UNIT 17 INDUSTRIAL COMPETITION AND MONOPOLY

Structure

17.0 OBJECTIVES

This unit gives an account of the industrial competition in theory and in the context of Indian economy. On going through it you will be able to:

- comprehend theory of industrial competition;
- learn theory of monopoly and strategic alliances; and
- understand concentration pattern of Indian industries.

17.1 INTRODUCTION

In the pursuit of profit maximisation, firms decide price and output levels. Such choices are sometimes aimed at eliminating competition from potential entrants by blocking their entry. This enables the firms to retain their market power and enjoy positive super-normal profits. In the decision regarding such conduct, however, technology and nature of product characteristics play important roles. In particular, these define the market power of firms and hence different market structures, such as perfectly competitive market, monopolistically competitive market, oligopolistic market and monopolistic market.

Strategic alliances, such as joint ventures, and other cooperative behaviour are also guided by profit motives of the firms. These confer benefits upon the partner firms primarily through different cost advantages and economies of scale and, therefore, encourage firms to enter into such agreements. Mergers, takeovers and buyouts of existing enterprises by the entrants, are the other forms of entry or direct foreign investment by the foreign firms or multinationals.

After initiation of liberal foreign trade and investment policies in India in the early 1990s, there has been a phenomenal increase in the incidences joint ventures, mergers and acquisitions.

17.2 INDUSTRIAL COMPETITION: THEORY

In this section let us learn the theory of perfect and imperfect competition and sources of market power for the firms. Different types of entry barrier enabling a monopolist to retain its monopoly position are discussed in sub-section 17.2.2. Protectionist trade policies that restrict or eliminate foreign competition are also a source of market power for the firms. Sub-section 17.2.3 focuses on this aspect. Finally in sub-section 17.2.4, the costs and benefits of strategic alliances, mergers and acquisitions are discussed.

17.2.1 Perfect and Imperfect Competition

You must have learnt about perfect and imperfect competition in EEC-11 (Fundamentals of Economics). However, so recapitulate, two types of competition have been perceived in theory and practice. When there are a large number of sellers producing an identical good, who have perfect information and are very small in relation to the market and hence have no market power whatsoever to influence the price of the good they sell, and there is free entry and exit of firms, we say the market is perfectly competitive. Imperfect competition, on the other hand, arises when firms have market powers that might be the outcome of: i) product differentiation, ii) technology exhibiting economies of scale, iii) firms are few and large in size, and iv) entry to the industry, both for the domestic firms and for the foreign firms, is restricted or prohibited (or is costly).

In theory, classification of imperfect competition into monopolistic competition, oligopoly and monopoly, is made according to these alternative sources of market power. However, since technology and entry essentially determine firm size and number in an industry, these are the most important sources of market power.

A monopolistic market, where a single firm operates, may be the outcome of exclusive patent right, or due to technology exhibiting economies of scale. But if a good can be produced in different varieties, even though economies of scale allows each firm to grow very large, there may be a large number of producers and varieties in that market, provided of course entry is not restricted to a few. Market power of the firms will then vary depending upon the substitutability of such varieties. For example, if these varieties are very close substitutes of each other, such as in the case of different brands of toothpastes, competition among firms for the budget of consumers will be very intense. This scenario, first conceived by Chamberlain, is known as monopolistic competition.

On the other hand, if entry is restricted to only a few firms and technology does not allow a single firm to grow very large so as to capture the entire market, the market is characterised by oligopolistic competition. Of course, there are some unique features of such a market, other than just these, that crucially differentiates it from other kinds of market imperfection. We shall return to this.

Perfect competition among firms leads, in long run, to marginal cost pricing and firm output to a point where average cost is minimum. Thus each firm achieves the efficient scale of production. At equilibrium, all firms earn zero (supernormal) profit. Both these outcomes follow from free entry and exit. Suppose, at a particular point of time, market price is above the minimum average cost for each firm (who have

identical technology and hence cost curves), so that each firm in the industry earns strictly positive profits. This will attract potential entrants and since entry is free, the number of firms and total industry output will increase till price falls, of course as a consequence of entry and greater output, to the minimum average cost and profit is driven down to zero. Therefore, at equilibrium in a perfectly competitive market price equals minimum average cost and hence marginal cost.

Free entry and exit also lead to zero profit in a monopolistically competitive market. In this type of market, due to economies of scale (or increasing returns to scale), each firm offers a distinct variety of the good. That is, each firm has a monopoly over its own variety or brand of the product. Despite such monopoly power, they cannot earn more than zero supernormal profit. This is because, if each firm charges price for its variety above the average cost and earns positive profit, new firms with new varieties will enter the market. Since all varieties are very close substitutes, a few consumers will switch to these new brands if prices for them are lower than the existing brands. As a consequence existing firms also lower prices for their brands. At equilibrium, all prices must equal average costs and consequently all profits must be zero. The only difference from perfectly competitive equilibrium is that equllibrium price in this case will be strictly greater than the marginal cost. This has far reaching implication for social welfare, as we will see later.

Does the above discussion mean that restricted entry will lead to positive profits for the existing firms? Not necessarily. Consider a market where initially there are two identical firms, and further entry of firms is prohibited. If the incumbent firms produce identical good, and compete in prices, the market price will be equal to their (common) marginal cost and accordingly both will earn zero profits. This is the case of homogeneous-good Bertrand duopoly (or oligopoly, if there are more than two firms in the market). For example, suppose firm 1 charge Rs. 20 per unit and firm 2 charges Rs. 15 per unit. Since they produce the same good, "all" consumers will buy the good from firm 2. Thus, firm 2 serves the entire market, provided of course it has no capacity constraint to meet the market demand at that price. Accordingly, firm 1 cannot earn positive revenue and profit. Moreover, both the, firms cannot have positive market shares unless they charge the same price. Now suppose the marginal cost is constant and is identical for both. Let it be Rs. 10. If the same price that they charge is above this, anyone of them can serve the entire market and still can make positive profit by charging a slightly lower price than the other. Such incentive exists for both for any price above Rs.10. Hence equilibrium price must be equal to the marginal cost. This result is independent of the number of firms. Therefore, price competition among firms producing identical good with identical technology (i.e., identical marginal cost), leads to perfectly competitive solution. This is known as the *Bertrand paradox*. Even if entry is restricted and firms have market power, the profit that each can make at most is zero.

Three qualifications of this result are possible. First, if the firms produce differentiated products, such as computer systems produced by IBM and Hewlett-Packard, they can charge different prices that are above the respective marginal costs and yet can have positive market shares and profits. This market structure is called *differentiated Bertrand* oligopoly. Of course, firms can make strictly positive profits even when entry is free, provided the entrants produce varieties that are not close substitutes of those existing in the market.

Second, even with identical products, there can be positive profits for the oligopolistic firms if they have different technology and hence marginal costs. Suppose, in our earlier example, firm 2 has a lower (constant) marginal cost equal to Rs. 8. If it charges a price slightly lower than Rs. 10, the marginal cost of firm 1, firm 1 cannot

have positive market share by charging any other price and hence shuts down. Firm 2 thus captures the entire market and earns strictly positive profit.

Third, if the firms compete in output levels (or market shares) instead of in prices, and sell the good at the *market clearing* price corresponding to their total production and supply, both firms make strictly positive profits. Of course, firms might choose their output levels simultaneously or sequentially. Augustin Cournot studied the oligopolistic market where firms choose their output levels simultaneously in 1838. Each firm chooses its profit-maximising output level for each level of output of its rival. This constitutes the best response of the firm for a given level of rival output. The rival decides over its own best response in the similar way. On the other hand, when one firm chooses its output level before its rival chooses her output level, we have a leader-follower market structure. This was studied by Stackelberg. In any case, whether it is Cournot competition or Stackelberg's leader-follower game, firms always earn strictly positive profits. In Cournot competition, firms earn same profit if they are symmetric and as the number of firms increases to infinity price tends to equal to marginal cost, whereas in the Stackelberg's (output) leadership model, the leader (i.e., the first mover) earns higher profit than the follower (i.e., the second mover). Thus, under quantity competition, restricted entry does generate market power and positive profits for the incumbent firms.

What emerges from the above discussion is that whether restricted entry implies market price above the marginal cost and consequent positive profits for the firms, depends on : i) nature of product, differentiated or identical; ii) nature of competition, price or output; and iii) nature of technology.

17.2.2 Barriers to Entry and Monopoly

A monopolistic market is one where a single firm operates. The source of such monopoly power is related to barriers to entry. Economic Theory distinguish between three types of barriers to entry:

i) Artificial or legal barrier, e.g. patents

ii) Natural barrier, e.g. high fixed cost

iii) Strategic barrier, e.g. limit pricing

A monopoly situation might arise due to restricted entry such as patent right granted to the first innovator of a new product or license granted to only one firm for production and sale of a good. Sometimes the monopolist might seek patents for substitute products as well not for their production but just to forestall indirect competition from potential producers of those substitute goods. These are called *sleeping patents*. Alternatively, there might not be an artificial barrier to entry, but technology might allow only one firm to operate and make non-negative (supernormal) profit, so that no other firm enters the market. This is the case of natural monopoly. Another way a market can be monopolised by a single firm is where the firm (either the first entrant or the incumbent) itself erects barrier to entry by some aggressive price strategy.

Conceptually, the strategic barrier is often distinguished from other two types by labelling it entry deterrence. The distinction between entry-deterrence and entry-barrier is not without problems. In many cases, it is hard to find whether the conditions leading to entry are external to the firms or are created by the incumbent firms.

Let us begin with the pricing rule of the monopolist in case of an artificial or legal barrier to entry in the form of patent right. With exclusive product patent right, for

whatever reason, the monopolist is not worried about any potential entrant attracted by the positive profit that it might earn. Given such entry barrier, the monopolist sets price and output at levels that maximise its profit, and such levels correspond to the equality between marginal revenue and marginal cost. To see why this maximises profit, note that marginal revenue is addition to total revenue when an additional unit is sold whereas marginal cost is the additional cost incurred to produce that additional unit. If marginal revenue exceeds marginal cost, production and sale of the additional unit is profitable and profit *increases*. The monopolist thus expands production. On the other hand, if marginal revenue is smaller than marginal cost, the firm loses from production and sale of the additional unit. Profit falls and the firm lowers its production. When marginal revenue and marginal cost are equal, profit neither increases nor decreases and hence there is no incentive for the monopolist to change the output level. Figure 1 illustrates the equilibrium of the monopolist. It sets the price at P_m and output at X_m corresponding to the point where the marginal revenue curve cuts the marginal cost curve. The profit that it earns equals the striped region.

In the same figure is shown equilibrium in other market structure as well. In a perfectly competitive industry as well as under Bertrand competition (with homogeneous or identical product), price equals the marginal cost, c, with industry output equal to X_{PC} (or X_B). The price under output (or Cournot) competition, on the other hand, is strictly greater than the marginal cost, but is less than the monopoly price. Thus though the firms make positive profits, such profits are smaller than the monopoly profit.

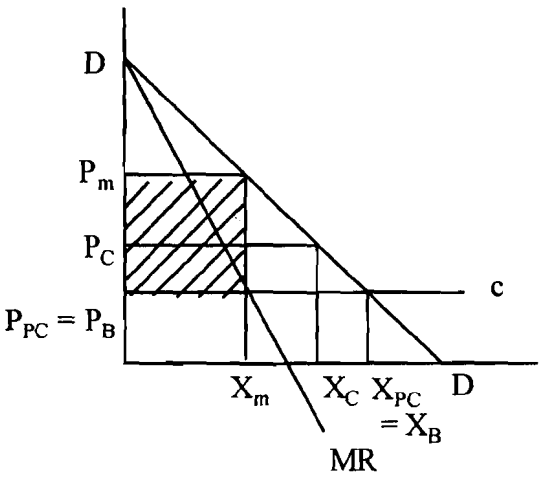

Figure 1: Equilibrium in different market structure
M: Monopoly; C: Cournot;
B: Bertrand; PC: Perfect Competition
MR: Marginal Revenue

What follows from Figure 1 is that the output in a monopolistic market is lowest. But there are some exceptions to this result, particularly when the monopolist discriminates between consumers or between each unit purchased in terms of prices charged instead of the above uniform pricing rule.

For many industries, fixed costs constitute a major proportion of total cost of production. Costs involving setting up of plants such as in telecom and power industries, setting up of rail tracks, signal posts, stations and overpass in case of railway industry are examples of huge fixed costs of production. These costs themselves are often natural barriers to entry and hence source of monopoly power. To fix this idea, consider a market where initially there was a single firm charging the monopoly price Rs.8 per unit, supplying 15 units and earning a gross profit (total revenue less total variable cost) worth Rs. 100. Let the fixed cost be Rs. 80. The

firm thus earns a net profit worth Rs. 20. If the firm has no exclusive product patent and there is no entry cost, then other firms being attracted by this positive net profit will enter the industry. Suppose one firm decides to enter. Now once it enters, quantity competition will drive down the market price and hence gross profit to be realised would fall below Rs. 100. If such lower gross profit covers the fixed cost (i.e., does not fall below Rs. 80), the potential entrant will enter. Otherwise it will not enter and the incumbent firm maintains its monopoly position despite unrestricted and costless entry. This is the case of natural monopoly as we see in telecom industry. Natural monopoly means High fixed cost continuously falling average cost curve. Suppose incumbent (I) is producing a large output. (i) If entrant matches this, it will benefit from low cost but market price will plunge. (ii) If it enters on a smaller scale, market price may not fall too much, but it suffers from a cost disadvantage.

But when the gross profit for the entrant after quantity competition is above Rs. 80, the firm enters. The incumbent firm's net profit falls and let it be Rs.5. Anticipating such loss of profit after entry, the monopolist might charge (before entry actually takes place) a price below the monopoly price Rs.8 (that it could charge in absence of any entry possibility). Such a price may not be consistent with short run profit-maximising behaviour, but certainly may be consistent with its long run goal of maintaining the monopoly position. For example, suppose when the incumbent sets the price at Rs. 6 and sells 18 units before entry (and thus earns Rs. 98 as gross profit), entry by a firm lowers gross profit for both through quantity competition just below Rs. 80. The entrant in such a case does not find it profitable to enter because this would cause it a loss. Once again the incumbent enjoys monopoly position but now charging a price that prohibits entry. This is the case of limit pricing (strategic barrier to entry) discussed first by Bain and Sylos-Labini.

17.2.3 Trade Policy and Industrial Competition

Trade policies, like industrial policies, are a source of market power for the domestic firms. Restrictive trade policies essentially eliminate competition from foreign firms who might be technically more efficient or might have better product range to offer. An import quota, which does not allow foreign firms or quota-license holders to sell more than a stipulated amount in the domestic-country market, is a typical example. This is illustrated in Figure 2.

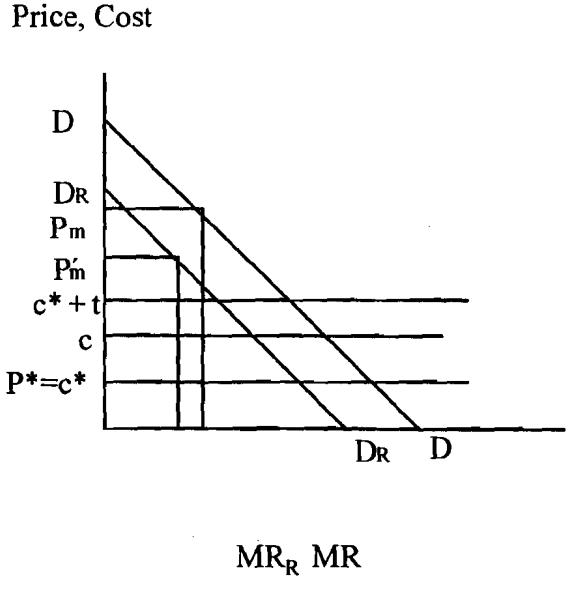

Figure 2: Trade Policy and Market Power

Suppose before trade there was only one domestic firm operating in the market charging the price P_m. Suppose the world market is perfectly competitive so that the

world price equals the foreign marginal cost, c*, which is lower than the domestic firm's marginal cost, c. When foreign firms are allowed to enter this market, price drops to $P^* = c^*$, and the domestic firm shuts down. But suppose there is an import quota that allows only D_RD amount of the good to be imported. This enables the domestic firm once again to enjoy monopoly position in the residual market indicated by the residual market demand curve D_RD_R though its profit falls a bit as it can now charge a lower price P'_m than before.

An import tariff, on the other hand, does not necessarily enable the domestic firm to maintain its monopoly position. It is less restrictive than the import quota. This is because an import tariff per unit of imports raises only the marginal cost to $c^* + t$ (see Figure 2) but does not restrict the amount to be sold. Hence the domestic firm can charge at most $c^* + t$. For any price higher than this, it cannot have positive market share. Of course, by charging the price $c^* + t$, the domestic firm can still make positive profit but that is strictly lower than the monopoly profit (before trade) unless the tariff is very high so that $c^* + t$ exceeds the monopoly price P_m.

Check Your Progress 1

1) Tick mark (✓) the correct answer :

   a) In a perfectly competitive market firms earn zero super-normal profits because,

      i) they produce identical good

      ii) there is free entry and exit

      iii) both (i) and (ii)

      iv) economies of scale

   b) When two firms produce differentiated products and compete in prices. they earn

      i) zero profits

      ii) strictly positive profits

      iii) same profit

      iv) positive and different profits

2) Identify the different types of entry barrier. (Answer in one sentence.)

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3) Argue whether the following statements are true or false:

   a) A first-degree discriminating monopolist produces same level of output as a competitive industry.

   b) An import quota turns a domestic firm into a monopolist.

17.2.4 Strategic Alliance, Mergers and Acquisitions

When firms decide to enter a market, the choice of mode of entry becomes very important. Such a choice includes the choice between setting up of own subsidiaries and entering into some strategic alliance (like joint venture) with the incumbent firm. Sometimes the entrant might go for a merger with or acquisition of one of the incumbent

firm. Of course, the incumbent firms also face similar choice problem when entry barriers (natural, artificial or strategic) are either absent or ineffective: whether to compete with or to get into a strategic alliance or merge with the entrant. In fact sometimes, strategic alliances might be more profitable than strategic barriers like limit pricing.

A strategic alliance may be broadly defined as an association of two or more firms. Of course, participation in such alliance must be voluntary, i.e., must be profitable. The most dominant type of such alliance is joint venture, where firms unite to pursue a set of agreed upon targets (such as research and development, production and marketing) through a separate entity, the joint venture firm, but both remain as independent units subsequent to the formation of alliance. The partner firms share the benefits of alliance and control over the performance of the assigned tasks in some mutually agreed upon fashion. Franchising, patent and know-how licensing, and technical training agreements are some other examples of strategic alliance.

There are quite a few benefits from strategic alliances. These include reducing competition, achieving lower average costs by spreading the fixed cost of production over a larger volume of production and achieving technological synergy through exchange of know-how. Apart from these incentives, strategic alliances are often the outcome of policies of the local government regarding entry of foreign firms. The government policies sometimes explicitly require foreign firms to have at least one domestic partner or that at least some components of the product be produced locally.

Strategic alliances are mechanisms through which firms can hope to gain from cooperation than from competition. But at the same time, in many situations, there are incentives for *unilateral* deviations from the agreement. For example, referring back to Figure 1, suppose firms in a market agree upon a price collusion whereby all of them will charge the monopoly price and share the corresponding demand equally. But, if any one of them deviates from this agreement by charging a price slightly below the monopoly price and thereby capturing the entire demand corresponding to that price, its profit increases (in fact, is very close to the monopoly profit). It is, therefore, profitable for the firm to cheat. Similar incentive exists for other firms. As soon as everyone deviates, assuming that others will abide by the agreement, price competition will ensue causing price to fall to the level of the marginal cost. The alliance breaks down and everyone becomes worse off.

The key to strategic alliance, therefore, is designing schemes that reduce the incentives for cheating or deviating from the agreement. Economic theory suggests that, when there is a possibility of repeated interactions between firms for infinite period of time, punishment strategies such as tit-for-tat strategy (where cheating by one firm is followed by non-cooperation by others and cooperation is rewarded by cooperation by all) and *trigger strategy* (where cheating is punished by non-cooperation forever thereafter) can ensure cooperation by partners and hence sustain strategic alliance.

Joint ventures have some additional problems. Problem of ownership and control of the partner firms over the joint venture unit often contributes to breakdown of such alliances. A joint venture gives partners stake in the outcome. Partners have financial stakes as well as share in risks. It is often argued only 50: 50 joint ventures can survive in the long run, otherwise conflict over control dooms it. Cultural problems are also a critical factor. Local partners often allege that multinationals are not willing to take into account local conditions and sentiments and fail to appreciate local business practices. Local partners, on the other hand, often lack the kind of dynamism and innovation that multinationals look for.

Merger and acquisitions are also important modes of entry by firm, particularly, the foreign firms. In merger, the firms cease to operate as a separate entity. The terms merger, takeover, acquisitions and integrations describe a situation where independently owned firms join under the same ownership. There are three broad classifications of mergers:

1) *Horizontal merger*, where firms in the same industry, producing identical or similar products merge.

2) *Vertical merger*, where a firm producing an intermediate good or input merges with a firm producing the final good using that input.

3) *Conglomerate merger*, where firms producing less related products merge under same ownership.

Of course, a merger takes place primarily because it reduces competition between the merged firms and the other firms in the industry, thereby increasing the profit of the merged firms. Note that if merged firm's profit does not increase over the total profit in the pre-merger state, merger is not profitable and, therefore, should not take place. Under such situations, firms would be better off if they do not merge.

Check Your Progress 2

1) List the benefits of a joint venture.

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2) What are the broad classifications of merger? (Answer in one sentence.)

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3) Distinguish between joint venture and merger. (Answer in two sentences.)

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17.3 COMPETITION AND CONCENTRATION IN INDIAN INDUSTRIES

In this section, the extent and nature of industrial competition in India is discussed. Conceptually, we must distinguish between two phases. First is the pre-reformperiod and the second is the post-reform period. The reason for such watershed around 1990-91, the year in which the economic reform programmes were initiated, is that such reform policies facilitated mergers and acquisitions including cross-border,

mergers. As a result, incidences of mergers and acquisitions have boomed over the past few years. In contrast to nearly all of foreign direct investment flows to India taking the form of projects until early 1990s, a substantial proportion of current investment flows takes place in the form of acquisition of existing enterprises in the economy.

We begin our discussion with empirical estimate of the industrial concentration in the following sub-section and then present the Indian scenario regarding concentration. Finally, in the last sub-section some examples of strategic alliances and of merger and acquisitions are provided.

17.3.1 Herfindahl Index of Concentration

The Herfindahl Index of Concentration is a summary statistics denoting the level of concentration of the market share. The index takes the values between 0 and 1, where the value 0 indicates no concentration of firms at all, and the value 1 indicates a monopoly situation. If there are N firms in an industry, then the Herfindahl Index is sum of squares of market shares of these N firms:

The Herfindahl Index uses information of all companies and is not limited to just a few companies as in the case of alternative measures such as N-firm concentration ratio.

17.3.2 Concentration of Indian Industries

Table 17.1 given below, shows Herfindahl Index of concentration measure in three industries in India: food and beverages, electronics and automobiles. Years of reference are 1992-93 to 1997-98. Food

Table 17.1 : Concentration of Firms in Select Industries in India

Industries	Herfindahl Index
I. Food & Beverages	
Vegetable oil	0.003
Sugar	0.002
Tea	0.061
Coffee	0.028
Buiscuits	0.119
Infant milk foods	0.669
Icecreams	0.578
Bread	0.528
Wafers, potato chips	0.513
Break-fast cereals	0.442
Cigarettes	0.591
Wines & liquors	0.080
II. Electronics	
Computers & peripherals	0.082
TV picture tubes	0.173
Photo copying machine	0.785
Telephone instruments	0.292

III. Automobiles	
Passenger cars	0.589
Motorcycles	0.257
Scooters	0.336
Three wheelers	0.609
Mopeds	0.323

Source: Centre for Monitoring the Indian Economy.

and beverages is the largest group of manufacturing industries in India with an estimated market size of Rs. 70, 243.5 crore. Industries like infant milk products, ice creams wafers and breakfast cereals are highly concentrated. But domestic firms in vegetable oil, sugar and tea industries are very dispersed. The cigarette industry is also quite concentrated.

The electronics market in India is dominated by imports. In some cases, share of imports is as high as 86 per cent. Except in the photocopying machine industry, in general competition among domestic firms is intense and concentration is very low.

At the other extreme lies the automobile industry. Competition from imports is insignificant. Despite quite a number of new entrants the domestic firms in the industry are highly concentrated and there has not been any significant increase in the concentration ratio. On the other hand, concentration has increased to a substantial extent in the moped sector.

17.3.3 Joint Ventures, Mergers and Acquisitions in India

There have been quite a large number of joint ventures in Indian industries, particularly with the foreign firms. As mentioned above, joint venture is often a preferred mode of entry for the foreign firm. In India, however, this has been directed by government regulations. That the government stipulations rather than profitability might have directed foreign firms to enter into joint ventures with the Indian firms, is to some extent evident from their breakdown after a few years of forming the ventures.

Indian automobile industry has witnessed quite a few successful joint ventures. For example, the Maruti Udyog Ltd. between Government of India and Suzuki Corporation, Japan; Mercedes-Benz India between Tata Group and Daimler Benz of Germany; joint venture between DCM and Daewoo; LML-Piaggio between LML India of Singhanias and Piaggio, Italy. The lubricant industry is another sector dominated by joint ventures though the immediate prospect does not appear too alluring. The notable ventures have taken place between Indian Oil and Mobil, HPCL and Exxon, BPCL and Royal Dutch Shell. Another sector witnessing joint ventures is electronics. In Rs. 787 crore joint venture Whirlpool India with J.R. Desai and Associates, the US-based Whirlpool Corporation had a 56 per cent stake in mid-1990s. Modi-Xerox between Modi and Xerox Corporation is another quite well known joint venture.

The policy regime in the 1990s has greatly liberalised the possibility of industrial restructuring through mergers and acquisitions removing the restrictions under the Capital Issues Control Act, MRTP and Companies Act. As a result, mergers and acquisitions have increasingly been employed by Indian industries for consolidations of their operations. The new *DFI* policy and abolition of FERA regulations also facilitated acquisitions by multinationals. Apart from mergers and acquisitions by

new foreign firms, there have been quite a few takeovers of the previous joint ventures by the foreign partners. In computer systems and peripherals, for example, the joint venture between Tata and IBM was taken over by IBM in 1999. The other notable examples of takeovers of joint ventures by foreign partners are advertisement giant Bates Worldwide buying out Bates Clarion in January 2000 and in publishing industry McGraw Hill buying out Tata- McGraw Hill in April 1996.

Table 17.2 below indicates that during 1997-99, nearly 40 per cent of the DFI inflows in India have taken place in the form of mergers and acquisitions. This is in sharp contrast to almost all DFI flows taking the form of subsidiaries until 1990s.

Table 17.2: Share of Mergers & Acquisitions in DFI in India

	DFI Inflows ($ million)	Share of M&A in DFI
1997	3200	40.6
1998	2900	34.5
1999*	1400	35.7
Total	7100	39.4

Note : * January-March

Source : Economic Times, June 1999

The growth of mergers and acquisitions in the 1990s, on the other hand, is shown in Table 17.3 below.

Table 17.3: Mergers & Acquisitions in India

	Mergers	Acquisitions	Total
1993-94	4	9	13
1994-95		7	7
1995-96		12	12
1996-97	2	46	48
1997-98	4	61	65
1998-99	9	60	69
1999-00	198	1297	1495
2000-01	287	1188	1475

Source: Kumar, 2000.

CMIE, Various Issues.

Though majority of the mergers and acquisitions has taken place in the manufacturing sector, services such as banking and finance, accounting and management consulting, travel related services and advertisement have become quite important in recent years. In these sectors, foreign companies are trying to get into the business primarily through acquisitions. In the manufacturing sector, mergers and acquisitions by foreign companies are heavily concentrated in food and beverages, household appliances and pharmaceuticals. The most vivid example is that of Coca-Cola, which upon re-entering the country in 1993 acquired Parle that had nationwide bottling and marketing network.

Check Your Progress 3

1) State whether the following statements are true or false :

   a) Herfindahl Index measures number firms in an industry.

   b) Indian automobiles sector is highly concentrated.

2) What are the important joint ventures that have taken place in the Indian automobiles industry?

3) Tick mark (✓) the correct answer :

   a) During 1997-99, share of mergers and acquisitions in the DFI inflow in India was,

      i) nearly 40 per cent

      ii) 20 per cent

      iii) 30 per cent

      iv) more than 50 per cent

   b) Majority of the mergers and acquisitions has taken place in,

      i) banking and finance

      ii) manufacturing sector

      iii) accounting and management consulting

      iv) automobile sector

17.4 LET US SUM UP

Technology, nature of product characteristics and trade and industrial policies define the market power of firms and hence different market structures, such as perfectly competitive market, monopolistically competitive market, oligopolistic market and monopolistic market.

Strategic alliances (such as joint ventures), mergers and acquisitions, takeovers and buyouts, are other conducts of firms that are intended to reduce competition. For foreign firms entering the Indian market, these constitute different forms of entry. In fact, after initiation of liberal foreign trade and investment policies in India in the early 1990s, there has been a phenomenal increase in the incidences of mergers and acquisitions of Indian enterprises by the foreign firms.

17.5 KEY WORDS

Economies of Scale: A situation in which the average cost of production declines when plant size and output are increased.

FERA: The Foreign Exchange Regulation Act (FERA) empowered the Reserve Bank of India to regulate activities of foreign companies and foreign nationals in India.

Joint Venture: In a joint venture firms unite to pursue a set of agreed upon targets (such as research and development, production and marketing) through a separate entity, the venture firm, but both remain as independent units subsequent to the formation of alliance.

Merger and Acquisitions: These describe situations where independently owned firms join under the same ownership.

N-firm Concentration Ratio: Suppose there are M firms in an industry. After indexing these companies according to decreasing value of their market shares,

$$s_1 > s_2 > S_3 > \ldots\ldots > s_N > s_{N+1} > \ldots\ldots > s_M$$

when we take the sum of market shares of first N firms in this ranking, $I_N = \sum_{i=1}^{N} S_i$, we get the N-firm concentration ratio.

Price Discrimination: Charging different prices for different units purchased or charging different consumers different prices for same units bought.

Strategic Alliance: It may be broadly defined as an association of two or more firms.

Super-Normal Profit: Revenue in excess of all accounting costs (such as labour payments, raw materials cost, rental, etc.) and implicit costs (such as, opportunity cost of entrepreneurship, own capital etc.).

17.6 SOME USEFUL BOOKS AND REFERENCES

Acharyya, Rajat and Bhaswar Moitra,(eds.) (2001). *Effects of Globalization on Industry and Environment*, Lancer's Books, New Delhi.

CMIE, (1999). *Industry: Market Size and Shares*, Centre for Monitoring Indian Economy, August.

Kumar, Nagesh, (2000). "Mergers and Acquisitions by MNEs: Patterns and Implications", *Economic and Political Weekly*, August 5.

Oz Shy, (1995). *Industrial Organization*: *Theory and Application*, MIT Press.

17.7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) a) iii b) ii

2) Read Sub-section 17.2.2

3) a) True b) True

Check Your Progress 2

1) Read Sub-section 17.2.4

2) Horizontal merger, vertical merger and conglomerate merger.

3) Read Sub-section 17.2.4

Check Your Progress 3

1) a) False b) True

2) Read Sub-section 17.3.3

3) a) i b) ii