Public interest is virtual another way to describe consumers' wants, namely, maximising utility at the lowest price and the best quality. This concept has been contributed by Jeremy Bentham and J.S. Mill referred to "the greatest happiness for the greatest number". (*Handout, 2004, the 'public interest'*) In the market structure, one extreme form, imperfect competition is known as monopoly. The following is going to discuss that monopoly is always against the public interest. To compare with perfect competition (another extreme form), the potential strengths and weaknesses of monopoly will be presented and examine which one can be best to serve the public interest.

First of all, a monopoly literally means a sole seller, it occurs when there is only one firm in the whole industry. But in practice, it is difficult to exist. Thus more than 25% market share in the industry is identified as monopoly by its legal definition. Meanwhile monopoly also exists in a certain region, e.g. a local water company dominates the local market as 'natural monopoly' which means that market may be too small to support more than one firm to achieve significant economies of scale. A major characteristic of monopoly is high barriers to entry. For example, a specific legal barrier protects monopoly in term of patent on essential processes, copyright and licenses and so on. At the same time, monopoly protects itself from competing through a variety of ways such as achieving great economies of scale, merger and takeover other companies and aggressive tactics etc. In case like this, the monopoly strongly erects the barriers to stop other rivals from entering or drive existing rivals out of the business. Furthermore some industries are considered to be unsuitable for competition, e.g. gas, electricity. Competition would lead to duplication of resources.

Unlike monopoly, perfect competition, another extreme form, is normally defined through a number of assumptions or conditions: a lager number of sellers and buyers are price taker, they have to accept market determined price. Sellers can sell as much as they wish at the prevailing price and buyers only buy a small proportion of the total goods available thus can not influence market price; Freedom entry, namely, no barriers to restrict; Homogeneous products means all goods are identical and can not be distinguished; Perfect knowledge makes sure the consumers and producers are full aware of prices, costs, and quantity of products. The determination of price, output and profit in the short run under perfect competition can be shown in figure1.


Short run equilibrium of industry and firm under perfect competition
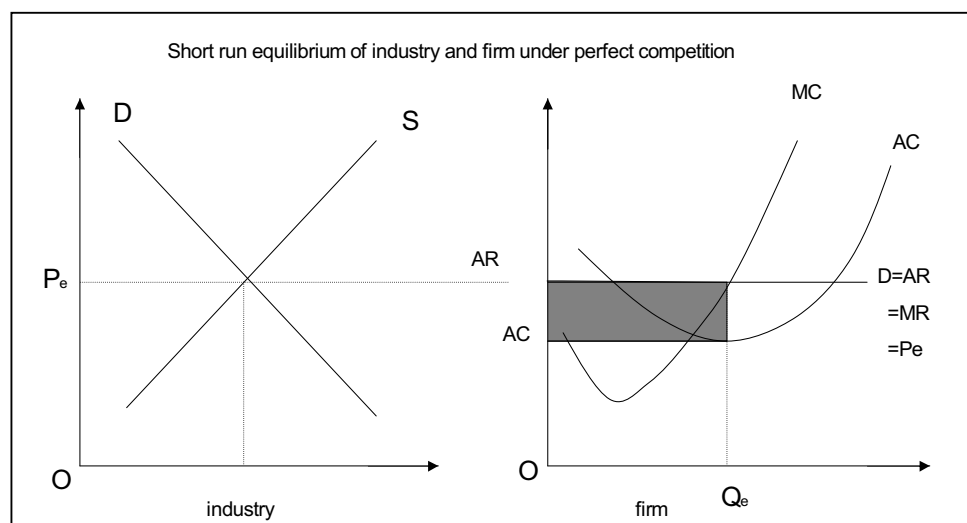
The firm faces a horizontal demand curve at price of Pe where it can sell all it produced but nothing at a price above Pe. The firm will produce output at MC=MR where is known as profit-maximising rule. "If the additional cost of producing an extra unit is less than the additional revenue gained by selling that unit, there will be an increase in profit. Whereas if marginal cost of an additional unit is greater than marginal revenue, there will be a decrease in profit." (Handout, 2004, the model of perfect competition) Thus profit will be maximised just at MC=MR. It involves the firm, under perfect competition, can obtain supernormal profit during the short-run. The profit has been illustrated by the shade area. However the monopoly, in the short-run, is only one firm in the industry, therefore the firm's demand curve is also industry demand curve. Demand under monopoly tends to be less elastic at each price whereby monopolist can raise price and consumers have no substitute firm to choose within the industry. Firm is a price maker even though the increase of price will still lead to the reduction of quantity demand. It is illustrated by figure2:


Short-run equilibrium of monopoly
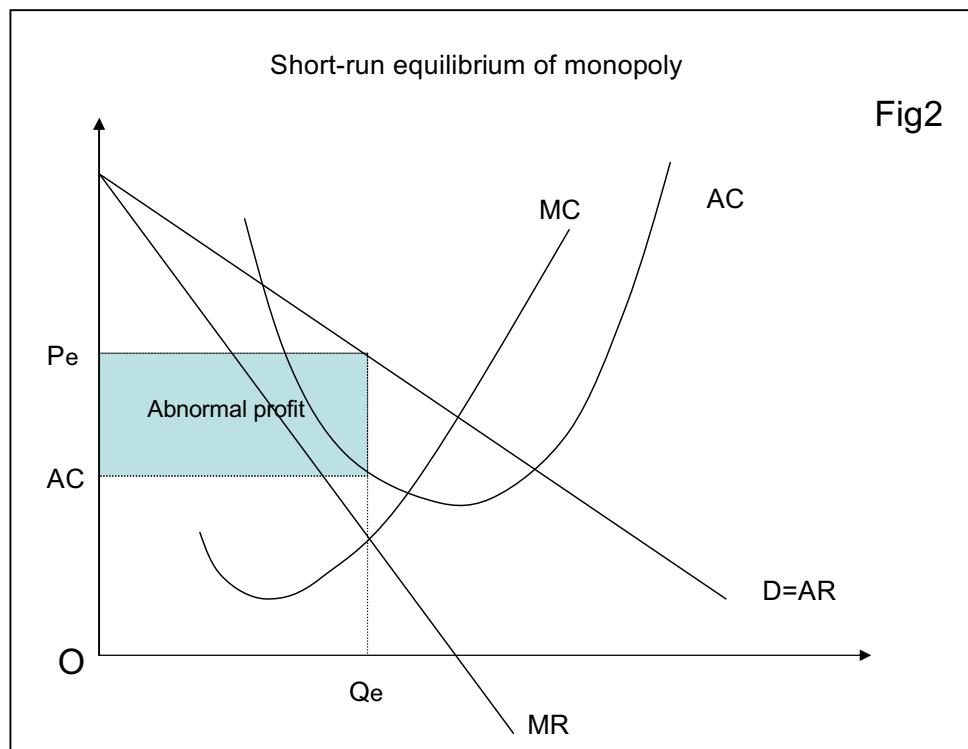
As the same as perfect competition, in the short-run monopolist can maximise the profit where MR=MC. The supernormal profit (abnormal profit) earned is shown by the shade area. As there are lots of barriers erected to prevent supernormal profit

being competed away, so the profits will be maintain in the long-run. The firm will produce output where MR=long-run MC. To compare the two structures in the short-run that can be seen by figure3:

Short-run equilibrium of monopoly and perfect competition

Fig3

MC

Pm

Ppc

O

Qm   Ppc

MR

D=AR
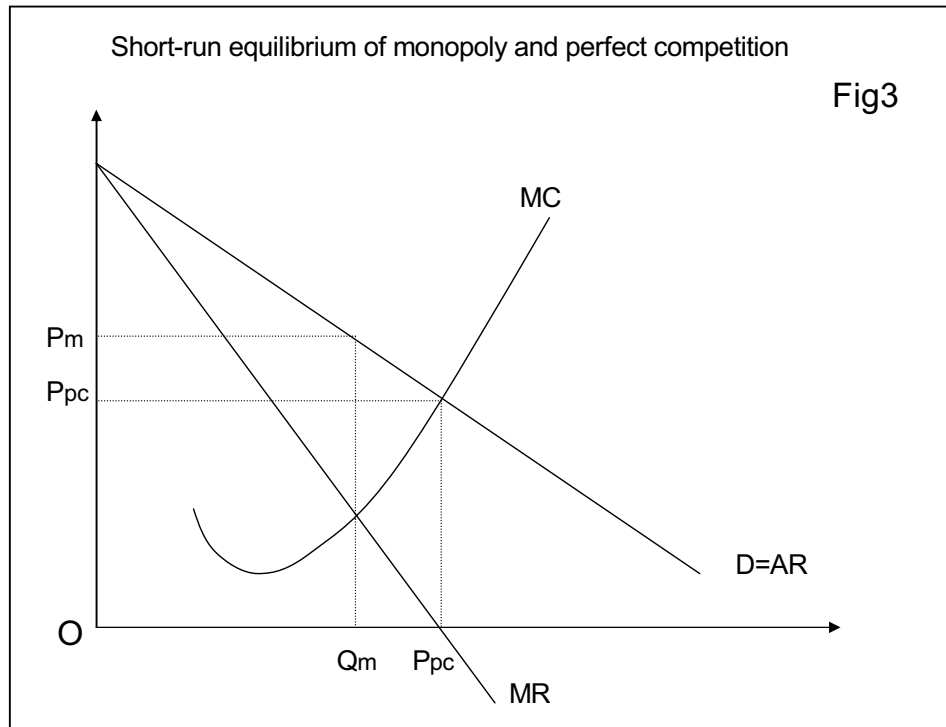
Assume that they both face the same demand curve and the same cost curve. The monopolist will produce Qm at a point of Pm due to MR=MC. Conversely, perfect competition would produce at Qpc with Ppc. Obviously, a higher output and lower price has been contributed by perfect competition, because the firm under perfect competition faces a perfectly elastic demand curve which D=MR (see Fig1), thus, producing where MC=MR=P. Furthermore, the firm pursues the maximising profit where MC=MR, thus the price and quantity will be produced at Ppc and Qpc. It seems that perfect competition better serves the consumer's interest than monopoly. In the long-run, supernormal profit will be remained under monopoly. Nevertheless, under perfect competition, freedom of entry results in the destruction of supernormal profit gained by firm.

long-run equilibrium of perfect competition

Fig4

MC

S1

Se

AC

P1

Pe

AR1

ARe

D1

De

D
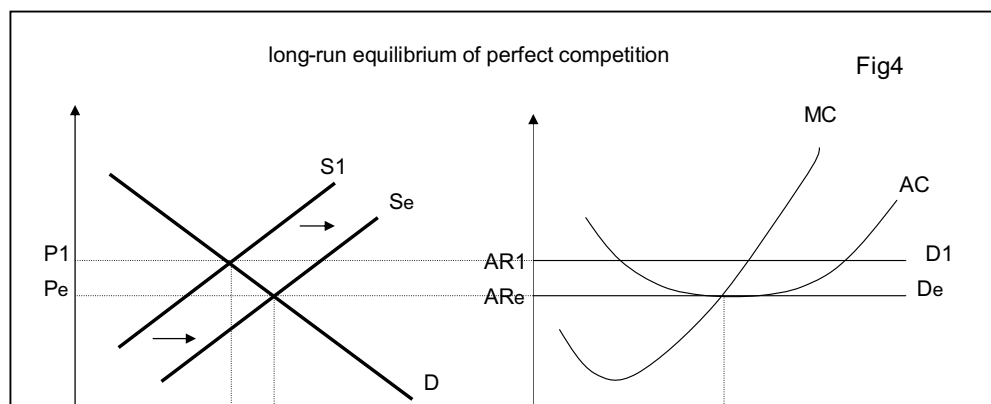
According to figure4, new firms would be attracted into the industry by supernormal profit. Thus the supply curve will shift as the new firms enter and the existing firms expand. An increase in supply leads to a reduction in price until firms are making only normal profits where reaches a new equilibrium point. This will be when price has fallen to the point whereby demand curve just touches the bottom of its long-run average cost curve. However, monopoly is not forced to operate at the bottom of the AC curve. Thus, other things being equal, long-run price will tend to be higher and output even lower. Hence perfect competition better serves the consumer's interest again.

To consider about market structure and efficiency, allocative efficiency is the degree to which resources are allocated in accordance to consumers' preferences, and therefore the degree to which economic welfare is maximised for a give level of total output. Allocative efficiency is achieved when the consumers are willing to pay a price which equals the cost of resources used up in production, namely, price=MC. Total economic welfare will be maximised when this situation is contributed. If price were greater than MC that results in consumers were putting a higher price on the production of additional units than they cost to produce. Therefore more ought to be produced, conversely, if price were less than MC, less ought to be produced. Thus allocative efficiency can be achieved under perfect competition in figure5.

Economic welfare under perfect competition — Fig5
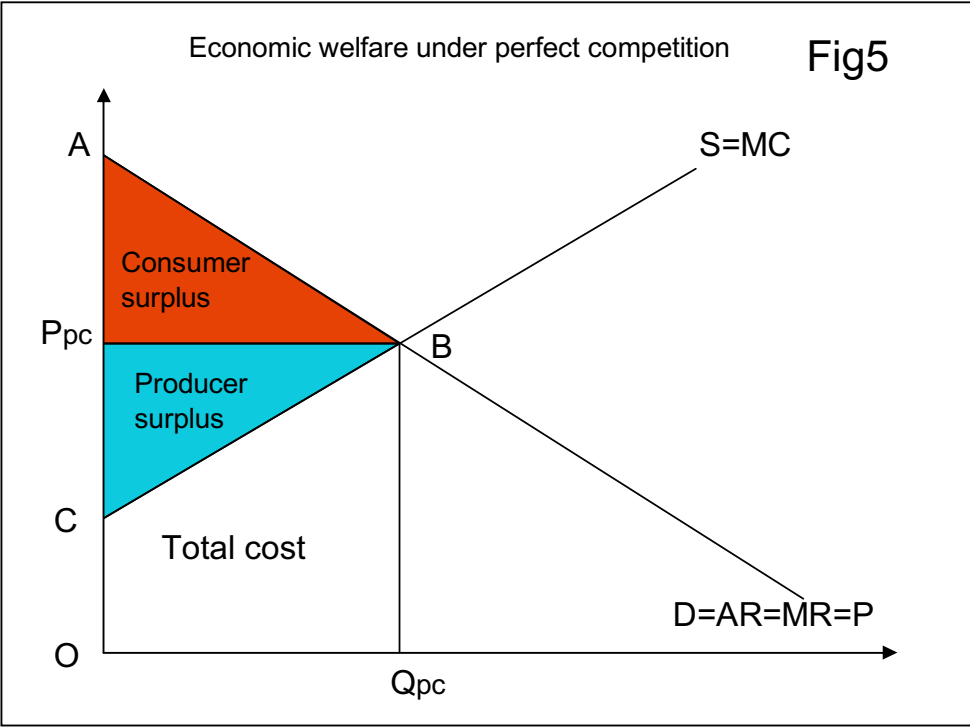
The area ABQpcO represents the total utility gained by the consumers who are willing to pay for the amount. They actually pay is the same as the total revenue OPpcBQpc which can be calculated by price times quantity. Therefore it minus total cost is producer surplus. In another word, total profits, namely producer surplus which is represented by PpcBC. Thus consumer surplus plus the producer surplus is the total economic welfare created by the market. Unlike perfect competition, monopoly will generate a loss of allocative efficiency and economic welfare where is illustrated by figure6:

Fig6

Monopoly and efficiency (assume the same cost curve)
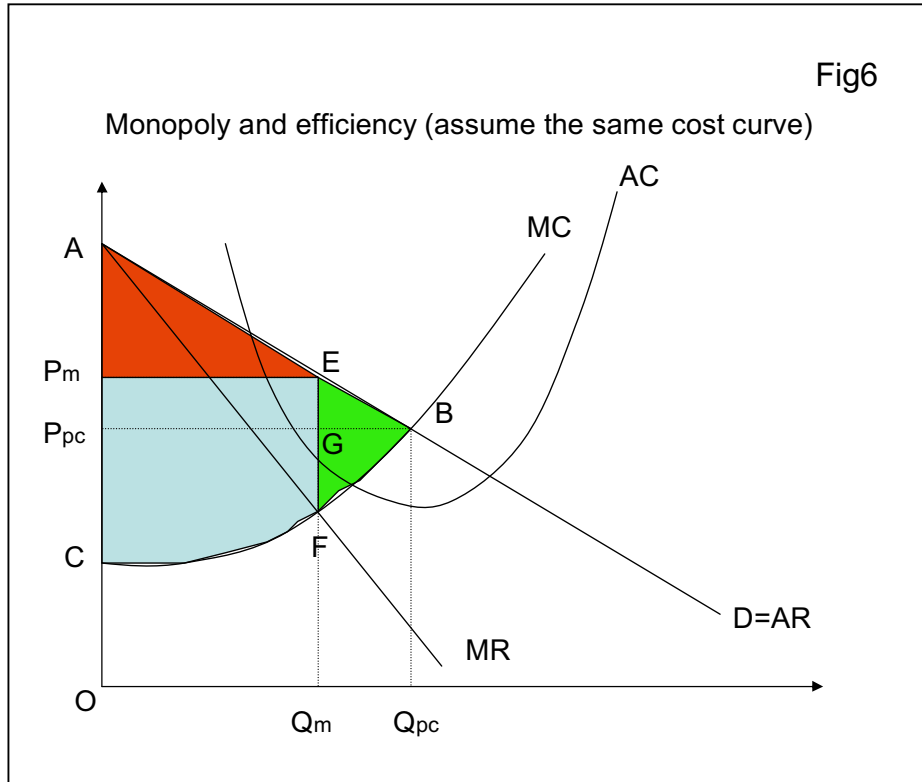
Under monopoly, price will not equal MC so the correct price signals will not be given and resources will not be optimally allocated. In order to earn supernormal profit, monopoly produces output at Q_m where MR=MC that leads to the price, Pm, is greater than MC. Therefore insufficient resources are applied to the production of this product because the marginal benefits exceed the additional costs. It also involves a loss of consumer surplus equal where they are reduced by AEPm. There will, however, be an increase in producer surplus (PmEGPpc area is obviously greater than BGF area). This illustration involves the transfer of benefits from the consumer to producer. However there are some consumer benefits lost altogether and shown by the green shaded area EBF. This is known as the deadweight welfare loss. P≠MC and deadweight loss demonstrate the allocative inefficiency of monopoly. In addition, the monopolist does not produce where the AC curve is minimised; it is represented by point G. whereas referring to figure1 and 4, in the equilibrium of perfect competition producing is at its lowest point of AC curve; it is therefore productively efficient.

However, deadweight loss can be removed by used of 'price discrimination' which means charging different prices for different unit of the same good or service, e.g. charging adults and children different fees to watch movie. To price discriminate a firm must be powerful to control price, be able to keep the market separate and there must be different elasticity of demand in the different markets. Thus, this concept can be used by monopolists in converting consumer surplus to producer surplus and reducing loss of deadweight welfare. It is shown as figure7:

Economic welfare under price discrimination   Fig7
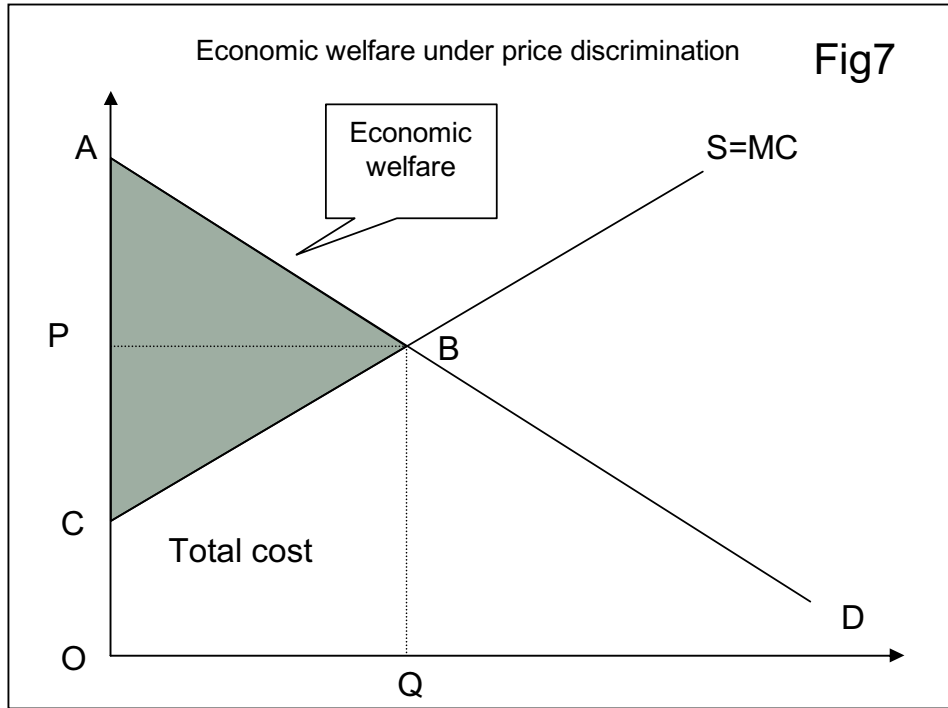
A perfectly discriminating monopoly will continue to increase output as long as MC<P. The consumer is charged the maximum he/she is willing to pay for each unit. The different price of each single unit leads to remove all consumer surplus and take the whole economic welfare. Profits are also maximised by charging a higher price in the inelastic market and a lower price in the elastic market. It is illustrated by figure8:

fig8
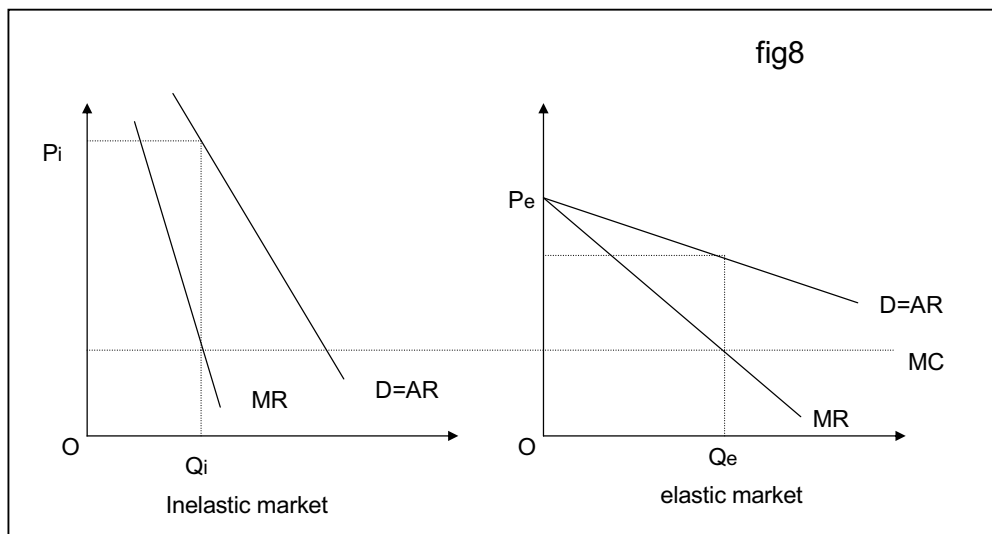
As above toughed, there are many factors involved in against public interest for monopoly. The main disadvantages can be summarised as following. Monopolist can

earn supernormal profits not only in the short-run but even in the long-run due to barriers to entry. Meanwhile, the high barriers result in operating with higher costs because the less competition means it may have less incentive to be efficient and keep costs down. "Managers and workers may take advantage of their monopoly position to use less technique and market knowledge, thus produce less efficiently than perfect competition. This is known as X-inefficiency." (*Brownless, C, 1989, P218*) Compare to a perfectly competitive industry, assume the same cost and demand curve conditions, the monopolist will charge a higher price for less output. Furthermore the monopoly is allocatively inefficient, like the price charging is greater than the marginal cost, this causes producing output is not enough and generates a loss of welfare. And production may be inefficient because it may not produce at the minimum of the average cost curve. Although price discrimination can reduce the loss welfare, it may be used as predatory pricing; that is the firm may set a low predatory price in order to quickly break into another market and dominate market and drive the rivals out of business. Since then, it will raise the price.

The existing weaknesses, in monopoly, are clear to against public interest, but it can still take advantage of its potential strength to serve public interest well. If assume that the cost curves are different under perfect competition and monopoly, the cost may be lower under monopoly. "The monopoly may be able to achieve substantial economies of scale due to lager plant, centralised administration and avoidance of unnecessary duplication." (*Sloman, J, 2001 2nd, P133*) This in turn might lead to lower price and higher output than perfect competition and an MC curve constantly below that of the same industry under perfect competition which is incompatible with substantial economies of scale. Producing with lower cost can be also reached if a monopolist can use partial supernormal profits research and development and investment even re-investment. "It may not have the same incentive to become efficient as the perfectly competitive firm which is fighting for survival," (*Sloman, J, 2001 2nd, P133*) but it may have a much greater ability to get efficient than several small competing firms with limited funds. Even though a monopolist has no competition in the good market, he/she may face a potential threat involved of competition which is takeover or merger. A monopoly may be subject to a takeover bid from another company. This induces it to reduce costs and improve efficiency in order to avoid being taken over. In the aspect of innovation and new products, legal barrier perhaps determines supernormal profit obtained by monopoly through patents. In order to gain a monopoly position firms often have to innovate; they then gain supernormal profits that encourage many firms to take the risk of going into business whilst more and more new products exerted. Clearly it is good for consumers and public interest. What is more, the output of a monopoly will be higher than with a non-discriminating monopoly. The deadweight welfare can be reduced or even eliminated. If each consumer pays a price where he/she is willing to pay, the extra revenue is the same as the price of the additional unit. That implies MR=Price, thus MR=MC=Price. There is increased allocative efficiency. And the increased output may generate economies of scale and increased productive efficiency.

All in all, the monopoly has both advantages and disadvantages in serving public interest. They have been examined by the equilibrium of monopoly and perfect competition and compared the two, market structure and efficiency, and price discriminating monopoly. Through the analysis mentioned, many weaknesses of monopoly have been identified such as less incentive, X-inefficiency, allocative and productive inefficiency and so forth. These factors may result in being bad for public interest (consumer interest) although it has some potential strength existed.

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