracted due to supernormal profit and continues until supernormal profit turns to normal profit.

It is concluded from the above discussion that firms want to stay in SR to get most benefits by innovating products.

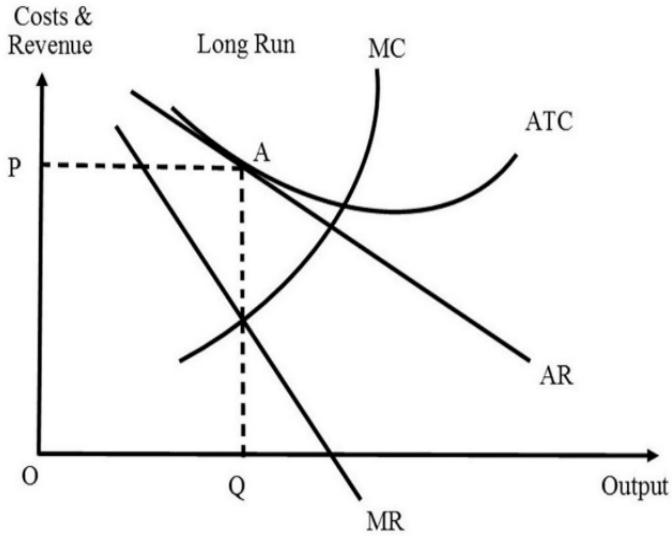


Fig. 7.10 Monopolistic competition in the long run

7.10. Oligopoly

It refers to a market with a few large sellers. Each firm produces a large fraction of the industry's total product and consequently the action of one firm in the industry can greatly influence other firms. In a pure oligopoly, the sellers are producing a homogeneous product. In a differentiated oligopoly, the firms are producing a similar but not identical product. The automobile industry is an example. Because each oligopolistic industry tends to develop unique interrelationships among firms, this type of market structure is the least susceptible to generalizations about price and output policies.

This classification of markets emphasizes the number of sellers and implicitly assumes many buyers. Other classifications may be devised with emphasis on the number of buyers in the market. For instance, a market with a single large buyer is referred to as a monopsony. Market having single seller and single buyer is called a bilateral monopoly (Stonier and Hague 1990). Obviously, many market structures can be devised each involving different combinations of buyers and sellers and degree of product differentiation.

Box 7.3 Sugar Mills Oligopsony

"An oligopsony is a form of imperfect competition. One of the best examples of oligopsony in Pakistan is Sugar mills. There are a few numbers of buyers but a large number of sellers in this chain. The raw material for the sugar formation is sugarcane which is produced by a large number of farmers. But the buyers of the sugarcane are few. Thus mills are free to purchase cane where ever they wish. The price setting is accomplished by supply and demand. Cane prices are above the minimum support price in short crop years. According to economic constraints a large portion of sugarcane still acquired by the producers nears the mill at minimum prices. Some supplies are accomplished by distant producers at some high prices depending on demand and supply condition to bid the cane away from other users. Eventually mills are likely come to some tacit agreement on zone areas. There are just 43 sugar mills in Province Punjab in comparison to thousands producers of sugarcane. Thus mills maximize their profit by snatching large share from economy".

***Source**: Saeed (2013)*

Many markets do not fit neatly into the categories just described. It is not easy to define an industry or to determine the number of firms which should be included, especially with the growth of large conglomerate enterprises. Measuring the degree of concentration is also difficult. One common measure of concentration is the proportion of total industry sales made by, say, the four largest firms in the industry. If the four largest firms in the industry account for 90 per cent of total sales, then the market may be classified as an oligopoly. Of course, such a single measure does not take account of the degree of product differentiation or other possible monopoly elements. In addition, a global or industry wide measure does not reflect the possible high levels of concentration in a local market area, and conversely a firm may pave a large share of the total market but only a small share of some local markets.

7.11. Efficiencies

It is noted that profit maximization and economic efficiency are the two sides of same coin and cannot be achieved without each other. Efficiency of firm depends on two factors i.e. Technical Efficiency (TE) and Allocative Efficiency (AE). Total efficiency shows the total output that a firm can achieve by using his inputs efficiently. AE reflects the capability of firm to use its inputs optimally with given respective prices. By combining these two efficiencies we can measure the total economic efficiency (EE). The concept of technical, allocative and economic

efficiency can be illustrated by using input/input space (input-oriented measures) or output/output space (output-oriented measures) (Coelli 1996) or input-output space (Ali and Chaudhry 1990).

Box 7.4 Cement Industry Oligopoly

"The best example of oligopoly is cement industry in Pakistan. Out of 24 cement companies in Pakistan four of them are holding majority market share and thus able to derive industry prices. The names and shares of the companies are: lucky cement holding 20%, Best way cement 11%, DG Khan Cement 15% and Maple leaf 10%. These major players in industry make cartels and thus determine cost structure, raw material sourcing and set prices according to their mutual preferences. Product is almost homogenous and the major product for most manufacturers is ordinary Portland cement (90%-94%). Thus difference in prices and competition is based on contiguity to raw material and markets. Cement industry does not face any major barrier to entry of new firms. But small manufacturers had to face cost inefficiencies due to the pressure of cost structure. In addition government policies are also in favor of cement manufacturers by All Pakistan Cement Manufacturers Association (APCMA) responsible to maintain such policies".

***Source**: Hijazi and Tariq (2006)*

1) The term economic efficiency in economics represents the optimal production of goods and services by using given resources (Bishop 1952). If more goods and services are provided to the economy by using fewer resources, then economic system is said to be more efficient. In absolute terms, a situation is economically efficient. No one can be made better off without making someone else worse off (commonly referred to as Pareto efficiency).
2) No further output can be gained without increasing the amount of inputs.
3) Production proceeds at the minimum possible per-unit cost.

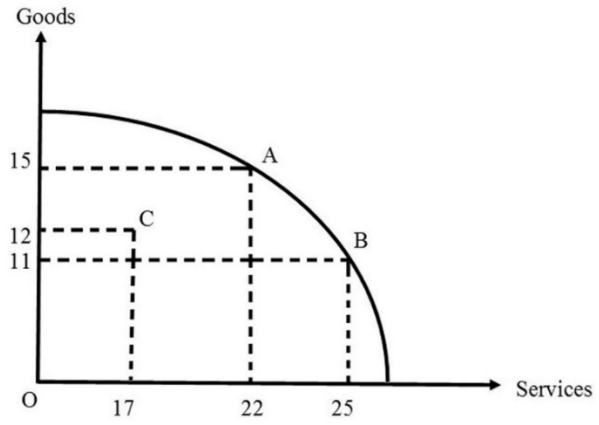
7.11.1. Technical Efficiency

In each condition, it is not possible to produce more output from same inputs the more output is not produced with same input and same technology and more output can be produces with improved technology.

7.11.2. Productive Efficiency

Productive efficiency is related with manufacturing of goods and services with optimum combination of inputs for optimal output for minimum cost. For efficient production, economy must produce on its production frontier curve (i.e., it is impossible to produce more of one good without producing less of another).

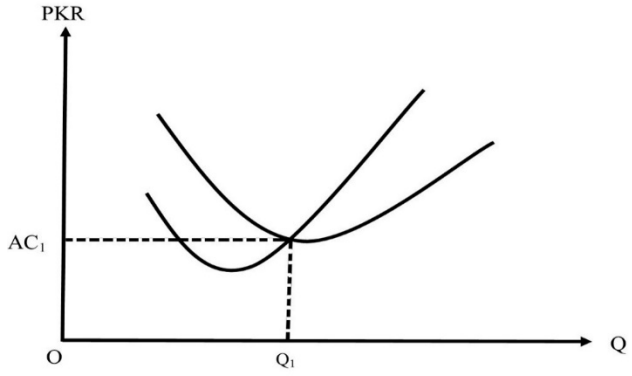
Fig. 7.11 Productive Efficiency Points A and B indicates production efficiency.



In the Figure 7.11, point C is inefficient because you can produce more goods and services with no opportunity cost.

A firm is called productively efficient, when producing at lowest point on average cost curve (here AC meets MC).

Fig. 7.12 Technical Efficiency



Concept of production efficiency is closely related with technical efficiency. A firm is said to be technically efficient, when it uses its optimal combination of capital and labor for production. Any economy may be productively efficient but can have a poor allocate efficiency.

7.11.3. Allocative Efficiency

It is such a type of efficiency in which those goods and services are produced by the economy that is more desireable and have a high demand in the market. As from the formula allocative efficiency is such a point where marginal cost (MC) becomes equal to marginal benefits (MB).

$$MB = MC$$

This is a point where social surplus is maximized and have no deadweight loss. Level of output less resources that are used to achieve that output can be applied to other things such as level of pollution. In perfect competition, free markets are allocative efficient but not in case of monopoly, monopsony and externalities that construe market failure. Allocative efficiency is a basic instrument used judge the effect of markets and public policy on subgroups and society being worse or better off.

It is related with maximum distribution of resources. Which means getting maximum buyer's satisfaction from given resources. It indicates that economy doing best job to satisfy unlimited needs and wants with limited resources. For example, if economy spent its 90 % GDP for defense purpose, it could be productively efficient but have a very unbalanced economy.

7.11.4. Pareto Efficiency

Pareto efficiency occurs when someone is better off at the expense of other being worse-off. In an economic state resources are distributed among the society in an efficient way. It is a state of allocation of resources in which it is impossible to make any one individual better off without making at least one individual worse off. When economy is operating on a simple production possibility curve, Pareto efficiency will occur.

7.11.5. Comparison of Different Efficiency Measures

All efficiency measures have criticism and all methods face problems on theoretical and practical side. It implies that the final efficiency estimate should not interpret as being definite efficiency measure. We can develop a range of efficiency scores and act as a device to signal rather as conclusive statement.

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