



WORKING PAPER

Working Paper No. 36

A STUDY OF PRODUCTION CONCENTRATION
IN INDIAN INDUSTRY - A STATISTICAL
ANALYSIS OF STRUCTURE

Padmini Swaminathan

MADRAS INSTITUTE OF DEVELOPMENT STUDIES

79, SECOND MAIN ROAD, GANDHINAGAR, ADYAR

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A Study of Production Concentration in Indian Industry - A Statistical
Analysis of Structure

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A. Introduction

At the inception of planning in 1951, India opted for a 'mixed' economy, which, in a nutshell tries to combine the "initiative" and enterprise of capitalism with the discipline and distributive justice of socialism". In the successive Five - Year Plans launched in India and specially since the Second Five - Year Plan, the emphasis has all along been on the need to rapidly industrialize the country to tide over many of its seemingly insurmountable problems. The stress on industrial growth does not imply that sustained growth cannot be achieved, by say, the development of agriculture or that the development of the latter is not a precondition for the development of industry. All said and done sustained economic growth will eventually have to turn to industry, for sooner or later, potentialities of agricultural expansion would have been exhausted.

Reviewing the progress of the industrial sector from 1950-51 to 1977-78 the Draft Sixth Five-Year Plan (Revised) stated: "In the industrial sector the major achievement has been the diversification of India's capability, the public sector playing a leading part. However, this pace of industrialization, has not been bought cheaply. The concentration of economic power has increased in the sense that within the corporate power the assets of the bigger corporations have increased more rapidly"¹. The Draft also admits that the various policy measures taken by the government such as the MRTP Act, 1969 and the Licensing Policy have not curbed concentration, while, inspite of policies like the FERA, foreign companies have continued to expand. Nay, in some industries like drugs and pharmaceuticals and a few other consumer goods industries foreign companies continued to be dominant.

1 India, Government of: Draft Sixth Five-Year Plan (Revised) 1978-83
Planning Commission, p3

Thus the pace of industrialization has been accompanied by an increase in the "concentration of economic power" such that one is forced to endorse of Edward Mason's conclusion that "the industrial sectors of the less developed countries are almost invariably areas of high concentration. Industry by industry the share of the market occupied by the largest firms tends to be higher than in the developed countries such as the US and England - the traditional homes of monopoly capitalism".²

Broadly "economic power" refers to the power conferred on individuals firms/business houses (and therefore their ability to influence) by virtue of their control over economic resources. In the industrial field to which our discussion is confined, the manifestations of economic power are many and varied. One such manifestation is the way in which one or more units in an industry acquire such a dominant position that they are able to control the market by the regulation of prices or output or by eliminating competition. But even if a dominant position is not held, producers may adopt practices that restrains competition and thereby prove prejudicial, to public interest "Economic power may also manifest itself in obtaining control of large areas of economic activity, by a few industrialists by diverse means. Apart from affecting the economy of the country, this often results in the creation of industrial empires tending to cast their shadows over political democracy and social values".³

It is the concentration of economic power which is the central problem; monopolistic and restructive practices are the consequences resulting from the abuse of such power and may therefore be considered as "functions" of such concentration. Analytically, two kinds of control can be distinguished: one is control of the market by one or more producers; the other is control of large areas of the economy by a few industrialists/business-houses. The two are not necessarily unrelated; more often than

2 Mason, Edward, "Monopolistic competition and the growth process in Less Developed Countries: Chamberlin and the Schumpeterian Dimension", in Kuene, R.E (Ed), Monopolistic Competition Theory: Studies in Impact, New York, 1967, p 82

3 India, Government of : Report of the Monopolies Inquiry Commission, Volumes I and II, 1965, pl

not they are complementary with one reinforcing the other.

The Monopolies Inquiry Commission (MIC), distinguished between two main kinds of concentration: product-wise concentration - where the production of a commodity is controlled by a single concern, or, correspondingly limited number of concerns - and, country-wise concentration where the production and/or distribution of different commodities is in the controlling hands of one individual or family or group of persons.

This study attempts an analysis of product-wise concentration since the publication of the Report of the MIC, 1965. The MIC was the first of its kind that dealt with the phenomenon of product-wise concentration. Its study gives the concentration picture for 1964 for 1298 products arranged under various industrial groups. Since 1964, however, there has not been a systematic investigation into this aspect of concentration. The emphasis generally has been on country-wise concentration and very often rightly so in the context of Indian industrial development given the peculiar institution of Business-Houses with their many and varied activities. Those who lament about the increasing concentration in the economy generally refer to the rapid growth in assets or sales or paid-up capital of the top Business-Houses over a period of time. To the best of our knowledge the aspect of product - concentration has not merited any attention since 1964.

In 1970 the Department of Company Affairs undertook a study of product concentration. The exercise revealed that out of 349 products, 312 products showed high concentration in the sense that the top three manufacturers in these products accounted for 75 percent or more of production. Further, out of 249 commodities covered in the study and also listed in the Report of the MIC in 1965, 207 items showed high concentration both in 1964 and in 1970. The details of the study have not been made public. Hence the actual products studied is not known which would otherwise have facilitated some sort of comparison.⁴

4. Lok Sabha Answer to Question No.1263, Answered on November 20, 1973.

Quoted in Company News and Notes, XII, January 1974 p 66-67

Studies subsequent to the MIC have not attempted to establish any kind of linkage or relationship between 'country-wise' and 'product-wise' concentration. It is our contention that for a proper appraisal of 'concentration of economic power' obtaining in the Indian economy, one needs to study both 'country-wise' and 'product-wise' concentration. Our emphasis is therefore on this particular aspect of concentration (that is product-wise) which we believe provides an important clue to the kind of production-structure that has emerged in the Indian economy.

B. Methodology and scope of the study

This study aims at any examination of Indian industry by presenting a picture of product-concentration from 1975 through 1980 and comparing it with the findings of the Monopolies Inquiry Commission for 1964. We have analysed the structure of Indian industry with reference to the number of firms producing a particular product and the extent or degree of market control they possess as reflected in their share in production of a particular product. We have retained the criteria adopted by the MIC to ascertain 'degree of concentration'. The Commission considered concentration to be high where the share of the top three enterprises was 75 per cent or more, medium where this share was more than 60 per cent but less than 75 per cent and low where the share was more than 50 per cent but less than 60 per cent; where the share of the top 3 enterprises was less than 50 per cent, concentration was deemed to be nil.

The primary method of examining concentration in this study is the concentration ratio. Since the actual market shares (in terms of output) of the leading firms in each of the products has been computed we hope to take care of Gort's complaint⁵ that high concentration ratios do not reveal any instability that might prevail in the market shares of individual firms, furthermore, it is more than a decade since the MIC published its findings. Our computation of concentration ratios for the years 1976 through 1980 would indicate the extent to which leading firms have been /

5. Gort, M: "Analysis of stability and change in Market Shares", Journal of Political Economy, LXXI, 1963

have not been able to maintain their relative position in a market, thus answering Gort's second point of criticism, namely, that the ability of leading firms to maintain their relative position in a market is probably more significant than the extent of concentration at a single point of time.

This study does not pretend to resolve the problem of devising satisfactory operational definitions of competition and monopoly. In the absence of definitive studies of this problem and general agreement on conclusions some arbitrariness in definition is unavoidable. As already stated earlier, data on output concentration is our principal structural variable. This choice is made for two reasons. First, it enables us to compare our findings from 1976 to 1980 with that of the MIC in 1964. Second, output data is more readily available than any other variable both from official and non-official sources. However, we have gone further than the MIC and computed concentration ratio, in terms of productive capacity also.⁶ The significance of presenting capacity figures specially for undertakings that are "dominant" in production is to judge the stability of this dominance. In other words, mere dominance in production could be a transitional phenomenon. Our data on productive capacity would, consequently, reveal, whether for the leading enterprises, dominance in production is reinforced by dominance in productive capacity.

The MIC report indicates that a large number of the firms holding monopolistic positions in individual products belong to one or the other of the identified business groups. To gauge the control that big business groups have in the supply of various products we have tried to identify, the business house connections of the firms that form part of our study. Our contention is, that, what matters in the Indian context is the expansion of the same firms from one market into another and the interlocking of the different sectors of the economy in powerful blocks of unified control, for it is these that determine the level and the direction of investment and thus of aggregate growth. It is easily understandable that once this modus operandi of monopoly is ignored, one should find, as many empirical studies have done, that the concentration ratios of isolated industries are often stable over time. In fact, it is not difficult to show that if a small group of oligopolists is represented simultaneously in different markets, monopoly in the meaningful sense may increase while the degree

6. Aspect of concentration in productive capacity discussed in a forthcoming paper

of concentration need not and may even decline.

Our study covers a total of 51 products which form 17 per cent of the total weight of industrial products in the country. These 51 products have been chosen from a selected list of 70 products, brought out by the DSTD as being important from the point of view of the industrialization of the economy. The reason why we had to leave out 19 products from the list of 70 is due to the non-availability of data on a unit wise basis.

Units registered with the DSTD have to furnish comprehensive data regarding all aspects - financial, physical etc. on a yearly basis. However, such information is not made available even for research purposes. One has therefore to depend on data provided in company Balance sheets. A Balance sheet, however, generally gives consolidated information for all units that come under a particular company. Hence, the data we have assembled refer to company data rather than plant data. This compares well with the MIC's data since the latter has also aggregated figures for identical products by units of the same concern. The official stipulation regarding the presentation of quantitative data in Balance sheets came into force in 1975. So as not to lend ourselves to the criticism that data confined to a particular year may be subject to extraneous fluctuations and may therefore be biased, we have collected information for a period of 6 years, 1975-1980.

C. Review of the findings of the MIC on product-concentration for the year 1964

An analysis of the MIC's study on product-concentration revealed that of the 1298 products studied, 1131 products or about 87 per cent revealed high concentration, in the sense that the share in production of the top 3 producers was 75 per cent or more. Of the 1131 products where high concentration obtained, in as many as 814 products or 72 per cent of the total, the total production was exhausted by upto 3 producers. Of the 814 products where the total production was exhausted by upto 3 producers, in as many as 426 products or 52 per cent of the total there was only one producer.

The MIC thus observed: "Our study of product concentration brings out prominently the fact that in a large number of industries a single undertaking is the sole supplier, or at least has to its credit a very large portion of the market as compared with its competitors". The explanation that the MIC gave for the prevalence of product-wise concentration are many and varied.

(a) One reason given was that "when a pioneering enterprise ventures into the production of a new commodity it generally happens that for sometime at least it is, the only producer so that concentration is 100 per cent. However there are almost always other entrepreneurs ready to take advantage of the pioneer's experience and to venture into the new line provided they expect a sufficiently profitable market for the new product. When this happens, concentration is reduced."

(b) The difficulty of finding the requisite amount of capital was given as a restraining factor.

(c) "A further potent restraint is often the necessity of obtaining an industrial licence and permission from the comptroller of capital issues".

(d) "The existence of a limited market may help the continuance of concentration".

The MIC's method of data-collection, product classification and subsequent conclusions would amount to pronouncing that monopolistic or oligopolistic markets are the rule in Indian industry.

The limitations of the MIC's study

It would be pertinent to record here the difficulty that the MIC faced when it set out to collect data. While statistics of production were made readily available by the DGTD, another Department of Government the Central Statistical Organization whose primary function is the collection of statistics of production refused to comply with the Commission's request giving 'certain legal difficulties' as an alibi.

The first limitation of the study is thus the inadequate coverage not so much in terms of the number of products as the actual production figures for each product. Some of the enterprises engaged in the production of certain commodities are not registered with the DGTD at all. Hence concentration ratios prepared on the basis of DGTD figures will not be a true reflector of the degree of concentration, specially in the cases of those commodities where small-scale production is considerable, example, leather and leather products, toilet articles like tooth paste, tooth powder, soaps etc.

Further the MIC does not segregate the cases where public sector is the dominant producer. Obviously the implications for policy in cases

where the public sector dominates will be quite different from cases where the private sector dominates.

Monopoly is defined in terms of the substitutability of products and of the control by the producer over as many of the close substitutes as possible.. The Commission has not only has anything to say on these aspects, but, what is worse, it has admitted "that several products which might be considered from the point of view of the economist as a single product have been classified as independent products by the DGTD".

D. Our approach to the problem of product-concentration

As mentioned earlier, our study covers a total of 51 products chosen from a selected list of 70 products brought out by the DGTD as being important from the point of view of the industrialization of the economy.⁷ The DGTD has classified these 70 products into basic, intermediate, capital and consumer goods industries. We have retained this four-fold classification.. Almost all the products that come within the first three categories, namely, basic, intermediate, and capital goods industries are by and large produced by large units in the organised sector and these units are also registered with the DGTD. Hence in the case of these 3 categories reliance on DGTD figures does not vitiate our conclusions regarding product-concentration. In the case of the consumer goods category in a few products there is substantial production in the small-scale sector which does not get reflected in DGTD figures. In such cases we have qualified our data and conclusion to make allowance for such production that is outside the purview of the DGTD.

The MIC measured concentration in terms of output. To make our data comparable with that of the MIC, we have also collected information showing the quantum of output produced by the top enterprises. For each of the 51 products we have calculated the absolute and percentage share of output produced by each of the enterprises producing the product. Our basic industry group covers 7 products, 6 of which were in the 'high' concentration

⁷ Lok Sabha Answer to question No.37. Answered on February 21, 1979.
Quoted in Assocham Parliamentary Digest. No.1, 19.2.1979 to 24.2.1979,
pp. 38-42

category in 1964. The intermediate industries category covers 20 products all of which were in the high concentration category in 1964. The capital goods sector has 11 products, all of which showed a high degree of concentration in 1964. The consumer good category has 13 products 11 of which were highly concentrated in 1964. The different products along with their respective weights are enumerated in Appendix 1.1. Appendix 1.2 gives a comparative picture of the degree of concentration obtaining in the 51 products a decade after the publication of the Report of the MIC. Our data cover the years 1975-1980.

E. Statistical Analysis of the structure of Indian industry.

1. Change in degree of concentration due to 2 or more enterprises (producing a particular product) being interconnected with the same business house, defined and identified as such under the MRTP act, 1969

In Table 1.1 we have given the products in which 2 or more enterprises belong to the same business house, along with the market shares of these enterprises for the years 1975-1980.

In Table 1.2 we have indicated the change in the degree of concentration of the above products consequent upon treating the enterprises belonging to the same business house as one unit.

Thus, in the case of 5 products (cement, styrene, viscose filament yarn, agricultural tractors, electric lamps) we find significant changes in the degree of concentration consequent upon enterprises producing the same product being interconnected with the same business-house.

TABLE 1.1.

Products in which 2 or more enterprises belong to the same Business-House

Sl.No. Product	Names of companies interconnected with the same Business-House	Name of the Business-House	Percentage share in production					
			1975	1976	1977	1978	1979	1980
1. Cement	1. Birla Cement Works	Birla	5.90	5.35	3.94	2.00	2.50	1.75
	2. Century Cement	Birla	1.43	3.31	3.72	3.40	3.80	4.07
	3. Kesoram Cement	Birla	1.69	2.59	2.70	2.90	3.90	4.04
	4. Mysore Cement	Birla	2.28	2.52	1.69	2.20	2.10	2.20
			11.30	13.77	12.05	10.50	12.30	12.06
2. Styrene	1. Synthetics and Chemicals	Kilachand	34.70	40.00	30.50	32.30	31.67	NA
	2. Polychem	Kilachand	47.40	45.50	47.00	41.59	34.57	NA
			82.10	85.50	77.40	73.89	66.24	
3. Viscose filament yarn	1. Century Rayon	Birla	29.13	26.50	23.34	25.86	25.02	25.61
	2. Kesoram	Birla	11.24	6.80	12.24	12.53	12.89	13.99
	3. Indian Rayon Corpn.	Birla	9.96	12.50	13.15	13.50	14.32	11.82
			50.33	45.80	48.73	51.89	52.23	51.42
4. Agricultural Tractors	1. Escorts Ltd.	Escorts	14.36	14.40	20.63	19.43	20.35	16.83
	2. Escorts Tractors Ltd.	Escorts	14.52	13.70	15.89	12.50	12.34	8.94
			28.88	28.10	36.52	31.93	32.69	25.77
5. Electric Lamp	1. ELMI	Philips	22.25	18.07	16.31	13.51	15.12	15.25
	2. Philips (Pieco)	Philips	12.65	16.13	15.57	14.51	11.79	12.54
			34.90	34.20	31.88	28.02	26.91	27.79

Source: Appendix 1.2 and Appendix 1.3

TABLE 1.2

Change in Degree of Concentration of Productions due to Enterprises belonging to the same Business-House.

Sl.No.	Product	Year	<u>Change in Market share of Top 3</u>		<u>Change in Degree of concentration</u>	
			From	To	From	To
1.	Cement	1975	46.78	53.26	N	L
		1976	49.26	57.97	N	L
		1977	45.95	53.24	N	L
		1978	44.90	50.90	N	L
		1979	44.68	51.78	N	L
		1980	42.64	49.60	N	L
2.	Styrene	1975	*		*	
		1976				
		1977				
		1978				
		1979				
		1980				
3.	Viscose filament yarn	1975	68.96	89.71	M	H
		1976	63.50	79.90	M	H
		1977	59.90	81.40	L	H
		1978	59.57	81.03	L	H
		1979	60.61	83.22	M	H
		1980	62.83	84.11	M	H
4.	Agricultural Tractors	1975	57.59	71.95	L	M
		1976	49.90	63.60	N	M
		1977	53.05	65.00	L	M
		1978	48.89	62.43	N	M
		1979	50.00	62.34	L	M
		1980	49.97	58.91	N	M
5.	Electric Lamp	1975	63.02	75.67	M	H
		1976	57.15	73.28	L	M
		1977	62.24	77.81	M	H
		1978	50.31	63.82	L	M
		1979	53.32	65.31	L	M
		1980	NA	NA		

* Since there are only 3 producers of styrene (the top 2 belong to the same Business-House) there is no change in the market share of the top 3 (which remains 100%) or in the degree

2. Number of products that show a high degree of concentration in 1964 and from 1975-1980

Table 1.3. gives the number of products that show a high degree of concentration in 1964 and from 1975 to 1980, as also the percentage of high concentration products to total number of products.

Table 1.3.

Year	No. of products	Number showing high degree of concentration	Percentage of high concentration to total number of products
1964	51	48	94.12
1975	51	46	90.19
1976	51	46	90.19
1977	51	46	90.19
1978	48	42	87.50
1979	46	40	86.96
1980	46	40	86.96

Between 1964 and 1980, the percentage of high concentration products to total number of products has declined from 94.12 per cent to 86.96 per cent.

3. Analysis of the Degree of Concentration

(a) Table 1.4. gives the break-up of the 'high' concentration products of 1964 and those of 1975 to 1980 according to their industrial categories.

Table 1.4.

'High' concentration category - Industry-wise

Industry Category	1964	1975	1976	1977	1978	1979	1980
Basic (7)	6	5	5	5	6	5	6
Intermediate (20)	20	18	19	18	18	19	18
Capital goods(11)	11	10	10	10	10	10	10
Consumer goods(13)	11	13	12	13	8/10	6/8	6/8
Total (51) [£]	48	46	46	46	42	40	40

Note: £ indicates total number of products

* indicates that in the years 1978, 79 and 80, the number of products for which data were available in the consumer goods category was 10, 8 and 8 respectively.

(b) Products where concentration has increased during the period 1975 - 80 as compared to 1964

Table 1.5. gives details regarding products where degree of concentration (as measured by the share in production of the top 3 enterprises) has increased in 1975-1980 as compared to 1964.

TABLE 1.5

Products in which there has been an increase in the percentage of concentration between 1975 to 1980 as compared to 1964.

Sl.No.	Products	1964	1975	1976	1977	1978	1979	1980
1.	Soda ash	95.25	-	-	-	96.61	97.66	97.92
2.	Viscose filament Yarn	64.80	89.71	79.90	81.40	81.01	83.22	84.11
3.	Grinding wheels	95.20	-	-	97.74	100.00		
4.	Air and Gas Compressors	83.10/2*	-	-	-		89.68/2*	92.82/2*
		80.10	-	-	-	82.45	81.71	90.43
5.	Commercial Vehicles	83.80	86.90	88.37	86.95	87.06	-	-
6.	Leather footwear	99.07	99.55	99.42	99.19	99.43	-	-
7.	Rubber footwear	75.20	92.17	91.79	93.49	87.22/2*	91.45	98.09
8.	Storage Batteries	87.90	-	-	-	-	-	88.53
9.	Domestic Refrigerators	89.20	90.70	91.20	91.84	NA	NA	NA
10.	Room Airconditioners	61.30	79.90	87.30	87.80	89.95	NA	NA
11.	Electric Lamps	68.70	75.67	73.28	77.81	-	-	-
12.	Cigarettes	83.80	84.22	86.76	86.82	86.86	-	-
13.	Toothpaste	77.60	89.90	89.88	91.04	NA	NA	NA

Note: * indicates the market share of the top 2 producers.

- indicates 'does not apply' for that particular year.

NA Not available.

There are 13 such products where degree of concentration has increased out of which the following six products have shown substantial increases (more than 5 per centage points) in concentration.

<u>Product</u>	<u>Percentage increase in 1980 as compared to 1964</u>
1. Viscose filament yarn	19.31
2. Grinding wheels	9.72
3. Air and Gas Compressors	10.33
4. Rubber footwear	22.89
5. Room airconditioners	28.65 [£]
6. Toothpaste	13.44 ^{**}

£ Data available only upto 1978

* Data available only upto 1977

In the case of 3 out of the above 13 products, where concentration has increased, the number of enterprises between 1964 and 1980 have gone down (Rubber and Canvas footwear, Room airconditioners and storage batteries). In 3 products, the number of enterprises have remained the same both in 1964 and 1980. (Viscose filament yarn, Soda ash, Domestic Refrigerators).

In 7 products there has been a marginal increase in the number of enterprises between 1964 and 1980 (Grinding wheels, air and gas compressors, Commercial vehicles, Leather footwear, Cigarettes, Electric Lamps and Toothpaste).

Appendix 1.3. gives the names of the top enterprises and the percentage share in production of each of these enterprises in 1964 and from 1975 to 1980.

From Appendix 1.3. it will be clear that in 9 out of the above 13 products, the top producer has increased his market share during the period (1975-80) as compared to 1964 (Soda Ash, Grinding Wheels, Commercial Vehicles, Leather footwear, Rubber footwear, Storage Batteries, Room airconditioners, Cigarettes and Toothpastes).

C) Products where concentration has decreased

18 out of our 51 products show a decrease in concentration, as measured by the share in production of the top 3 enterprises.

One explanation for the decrease in concentration could be the increase in the number of enterprises for a large number of these 18 products. This becomes apparent if we delve deeper into the details.

In the case of Aluminium, Bharat Aluminium a public sector undertaking, and Madras Aluminium with no share of the market in 1964 now have around 15 per cent and 12 per cent of the market respectively thus reducing the hold of the top two enterprises. In cement, the number of enterprises have increased from 18 in 1964 to 39 in 1980; but, while ACC continues to lead the market with slightly over 30 per cent of the share the rest of the enterprises have each less than 8 per cent of the market share. In BHC (Tech) whereas in 1964 there was no public sector, the public sector with 2 enterprises now holds around 15 per cent of the market while MICO Farm Chemicals, which also had no share in 1964 now has 15 per cent of the market, thus reducing the degree of concentration. Indian Explosives which was the sole producer of Industrial Explosives in 1964 now holds only 67 per cent of the market with the rest being contributed by the three new producers. In Automobile Tyres, Dunlop the leading producer in 1964 with slightly over 40 per cent of the market, has been facing effective competitions from Ceat, Good Year, MRF, Modi Rubber and Bombay Tyres International between 1975 and 1980. Thus in 1980, for example, percentage of concentration has reduced by almost 31 per cent. Phillips Carbon Black, which was the sole producer of Carbon Black in 1964 now finds its market share drastically reduced with the entry of 3 producers. In Ball and Roller Bearings, National Engineering Industries, the leading producer in 1964 which had 68.76 per cent of the market now has its share reduced to around 34 per cent, while Associated Bearing which had a negligible share in 1964 now controls 30 per cent of the market. In Agricultural Tractors whereas the leading producer in 1964 (TAFE) held 54 per cent the market, the leading producer now (Escorts) has only 30 per cent of the market. HMT, and Mahindra and Mahindra, which had no share in 1964, each now has around 16 per cent of the market. In the case of Scooters while Bajaj Auto has not only maintained but even increased its market share, API's share has drastically reduced with the entry of 7 more companies in the field. In the case of Mopeds where Saund Zweirad Union was the sole producer in 1964, the leading producer has been replaced by Kinetic Engineering (43.95%) and Mopeds India (32%) while the rest of the 8 entrants hold less than 10 per cent of the market. In Synthetic Detergents while the leading producers (Hindustan Lever and Swastik Household and Industrial Products) continue to dominate the field, the

number of entrants has increased substantially each producing a miniscule percentage of the total. Though Union Carbide is still the market leader of Dry Batteries, its share of the market has been considerably reduced with the field being invaded by 6 other producers.

Thus in all the above cases where there has been a substantial decrease in concentration, the number of enterprises have increased followed by substantial decreases (in most cases) of the share of the leading producer.

Table 1.6 gives details of the 18 products where concentration has decreased - number of enterprises producing these products in 1964 and 1980, Decrease in concentration between 1964 and 1980.

Table 1.6

Products	No. of Enterprises		Decrease in concentration		Difference (1980-1964)
	1964	1980	1964	1980	
1 Aluminium	3	4	100.00	87.80	12.20
2 Cement	18	42	63.80	49.60	14.20
3 BHC	3	7	100.00	79.66	20.34
4 Potassium chlorate	3	4	100.00	96.11	3.89
5 Ind. Explosives	2	6	100.00	83.67 ^f	16.33
6 PVC	2	5	100.00	90.76	9.24
7 Auto Tyres	7	12	81.40	50.18	31.22
8 Carbon Black	1	4	100.00	85.33	14.67
9 Ball & Roller Bearing	5	12	98.85	71.43	27.42
10 Twist Drills	6	NA	94.10	87.58 ^g	6.52
11 Agricultural Tractors	4	12	92.50	58.91	33.59
12 Scooters	3	10	100.00	81.54	18.46
13 Mopods	2	10	100.00	84.76	15.24
14 Drugs					
a) Pencillin	3	4	100.00	81.94	18.06
b) PAS & salts	4	6	89.50	67.06	22.44
c) Chloroquin	3	5	100.00	98.04	1.96
d) Chloramphenicol	2	4	100.00	97.73	2.27
15 Soap	22	(44)	87.80	81.60 ^h	6.11

Products	No. of Enterprises		Decrease in concentration		Difference (1980-1964)
	1964	1980	1964	1980	
16. Syn. Detergents	2	(18)	100.00	87.65 [@]	12.35
17. Dry Batt- eries	2	8	100.00	71.31	28.69
18. Typewriters	4	4	97.40	86.57	10.83

Notes: £ Data available only for the top 2 producers

* Data refer to 1979

@ Data refer to 1977

D. Products where concentration has remained cent per cent in 1964 and between 1975 and 1980

In 21 products the percentage of concentration (as measured by the share in production of the top 3 producers) has remained the same (that is cent per cent) both in 1964 and between 1975 and 1980. In 9 products the number of enterprises have remained the same both in 1964 and 1980; in 12 products, there has been an addition of one or at the most 2 producers since 1964, thus explaining to a large extent the phenomenon of an unchanging degree of concentration.

Table 1.7 gives the names of the 21 products where degree of concentration has not changed between 1964 and 1980 and the number of enterprises producing these product for both the years.

Table 1.7

Products where degree of concentration has remained the same

<u>Product</u>	<u>No. of Enterprises</u>	
	<u>1964</u>	<u>1980</u>
1. Zinc	2	2
2. Lead	1	1
3. Copper	1	1
4. DDT	1	1
5. Newsprint	1	1
6. Stable Bleaching Powder	1	3
7. Bromine	1	2
8. Borax	1	2
9. Boric acid	1	2
10. Rubber Chemicals	1	3

<u>Product</u>	<u>No. of Enterprises</u>	
	1964	1980
11. Synthetic Rubber	1	2
12. Polythelene (L.D)	2	3
13. Polythelene (H Y	1	1
14. Styrene	1	3
15. Polystyrene	1	2
16. Rayon Grade Pulp	1	2
17. Passenger cars	3	4
18. Jeeps	1	1
19. Motor cycles	3	4
20. Three-wheelers	3	3
21. <u>Drugs</u> a) Insulin	1	1
b) Vitamin A	2	2
c) Vitamin C	1	3
d) Aspirin	3	2
e) Streptomycin	2	4

Going over the three cases, one, where concentration has increased, second, where concentration has decreased, and third where concentration has remained the same, we find that in the first case, the change in the number of enterprises has been very marginal while in quite a few products the leading producer has increased substantially his share of the market during 1975-1980 as compared to 1964; in the second case of a decline in concentration one finds in most cases a substantial increase in the number of enterprises and/or a drastic decrease in the share of the leading produces. In the case of the products where concentration has remained the same, the number of enterprises has either remained the same, or increased very marginally.

4. Stability in Market shares of the Top Enterprises between 1964 and (1975 to 80)

Michael Gort in his paper dealing with an analysis of stability and change in market shares⁶ objects to the use of concentration ratios as descriptions of market structure for two reasons: firstly, according to him, the ratios show only the proportion of industry sales contributed

by a group of leading firms they obviously tell us nothing about the distribution of shares or changes in this distribution within the groups. Secondly the concentration ratio for a group of the largest four or eight firms can remain highly stable notwithstanding changes in the firms that compose these groups.

Our study takes care of both the above objections. Since we have calculated the market share of each of the major enterprises in each of the products over a period of time. We not only have information about the distribution of shares but also changes in this distribution as also the changes in the firms that compose these groups.

Table 1.8. reproduces from Appendix 1.3. the products and the top companies in 1964 producing these products that have retained their top positions in the 70's also. While market shares of individual companies for each of the 6 years (1975-1980) have been calculated and presented in Appendix 1.3. in Table 1.8 we have presented the average market shares of the companies (during the period 1975-1980) to facilitate comparison with 1964.

From Table 1.8. it is clear that in 40 out of the 51 products the top enterprise(s) in 1964 has (have) been able to maintain its (their) leading position(s) in the latter half of the 70's also. In 16 out of 40 products the leading firms in 1964 have even increased their market share during 1975-80. In quite a few products, specially, Industrial Explosives, PVC Resin/Compound, Carbon Black, Ball and Roller bearing, Dry Batteries and Typewriters, the shares of the leading producers have drastically reduced during the latter half of the 70s as compared to 1964; yet we have listed these companies because they still are the single largest producers of the products in question.

TABLE 1.8

Companies that have been able to maintain their leading position in (1975-1980) as compared to 1964

Sl.No.	Product	Change in the degree of concentration of the product between 1964 and (1975-80) (P)	Names of Top Enterprises	Percentage share of each in production in 1964	Average percentage share of each in production for the years 1975-1980
(1)	(2)	(3)	(4)	(5)	(6)
1.	Aluminium	D	1. Indian Aluminium Corporation	48.20	38.89
			2. Hindustan Aluminium Corporation	38.50	37.98
2.	Zinc	C	* 1. Hindustan Zinc	51.00	71.51
3.	Copper	C	1. Indian Copper Corporation (Hindustan Copper)	100.00	100.00
4.	Lead	C	1. Metal Corporation of India (Hindustan Zinc)	100.00	100.00
5.	Cement	D	1. ACC	39.80	33.76
6.	DDT	C	1. Hindustan Insecticides	100.00	100.00
7.	Newsprint	C	1. National Newsprint and Paper Mills	100.00	100.00
8.	Soda Ash	I	* 1. Tata Chemicals	50.90	54.80
			2. Saurashtra Chemicals	29.54	29.13
9.	Bromine	C	1. Tata Chemicals	100.00	99.58
10.	Borax	C	1. Borax Morarji	100.00	79.15
11.	Boric Acid	C	1. Borax Morarji	100.00	98.15
12.	Industrial Explosives	I	1. Indian Explosives	100.00	67.18
13.	Synthetic Rubber	C	1. Synthetics and Chemicals	100.00	88.75

(1)	(2)	(3)	(4)	(5)	(6)
14..	PVC Resin/Compound	D	1. Rajasthan Vinyl and Chemicals (DCM)	60.20	35.58
15.	Polythelene (H.D)	C	1. Polyolefins	100.00	100.00
16.	Styrene	C	1. Synthetics and Chemicals	100.00	33.81
			2. Polychem		43.21
17.	Polystyrene	C	1. Polychem	100.00	70.66
18.	<u>Man-made fibres</u>				
	(a) Nylon filament Yarn	D	1. J.K.Synthetics	35.80	30.44
	(b) Viscose staple fibre	I	* 1. Gwalior silk Mfg (Wvg) Co.	89.00	93.58
	(c) Viscose filament Yarn	I	1. Century Rayon (Century Spg. & Mfg. Co.)	26.00	25.91
			2. Kesoram Industrial and Cotton Mills	13.50	11.62
				39.50(b)	50.07 (b)
19.	Rayon Grade Pulp	C	1. Gwalior Rayon Silk Mfg and Wvg. Co. Ltd.	100.00	79.11
20.	Carbon Black	D	1. Philips Carbon Black	100.00	60.37
21.	Ball and Roller BearingD		1. National Engineering Industries	68.67	33.64
22.	Grinding Wheels	I	1. Grindwell Norton	47.70	43.88
			* 2. Carborandum Universal	35.40	49.38
23.	Twist Drills	D	1. Indian Tool Mfg. Ltd.	47.00	32.03
			* 2. Addison and Co. Ltd.	35.30	47.44
24.	Passenger Cars	C	1. Hindustan Motors	66.10	56.31
25.	Jeeps	C	1. Mahindra and Mahindra	100.00	100.00
26.	Commercial Vehicles	I	* 1. TELCO	42.90	54.35
27.	Scoters	D	* 1. Bajaj Auto	41.60	50.66

(1)	(2)	(3)	(4)	(5)	(6)
28.	Motorcycles	C	* 1. Escorts Ltd.	32.50	41.78
			* 2. Ideal Jawa	31.80	35.49
29.	3-Wheelers	C	* 1. Bajaj Auto	28.70	84.62
30.	<u>Drugs:</u>				
(i)	Insulin	C	1. Boots (India) Ltd.	100.00	100.00
(ii)	Streptomycin	D	1. Hindustan Antibiotics	55.60	34.89
			2. Synbiotics	44.40	41.99
(iii)	Vitamin 'A'	C	* 1. Roche	68.30	72.91
(iv)	Vitamin 'C'	C	1. Sarabhai Merck Pvt. Ltd. (Sarabhai M Chemicals)	100.00	69.00
(v)	Aspirin	C	* 1. Alta Labs	82.10	99.12
(vi)	Chloramphenicol	D	1. Boehringer-mann	58.80	47.85
			2. Parke - Davis	41.20	31.44
31.	Soap	D	1. Hindustan Lever	58.70	51.92
			2. TOMCO	23.40	24.58
32.	Synthetic Detergents	D	1. Hindustan Lever	67.60	48.56
			2. Swastik Oil Mills	32.40	34.81 /3 £
33.	Leather footwear	I	* 1. Bata Shoe Company	87.27	92.05
34.	Rubber and Canvas footwear	I	* 1. Bata Shoe Company	59.10	68.30
35.	Dry Batteries	D	1. Union Carbide	82.00	55.71
36.	Storage Batteries	I	* 1. Associated Battery Makers (Chloride India)	45.80	52.87
37.	Room airconditioners	I	* 1. Voltas	28.50	47.96
38.	Typewriters	I	* 1. Remington Rand	62.10	40.90
39.	Cigarettes	I	* 1. I.T.C.	46.20	48.17
			2. Vazir Sultan	19.90	19.57
40.	Toothpaste	I	* 1. Colgate Palmolive	42.20	56.94 /3 £

NOTES:

* refers to those companies whose market share has increased during (1975-1980) as compared to 1964.

(a) both the companies belong to the same Business-House, namely, Kilachand (Tulsidas)

(b) The companies belong to the Birla Business-House.

£ denotes that the average is for 3 years only.

(P) 'Change in the Degree of concentration' compares concentration obtaining in (1975-1980) vis-a-vis 1964.

Thus: D decrease in concentration in (1975-1980) as compared to 1964.

C constant degree of concentration, that is, cent per cent in 1964 and (1975-1980).

I increase in degree of concentration in (1975-1980) as compared to 1964.

In 18 out of the 40 products where the leading producers have maintained and/or improved their shares in market, the degree of concentration between 1964 and (1975-80) has remained the same; in 11 products the degree of concentration has increased, while in 11 products the degree of concentration has decreased. Excluding the cases where there have been drastic reductions in the market shares of the leading producers, we have three cases:-

- (i) where with increasing concentration the leading producer(s) has (have) maintained and/or improved its (their) market share;
- (ii) where with decreasing concentration the share of the leading producer(s) has (have) remained the same and/or increased;
- (iii) where concentration has remained the same but the share of the leading producer(s) has/have remained the same and/or increased.

The first and third cases are not difficult to surmise; with increasing concentration one would expect an increase in the share of the leading producer, while with concentration remaining the same an increase in the share of the leading producer would necessarily have been achieved at the expense of the other producers. It is the second case which has serious implications from the policy angle. While concentration has decreased with increase in the number of enterprises, it does not automatically imply that competition has also increased. The fact that the leading producer has been able to increase his share even with the entry of new enterprises, implies among other things, that industrial development has merely meant the addition of new enterprises each contributing a miniscule share not offering any competition worth the name to the leading producer.

5. Business-Houses and Product-concentration

Using the MIC classification of Business-Houses with their bodies corporate we have grouped (for 1964) the undertakings that come within the purview of our study according to the Business-Houses to which they belong. For 1978 and 1980 we have the official list of industrial houses and their inter-connected undertakings registered as such under the MRTP Act, 1969 with the help of which we have been able to group undertakings covered by us according to the Business-Houses to which they belong. The total number of undertakings covered for 1964 is around 200 out of which 54 undertakings belong to one or the other Business-House giving a percentage of 27. For 1978 and 1980 the total number of undertakings covered is 250 out of which

76 in 1978 and 79 in 1980 belong to identified Business-Houses under the MRTP Act, 1969 giving a percentage of 30.4 and 31.6 respectively.

A few points need to be clarified at the outset:-

i) Some of the undertakings identified as belonging to particular business-houses by the MIC have now been registered as 'single large undertakings' under the MRTP Act, 1969. For example, Mettur Chemical and Industrial Corporation is no longer registered as belonging to the Seshasayee Group but is identified now as a single large undertaking;

ii) A few of the Business-Houses identified as such by the MIC do not figure in the MRTP List, while a few new ones have registered under the MRTP Act, 1969 which were formerly identified as large undertakings by the MIC. For example, the following houses no longer figure in the MRTP List - Dalmia Jar Dayal, Chinai, Kanoria, R.K., B.N. Elias. Those registered newly as Business Houses under the MRTP Act include Hindustan Lever, Ashok Leyland, Golden Tobacco, Godrej.

iii) The onus of registering a company under the MRTP Act, 1969 rests on the company itself so also the fact of its being interconnected with an industrial house identified as such by the MRTP act, 1969. Consequently, a large number of undertakings over the years have evaded registration. Wherever it appears to the Government on the basis of available information that section 20 of the MRTP Act, 1969 is prima-facie applicable to an undertaking which has not registered itself under section 26 of the MRTP Act, 1969, a default notice though not mandatory is issued to it advising it to comply with the provision of the Act. The companies very often take advantage of the default notice and report changes in the facts relied upon by the Department so as to remove the basis of registrability indicated to the undertakings in the default notice; they raise intricate questions of facts and law and interpretation, of various provisions relation to interconnection, manner of computation of assets and certain other expressions used in the Act which require careful examination. Many parties take recourse to legal proceedings in various High Courts and even Supreme Court of India. The examination of representations by the companies sometimes involves collection and analysis of voluminous data relating to shareholding pattern, management functioning and other general functioning. As on 31.12.1980 the Department of company affairs has issued default notices to 371 undertakings calling upon the undertakings

to register themselves under Section 26 of the Act.⁹

We have relied strictly on the data provided by the Department of Company affairs regarding industrial houses and their inter-connected undertakings. To the extent that particular undertakings have not registered themselves as being inter-connected with one or the other industrial houses, our data is an underestimation of the concentration of Business-Houses in production.

Table 1.9.

Joint Percentage Share of Business-Houses in Production (1964, 1978, 1980)

<u>Name of the Product</u>	<u>Percentage share of Business-Houses in Production</u>		
	<u>1964</u>	<u>1978</u>	<u>1980</u>
1. Aluminium	52.00	43.36	53.01
2. Cement	69.90	52.40	75.42
3. BHC (Tech)	80.50	27.02	21.36
4. Soda Ash	100.00	100.00	100.00
5. Stable bleaching powder	100.00	53.18	62.25
6. Potassium Chlorate	90.40	40.13	29.78
7. Bromine	100.00	99.09	99.65
8. Industrial Explosives	100.00	54.87	57.51
9. Rubber Chemicals	100.00	40.26	37.67
10. Synthetic Rubber	100.00	87.80	70.87
11. PVC Resin/compound	100.00	74.42	74.18
12. Polythelene (L.D)	62.40	53.79	39.28
13. Polythelene (H.D)	100.00	100.00	100.00
14. Styrene	100.00	73.82	66.24
15. Polystyrene	100.00	65.86	53.86
16. (a) Nylon filament yarn	35.80	52.08	68.42
(b) Viscose staple fibre	100.00	100.00	100.00

⁹ For details regarding the pending list of default notices refer. Company News and Notes (A Journal of the Department of Company Affairs), Vol. XIX, April 1981, No. 4, pp 68-73 (Unstarred Q.No. 3923, Answered on 17th March 1981).

<u>Name of the product</u>	<u>Percentage share of Business-Houses</u> <u>in Production</u>		
	<u>1964</u>	<u>1978</u>	<u>1980</u>
(c) Viscose filament yarn	75.00	53.76	61.21
17. Rayon grade pulp	100.00	100.00	100.00
18. Borax	-	-	78.64
19. Boric Acid	-	-	96.33
20. Automobile tyres	-	43.88	42.79
21. Carbon Black	100.00	56.21	-
22. Ball and Roller Bearing	93.24	59.87	72.41
23. Twist Drills	85.70	75.41	46.65
24. Grinding Wheels	-	52.54	47.61
25. Air and Gas Compressors	36.10	8.25	6.21
26. Agricultural Tractors	54.10	57.93	57.97
27. Passenger Cars	82.80	98.70	99.81
28. Commercial vehicles	88.90	96.20	93.67
29. Scooters	41.60	46.40	53.39
30. Motor Cycles	-	43.82	46.34
31. Three wheelers	28.70	89.08	81.22
32. Jeeps	100.00	100.00	100.00
33. <u>Drugs</u>			
(a) Penicillin	40.30	NA	25.71
(b) Streptomycin	44.40	NA	44.86
(c) PAS and its salts	-	-	16.47
(d) Chloramphenicol	58.80	-	-
34. Soap	25.90	78.46	79.91
35. Synthetic Detergents	32.40	67.85	61.97
36. Leather footwear	11.80	2.57	3.02
37. Rubber and Canvas footwear	11.20	23.98	27.82
38. Dry Batteries	-	58.58	53.12
39. Storage Batteries	-	11.52	15.36
40. Electric Lamps	24.10	48.83	48.73
41. Domestic Refrigeration	57.30	36.26	NA
42. Room airconditioners	44.90	60.23	58.72
43. Typewriters	10.70	33.61	29.90
44. Cigarettes	17.20	72.74	72.37

45. Toothpaste

10.61

17.37

Note: - indicates no company identified as belonging to a Business-House
NA - Not applicable

Source: Appendix 1.4.

Appendix 1.4 gives details of the Houses to which undertakings producing a particular product belong, the share of particular Houses in the production of a product and the collective share of Business-Houses in the production of a particular product. In Table 1.9, we have summarized the data to give an idea of the importance of Business-Houses in the production of various products. An analysis of the data in Appendix 1.4 and Table 1.9 brings out the following:

(a) A large part of the production of different products is accounted for by various industrial houses. Thus for example, in about 26 products out of 46 covered in 1980, over 50 per cent of the production in each is in the hands of one or the other industrial house;

(b) A particular business-house is characterised by wide occupational diversification. Very roughly, by diversification we mean the presence of an industrial Group/House in more than one industrial category. For example, in Table 1.10 we have drawn up the differing market shares of Tata and Birla, (the two top business-houses in terms of assets controlled) in selected products for 1980.

Table 1.10

Market Shares of Tata and Birla in the production of some products, 1980

<u>Product</u>	<u>Percentage share in production of</u>	
	<u>Tata</u>	<u>Birla</u>
Aluminium	=	40.81
Cement	=	12.06
BHC (Tech)	16.83	-
Soda Ash	57.68	27.86
Bromine	99.65	-
Viscose Staple Yarn	=	99.70
Rayon Grade Pulp	=	74.81
Ball and Roller Bearing	30.21	32.10

<u>Product</u>	<u>Percentage share in production of</u>	
	<u>Tata</u>	<u>Birla</u>
Commercial vehicles	46.50	7.19
Cars	-	71.23
Soap	26.75	-
Room and airconditioners	49.84	8.38

Such wide diversification is true of the other houses as well though to a lesser extent than the Tata and Birla.

The relevance of the above two observations namely, the domination of business-houses in production of different products, and the wide diversification of the business activities of a particular house, lies in the fact that it highlights the uniqueness of Indian industrial development. What matters in the Indian context is the expansion of the same business house from one industrial category to another, and the interlocking of the different sectors of the economy in powerful blocks of unified capital. If allowance is not made for such a fact then mere computation of concentration ratios for isolated products may grossly understate the magnitude of the problem of concentration of economic power in the Indian economy. It is possible to find that, when business groups enter several markets simultaneously, overall concentration in the sense of their control over several sectors may actually increase, while the degree of concentration or monopoly in a particular product need not and may even decline.

6. "Foreign" Companies and their share in production

By 'foreign' companies we mean the following two categories:

- (a) Those Indian companies registered under Section 29 of the FERA, 1973 and in which non resident interest is presently more than 40 per cent.
- (b) Subsidiaries of foreign multinational corporations (MNCs).

The categories are not mutually exclusive; in fact except for one company (Pieco formerly Philips India) (b) is a subset of (a). In the case of (a) we have data regarding the names of companies and the percentage of non-resident holding only for one year 1980; for (b) we have data for 1976 and 1980. Over the years the number of subsidiaries of foreign MNCs functioning in the country has been going down - their number was 171, 161, 146 and 125 for the years ending March 1976, 1977, 1978

and 1979.¹⁰

In 1976, among the companies covered by us are 29 Indian subsidiaries of foreign MNCs; in 1980 the number is 22, 7 having become Indian Companies through dilution of their equity holdings. The number of FERA companies among the companies covered by us works out to 29 in 1980, out of which 21 are subsidiaries of foreign MNCs.

Appendix 1.5 gives the names of FERA companies, the percentage of non-resident holding in these companies and their average share in production for (1975-80).

Appendix 1.6 gives the names of foreign MNCs and their share in production for 1976 and 1980. The 29 FERA companies operate in 25 out of the 16 products covered by us in 1980. 14 of these 29 companies control 30 per cent and over of the share in production in 16 of the 25 products. The names of the 14 companies and the 16 products in which they have a significant share of the market are given in table 1.11.

Table 1.11

FERA Companies controlling significant proportion of production

<u>S.No</u>	<u>Name of the FERA Company</u>	<u>Product in which market share is significant</u>
1.	Union Carbide	i) Polythelene (L.D) ii) Dry Batteries
2.	Carborandum Universal	i) Grinding wheels
3.	Grindwell Norton	i) Grinding wheels
4.	Associated Bearing	i) Ball and Roller Bearing
5.	Boots	i) Insulin
6.	Roche	i) Vitamin 'A'
7.	Bayer	i) Chloroquin (ii) Rubber Chemical
8.	Indian Explosives	i) Industrial Explosives
9.	Ingersoll Rand	i) Air and Gas Compressors
10.	Chloride India	i) Storage Batteries
11.	Indian Aluminium	i) Aluminium
12.	Hindustan Lever	i) Soaps ii) Synthetic Detergents
13.	Parke Davis	i) Chloramphenicol Powder
14.	Alkali and Chemical Corporation	i) Rubber Chemicals

¹⁰ Company News and Notes : Vol. XIX, No.3 March 1981, p 65
(Unstarred Q.No. 683, Answered on 23rd February 1981)

When one glances at the data in Appendix 1.6 it is clear that between 1976 and 1980 a number of companies have "Indianised" themselves: Wimco, Remington Rand, Bata India, ITC, Godfry Philips, Colgate - Palmolive. Bata India, ITC, WIMCO and Colgate - Palmolive are well entrenched in the consumer goods industry and still continue to dominate their respective fields of activity.

The process of diluting foreign equity is being referred to as "Indianisation" of the foreign companies. The idea is that as the percentage of foreign share after dilution works out to less than 50 per cent (which means that Indian holding is in the majority) the control is passing to the Indians. So naive a view of control will not fool anyone. The Dutt Committee found that much less than even one fourth of equity was adequate to exercise control. The point to be noted is that the shares have been so widely dispersed that any other controlling block emerging as a threat to the existing controlling authority can be safely ruled out. Sudip Chaudhuri¹¹ in his analysis of FERA and its provisions has pointed out that Hindustan Lever has ended up with 95000 share holders; Britannia Biscuits has about 27000 share holders while India Foils has more than 7500. What is more important from our point of view is the following observation: "Responding to the provision of FERA regarding foreign equity dilution the foreign firms are not passively disinvesting their shares. They are utilising the opportunities/^{and} are enthusiastically implementing expansion schemes. Previously, often, they used to dilute foreign equity in order to obtain licences for expansion, now they are expanding as part of the process of foreign equity dilution."¹²

The details regarding the specific expansion proposals of erstwhile 'foreign' companies now in the process of Indianisation or already Indianised the licences received by them etc., will be discussed in a

11. Chaudhuri Sudip: "FERA : Appearance and Reality", Economic and Political Weekly, Vol XIV, No.16, April 21, 1979, pp 734-744

12. IBID, pp. 739-740

separate paper on 'concentration in Productive Capacity in Indian Industry' but suffice it to state that the very process of Indianisation will have a significant impact on product-concentration.

Our analysis of foreign companies does not take into consideration the foreign collaboration agreements entered into by private and public Indian companies and to that extent the influence that foreign companies have on the production structure has been grossly underestimated. While the subsidiaries of foreign MNCs has been declining, the number of foreign technological collaboration agreements has been increasing -from 227 in 1976 to 526 in 1980.¹³ It is no secret that the seller of a technology has an overwhelming bargaining power. There are some important but concealed features of the technology market of which the buyers from developing countries are the biggest victims. The transfer of technology is subject to certain "restrictive clauses, some of which are:

- i) limitation on volume of production or capacity;
- ii) requiring the buyer to grant back to the seller or his representatives any improvements made in the technology bought without offsetting consideration;
- iii) restricting the buyer to undertake any R & D work to absorb or adapt the technology or to develop new products, processes or equipment;
- iv) territorial or quantitative restrictions on exports;
- v) imposing equity participation;
- vi) tying up sale of some or all elements of plants and equipment and engineering and technical services and sale of some of the raw materials, intermediate or components and
- vii) imposing regulation of prices of goods and services on the buyers of technology.¹⁴

Thus by insisting on Indianisation Government is merely and conveniently defining away the problem of foreign capital.

¹³ Lok Sabha Answer to unstarred question No. 1682, Answered on 3.3.82 Quoted in Assocham Parliamentary Digest, No.3, 1982, Budget Session 1.3.1982 to 5.3.1982, pp 106-108

¹⁴ Sanghvi, Prafulla: "On Technological Self-Reliance", Science/Today July 1981, pp 9-14

7. Concentration and the Public Sector

So far we have not explicitly segregated the cases where the public sector is the leading undertaking or the sole producer of a particular product. The MIC's study was criticized for its failure to make this distinction. The distinction assumes relevance at the policy level. Section 3 of the MRTP Act exempts from its purview any undertaking owned or controlled by Government or by any other Corporation established by Central or State Acts. The apparent justification for exempting these units can only be that since Government has a control over these companies no protection is needed by the General Public. However another view persists which does not accept this exemption without qualification. It has been represented that there is no reason why the provisions of the Act specially those relating to monopolistic and restrictive trade practices should not also be made applicable to such undertakings. Since Government or Government-controlled undertakings are engaged in the production of consumer and other items, the impact on the general consumer, or the user of the goods and services, of the trade practices in respect of such goods or services is the same whether they are produced or rendered by undertakings in the public sector or private sector.

The Sachar Committee opined thus: "The beneficiary of the legislation is the consumer and it appears to us to be only fair and reasonable that even undertakings owned or controlled by Central and State Governments should be under the same type of rigour and discipline where the interests, of the general consumer are involved."¹⁵

¹⁵ India, Government of., Report of the High Powered Expert Committee on Companies' and MRTP Acts, (Chairman: Justice Rajindar Sachar), Ministry of Law, Justice and Company Affairs, Department of Company Affairs, 1978, p.245

From Appendix 1.3 it is clear that public sector enterprises have emerged as leading producers in the following products.

<u>Name of the product</u>	<u>Name of the Public Sector undertaking</u>
1. Zinc	Hindustan Zinc
2. Lead	Hindustan Zinc
3. Copper	Hindustan Copper
4. DDT	Hindustan Insecticide
5. Newsprint	National Newsprint and Paper Mills
6. Polythelene (L.D)	Indian Petro-chemicals Ltd.

Besides, between 1964 and 1980 public sector enterprises have entered and/or significantly increased their production-share in:

Cement (Cement Corporation of India)

Tractors (Hindustan Machine Tools)

Scooters (Scooters India)

Streptomycin (HAL, IDPL)

Penicillin (HAL, IDPL)

In Table 1.12 we have shown the change in the number of products in the high concentration category when public sector production is excluded. We find that even with the exclusion of the public sector undertakings we still have slightly over 70 per cent of the products in the 'high' concentrational category. The maximum decline in the degree of concentration has occurred in the "Basic industry category" and it is precisely this area where the public sector has entered in a big way.

Table 1.12

Number of Products showing 'High' degree of concentration with public sector production excluded.

Year	No. of products	No. showing high degree of concentration	Percentage of high concentration products to total number of products
1964	51	43	84.31
1975	51	41	80.39
1976	51	41	80.39
1977	51	41	80.39
1978	48	36	75.00
1979	46	34	73.91
1980	46	34	73.91

F. Some Observations and Comments

From the point of view of the structure of the economy, while overall statistics show a decline in the number of concentrated products between 1964 and 1980, the ramifications of the problem are many and varied.

1. The analysis of the structure of Indian industry, in this paper, has been attempted at two levels.

- (a) Classification of products into basic, intermediate, capital and consumer goods categories;
- (b) Classification of companies into public sector and private sector; within the private sector we have studied separately the 'Business-Houses' as listed under the M.R.T.P. Act, 1969 and 'Foreign' companies.

While a thorough study of the performance of Indian industry in terms of the industrial categories and in terms of the public and private sectors is outside the scope of this study, some indication of performance in terms of the two classifications, and the relevance it has for the emerging industrial structure is nevertheless discernible from our data.

Between 1975 and 1980, the utilization of capacity⁽¹⁸⁾ in the different industrial categories has been as follows:

<u>Industrial category</u>	<u>Capacity Utilization</u>
(1) Basic Industries	70.38
(2) Intermediate Industries	77.73
(3) Capital Goods Industries	74.55
(4) Consumer Goods Industries	84.28

The significance of the above utilization figures and the relevance of the categorization will be clearer if one realizes that the public sector has entered in a big way the first of the industrial categories and to a lesser extent in (2) and (3). The last category, namely, consumer goods category is dominated by the private sector, both Indian and foreign.

In Appendix 1.7 we have reproduced those of the companies in our

(18) Capacity utilization figures for the products covered by us have been computed from data compiled by the Centre for Monitoring Indian Economy, Economic Intelligence Service "Production and Capacity Utilization in 650 Industries 1970 to 1981", January 1983

study that have a significant share in production (over 33 per cent average share between 1975 and 1980) and compared their performance in terms of capacity utilization with that for the product as a whole. In the process we also get an idea of the performance of the public and private sectors and within the latter, the performance, of foreign companies also. (19)

A scrutiny of the table reveals the following:

a) The Public Sector is the sole producer in the following products: DDT, Copper, Lead and Newsprint. Except in the case of DDT where capacity utilization is above 100 percent, in the other three, average utilization of capacity in the three years, 1978, 1979 and 1980 has been below 65 percent.

b) There are 10 products in which the Public Sector co-exists with the Private Sector out of which in 5 products, the share in capacity of the Public Sector exceeds 30 percent. These are (percentage share in capacity given in brackets):

- i) Zinc (82 percent)
- ii) Polythelene (L.D) (70 percent)
- iii) Scooters (43 percent)
- iv) Three-wheelers (50 percent)
- v) a) Penicillin (74 percent)
- b) Streptomycin (57 percent)
- c) PAS and its Salts (36 percent)

In the case of Zinc while the Public Sector units capacity utilization is better than that of the Private Sector, the former with 81 percent share in installed capacity has been producing only to the tune of 60 percent of its rated capacity. In the other four products the Public Sector's performance has been far below the level of performance of the Private Sector.

In 5 products the share in capacity of the Public Sector is below 30 percent. These are: (Percentage share in capacity is given in brackets):

- 1. Cement (15 percent)
- 2. Aluminium (15 percent)
- 3. BHE (Tech) (16 percent)
- 4. Tractors (16 percent)
- 5. Leather footwear (10 percent)

(19) Capacity figures for companies covered by us have been taken from their respective balance sheets.

Except in the case of Tractors (even here the utilization of capacity of the Public Sector has been going down while that of the Private Sector has been going up) in all the other products the Public Sectors performance has been far below than that of the Private Sector.

It is true that the Public Sector has entered "technologically complex areas where it has to do pioneering work" and that therefore "some allowance must be made for the longer gestation period and learning curve".⁽²⁰⁾ But by almost any yardstick 25 years is a sufficiently long period for any committed Government to sustain the momentum of a preplanned programme of industrialization. The Public Sector which was vested with the responsibility of establishing a sound infrastructure to make further industrial growth cumulative, has to take the major share of the blame in having failed the country on this score. It is not just a question of bad and/or inefficient management; for that matter the private sector has not shown any spectacular innovation on the management front. That it is slightly better run than most Public Sector units is merely a matter of relativity. Administrative delays have generally not come in the way of establishment and expansion of high-profit low-priority industries; neither have existing legislations been able to prevent the installation of capacity in excess of licensed capacity. On the other hand all the relaxations in the licensing policy has failed to attract investment into key industries like cement, paper, aluminium, fertilizers etc. Many licences and letters of intent have been issued in these industries; and yet in each of them the prospect is of a continuance of the existing severe shortages. "The scale of investment more or less keeps out new entrants and the existing producers are doing too well out of the shortages and the resultant black market premiums on their products to want to try overmuch to expand production. As for the Public Sector, it far from being in a position to fill in the gaps in private investment; it is having to abandon even long accepted projects like the Ratnagari Aluminium Plant".⁽²¹⁾

(20) India, Government of., Draft Five-Year Plan 1978-83, Planning Commission, Volume III p.137

(21) Editorial, Economic and Political Weekly, Vol.VI November 10, 1973

While not going into the reasons for the failure and/or the inability of the Public Sector to come up to expectations, and while, also, not making an apologia for the poor performance of the Public Sector, an important point needs to be highlighted - specially for the benefit of those who constantly rant about the poor performance of the Public Sector industrial undertakings and attribute much of the economy's difficulties to the Public Sector industrial undertakings and attribute much of the economy's difficulties to the Public Sector's non-performance. It is that, over the years, state subsidy of the private sector has assumed massive dimensions. Enormous subsidies to private enterprise accrue through Government reluctance to cover costs from receipts in the Public Sector industries which sell them steel, and service them with power, transport, post and telecommunication facilities etc. In an effort to restrain the rate of inflation in the economy as also ⁱⁿ the belief that private enterprise is in need of promotion and stimulation ⁽²²⁾ the Government has restrained prices in the Public Sector. The reasoning behind this - no doubt based on an outdated ideology - is that private manufacturing is basically price competitive and will pass on such subsidies from the Public sector to the Private sector in the form of lower prices..

c) In quite a few products (specially consumer goods) namely, Drugs - consisting of Chloroquin, Vitamin 'A', Vitamin 'C', Penicillin - Soaps, Synthetic Detergents, and Refrigerators etc, one can discern capacity utilization figures of over 100 percent for the private (Indian and foreign)

(22) Gunnar Myrdal had this to say: "All economic planning in South Asia starts out from the idea that development should be pushed. More particularly it is felt that private enterprise and specifically investment in production is in need of promotion and stimulation. We also find that state undertakings in basic industry and public utilities have the effect usually intended of improving conditions for private business".

companies. In all these products where the utilization of capacity has been over 100 percent, the companies have installed and produce in excess of their licensed capacities.

In some cases, namely, that of ITC in Cigarettes, National Engineering Industries in Ball and Roller Bearings, Indian Tool Manufactures in Twist Drills, Chloride India in Storage Batteries, Union Carbide in Dry Cell Batteries - while capacity utilization is less than 100 percent, the installed capacities of these companies in the products mentioned far exceed their licensed capacities.

S.K. Goyal in his survey of excessive industrial capacities with the Indian Corporate Sector has revealed that out of 565 cases of installation of unauthorized capacity as many as 200 are accounted for by Multinational Corporations and another 170 by Indian Monopoly Houses. In 138 cases, the capacity installed or production achieved is more than double the licensed capacity. Excess capacities exist most in the field of chemicals, dyes and pharmaceuticals (158 cases), electrical equipment and cables (103), and metals and alloys (87). The study has found that a large number of products for which excess capacity has been illegally installed cater directly or indirectly to the needs of the elite. Also a number of these products happen to be those which are reserved for the small-scale sector.⁽²³⁾

The Union Government has identified as many as 123 industrial units including some owned by MRF and TERA companies and one owned by a giant cooperative, with production in excess of their licensed capacities during the last three years (that is, 1978, 1979 and 1980).⁽²⁴⁾

(23) Goyal S.K. "A Preliminary Survey of Excess Industrial Capacities with the Indian Corporate Sector" Public Policy and Planning Division, IIPA, New Delhi (Mineo)

(24) Economic Times : "Production above Licensed Capacity", May 14, 1981
Page 1, Bombay

Cases of MRTP companies setting up new undertakings without obtaining prior approval under section 22 of the MRTP Act, 1969 has come to the notice of the Government, which has thus far identified 12 such cases. (25)

Production in excess of licensed capacity by already dominant undertakings cannot but enable the latter to appropriate a larger share of the market in any expansion of the market; worse still, excess capacity installation acts as a deterrent to other undertakings that might contemplate entering the market. The net result is to make concentration more concentrated. To crown it all, not only has this phenomenon been officially recognized but the whole process of legitimising this blatant illegal activity has been raised to the status of a routine official procedure. And if, in addition, MRTP companies unauthorisedly set up new undertakings in contravention of the provisions of the very Act that is supposed to regulate production and capacity creation in the public interest, it would be easier and more appropriate for the Government to redefine its notion of public interest.

2. The decisions regarding interconnections are taken strictly in accordance with the existing statutory provisions as laid down in the MRTP Act, 1969. Consequently, by say, merely reducing their shareholding, companies can escape the charge of interconnection. To take a glaring example. (26)

ITC Limited and Vazir Sultan Tobacco Limited (VST) (the top two companies manufacturing cigarettes), are both companies incorporated under the Indian Companies Act. According to information dated 30th November 1978, 37.9 percent of the equity share capital of ITC Limited is held in the name of Tobacco Manufacturers (India) Limited, a subsidiary of the British American Tobacco Company Limited (BAT). According to information

(25) Reply given in Rajya Sabha to Unstarred Question No. 543 on 4th August 1980. Quoted in Company News and Notes, vol. XVIII, August 1980 No. 8, pp 54-56

(26) Example taken from Lok Sabha answer to Unstarred Question No. 8264 Answered on 24 April 1979. Quoted in Company News and Notes, vol. XVII No. 4 April 1979 pp 85-86

dated 26.9.77, two subsidiaries of BAT hold a total of 31.73% of equity shares of VST. Both ITC and VST were originally under the majority equity control of BAT's subsidiaries. Several business connections are, therefore, believed to have existed between the two companies.... Prior to June 1975, the Department of Company affairs had declared the two companies ITC and VST to be interconnected undertakings on considerations of equity share capital held by BAT's subsidiaries. With effect from 6.6.1975, however, the shareholding pattern of VST changed substantially and it was found that the holdings of BAT's subsidiaries stood reduced to 31.73 percent only. VST could not therefore be considered any longer as an interconnected undertaking of ITC in accordance with the statutory provisions laid down in section 2 (9) of the MRTP, Act, 1969. Further ITC and VST are the largest shareholders in Bhadrachalam Paper Boards (BFB) a paper company in Andhra Pradesh. The following are the major equity shareholders of the company:

1. ITC Limited	32.4 percent
2. VST	14.2 percent
3. A.P Ind. Dev. Corp	13.8 percent
4. IDBI	13.9 percent
5. IFC	5.7 percent
6. ICICI	5.7 percent

Yet, because ITC holding in BFB is not technically 1/3rd, BFB is not listed as being interconnected with ITC.

Similarly, while Philips Carbon Black and Gujarat Carbon are listed as separate enterprises producing carbon black, Gujarat Carbon in fact has been promoted jointly as a joint sector enterprise by Philips Carbon Black and GIIC. (27)

Further, the Central Government has approved the proposal of Philips Carbon Black for the establishment of a new undertaking under the name and style of Bharat Carbon Limited (later changed to Oriental Carbon Ltd) for the manufacture of Carbon Black. One of the conditions of the approval

(27) India, Government of, Indian Chemicals Statistics, 1981-82, Department of Chemicals and Fertilizers, Ministry of Petroleum, Chemicals and Fertilizers, Government of India, New Delhi, p.48

is, that, neither Philips Carbon Black, nor any of its inter-connected undertakings should hold more than 32 percent of the equity capital of Oriental Carbon Black. Since, technically, Philips' holding in Oriental Carbon Black is not one-third, legally both the companies are not inter-connected. (28)

Such cases of substantial purchases of shares are legion; if in the same line of production, it helps in greater control of the market; if in a different line of production it helps in vertical integration or in diversification or both in the case of Business Houses. (29)

The implications for product concentration (in the light of such interlinkages between companies producing the same product) are grave, since, while appearing to be competitive on paper, these enterprises would infact be controlling the bulk of the market.

3. It is alleged that a number of consumer products are produced by the small-scale sector; hence the concentration figures based on production in the organized large-scale sector only would distort the picture. While we agree that allowance must be made for production in the small-scale sector, it must also be noted that in quite a few cases the organized large-scale sector buys up the production of the small scale sector to be sold through its (large scale sector's) own retail and wholesale outlets under its own brand name. In reply to a question in the Rajya Sabha: "Whether Government are aware that many MRTP/Multinational companies are marketing the products manufactured by small-scale units and other Indian

(28) (a) Company News and Notes. Vol XI. November 1973. pp11-12
(proposal originally approved)

(b) Company News and Notes. Vol XII, January 1974, No.1 (Approval of Government to Phillips' proposal to acquire 32 percent of equity shares at par)

(c) Company News and Notes. Vol XII, April 1974. No.4 (change of name of Oriental Carbon Black)

(d) Company News and Notes Vol XIV. December 1976 No.12 (consequent upon the increase in project cost, Phillips' was allowed to increase its investment in Oriental Carbon to make the holding 32 percent).

(29) For example, refer Reply given in Lok Sabha to unstarred question No.8793 on 2nd May 1978 regarding purchase of shares by Companies quoted in Company News and Notes, vol.XVI, July 1978, No.7 pp43-44

manufacturers under their own trade mark without permission of the CLB and the MRTPC in the guise of diversification? the Minister of Law, Justice and Company Affairs replied: "Government are aware that a few MRTP/Multi-national Companies are marketing the products manufactured by other units under their own trade names. There is no provision under the Companies Acts and the MRTP Act requiring the permission of the CLB/MRTPC for such purposes."⁽³⁰⁾ Here again our computation of concentration ratios based strictly on the production figures of the companies would be an underestimation of their control over the market; concentration in terms of sales would probably have given a better picture.

In any cases, the entire set-up of the small scale sector, its degree of independence in production as well as in the marketing of its products need to be examined before any pronouncements regarding the competitiveness or otherwise of production between the organized large-scale and the small-scale sectors can be made.

4. Mention has already been made of the manner in which monopoly Houses have managed not to register a number of undertakings interconnected with them. Apart from this, there are any number of companies belonging to identifiable family groups that have successfully managed to stay out of the provisions of the MRTP Act, 1969. For example, the Company Law Board by its order dated 8.2.1980 held that 23 undertakings were under the control of a group of persons who are members of the family of Shri Jai Dayal Dalmia. This order has been appealed against and the matter is now pending before the Supreme Court and the Delhi High Court. After the order of the Company Law Board two of the 23 companies, namely, Orrisa Cement Limited, and Konark Minerals Limited, registered themselves under section 26 of the MRTP Act but without admitting interconnection with other Dalmia group companies.⁽³¹⁾

(30) Rajya Sabha answer to starred question No.169, answered on 4 August 1980
Quoted in Company News and Notes, vol.XVIII, August 1980, No.8 p52

(31) Lok Sabha reply to Unstarred Question No.2929 on 10th March 1981
Quoted in Company news and Notes. Vol.XIX. April 1981, No.4 pp64-65

Even from the limited data that we have assembled, some idea of the dominance of a relatively small group of monopoly houses is discernible. A study of the business operations of the dominant business houses would provide the vital linkage between product-wise and country-wise concentration in such a framework an increase in concentration would express the increase in the collective dominance of a relatively small group of business-houses at the level of the economy and of specific sectors. It would not be a statement about the degree of competition in the system and in itself it cannot be assumed that a rise in concentration expresses some equivalent decline in competition.

5. The problem of the 'foreign' influence on the Indian economy is a larger problem of the technological dependence of the industrial sector of the economy. According to P. Mohanam Pillai and K.K. Subramanian foreign technology participation has helped in

- (i) directing the structure of industry towards product-wise concentration and
- (ii) accentuating the foreign dominance of country-wise concentration⁽³²⁾

Technological dependence has two major consequences firstly, because it consists necessarily of the imitation of techniques evolved in the advanced economies with their vastly larger markets, it is a decisive determinant of the competitive structure. And secondly, because the needed capital goods must be imported it tends to create a constant insufficiency of effective demand, through the leakage of domestic savings into import of producers' goods. Consequently the limitations of market tend to confer a monopolistic status on the enterprises that are set up and low growth tends to make them stable and more or less permanent.⁽³³⁾

An analysis of the foreign influence on the industrial sector and its impact on concentration would thus call for a thorough examination of the technological dependence characterizing the economy.

(32) Pillai.M. and Subramaniam K.K. "Rhetoric and Reality of Technology Transfer" Social Scientist, Special Issue on Industrialization, January - February, 1977, 0 p87

(33) For details on the implication of technological dependence for under developed countries see, Merhav, Meir, Technological Dependence, Monopoly and Growth, Pergamon Press, Oxford 1969

Appendix 1.1Products and their weights in 1964 and 1980*

Sl.No.	Product	Weight	
		1964	1980
I			
<u>Basic Industries.</u>			
1.	Aluminium	0.1730	0.5496
2.	Zinc	NA	0.0536
3.	Copper	0.1780	0.0095
4.	Lead	0.0080	NA
5.	Cement	1.2400	1.1700
6.	BHC (Tech)	0.0500	0.1008
7.	DDT (Tech)	NA	NA
II			
<u>Intermediate Industries.</u>			
8.	Newsprint	NA	0.0210
9.	Soda Ash	0.1300	0.2226
10.	Stable Bleaching Powder	0.0200	0.0121
11.	Potassium Chlorate	NA	0.0117
12.	Bromine	NA	NA
13.	Borax	NA	NA
14.	Boric Acid	NA	NA
15.	Industrial Explosives	NA	0.2408
16.	Rubber Chemicals	NA	0.0188
17.	Synthetic Rubber	NA	0.1298
18.	PVC Resin/Compound	0.0100	0.1210
19.	Polythelene (L.D)		0.0249
20.	Polythelene (H.D)	0.0100	0.0194
21.	Styrene	NA	NA
22.	Polystyrene	NA	0.0340
23.	<u>Man-made fibres</u>	0.2200	1.1869
	a) Nylon Filament Yarn		
	b) Viscose Filament Yarn		
	c) Viscose Rayon Filament Yarn		

<u>Sl.No.</u>	<u>Product</u>	<u>Weight</u>	
		1964	1980
24.	Rayon-Grade Pulp	NA	NA
25.	Automobile Tyres.	1.4100	1.4301
26.	Carbon Black	NA	NA
27.	Ball and Roller Bearing	0.0300	0.4756

III

Capital Goods Industries.

28.	Grinding Wheels	0.0300	0.3862
29.	Twist Drills	0.0670	0.1542
30.	Air and Gas Compressors	NA	0.2469
31.	Agricultural Tractors	NA	0.3308
32.	Passenger Cars		0.4936
33.	Jeeps	1.2800	0.1448
34.	Commercial Vehicles		1.2499
35.	Scooters	0.0070	0.1095
36.	Motorcycles	0.0030	0.1093
37.	3-Wheelers	0.0100	0.0296
38.	Mopeds	NA	NA

IV

Consumer Products Including Durables.

39.	<u>Drugs</u>	0.0500	0.0500
	a) Insulin	NA	NA
	b) Penicillin	NA	1.0765
	c) Streptomycin	NA	1.0829
	d) Vitamin 'A'	NA	0.1245
	e) Vitamin 'C'	NA	NA
	f) PAS and its salts	NA	0.0838
	g) Chloroquin	NA	NA
	h) Aspirin	NA	NA
	i) Chloramphenicol	NA	0.3175
40.	Soap	0.7200	0.6547
41.	Synthetic Detergents	NA	0.0083
42.	Leather Footwear	0.4600	0.3490
43.	Rubber and Canvas Footwear	0.4800	0.4389

Sl.No.	Products.	Weight	
		1964	1980
44.	Dry Batteries	0.2300	0.3324
45.	Storage Batteries	0.1400	0.2160
46.	Electric Lamps	0.1300	0.3760
47.	Domestic Refrigerators	0.0100	0.3040
48.	Room Airconditioners	0.0500	
49.	Typewriters	0.0500	0.1576
50.	Cigarettes	1.4600	2.2100
51.	Toothpaste	NA	0.0838
	TOTAL	8.7960	16.9439

Note: For 1964 (Base 1956=100)

For 1980 (Base 1970=100)

*Post 1977 data regarding weights generally give the weights of broad industrial groupings. Hence data for 1980 have been supplemented with data from the previous years.

NA = Not Available.

- Source: 1) India, Government of., Monthly Statistics of the Production of Selected Industries of India, (162), 1964, Department of Statistics, C.S.O., Ministry of Planning, Calcutta.
- 2) India, Government of., Monthly Statistics of the Production of Selected Industries of India, March 1975, Department of Statistics, C.S.O., Ministry of Planning, Calcutta.
- 3) India, Government of., Monthly Statistics of Production of Selected Industries of India, December 1980. C.S.O., Ministry of Planning, Calcutta.

APPENDIX 1.2Share of Top 1, 2, 3 and 5 Enterprises in Production in 1964 and 1975 to 1980

Sl.No.	Product	Year	No.of Enterprises	Degree of Concentration	Percentage Shares in Production			
					1	2	3	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>I Basic Industries</u>								
1.	Aluminium	1964	3	H	48.2	86.7	100.00	-
		1975	4	H	46.86	84.14	93.56	100.00 @
		1976	4	H	41.42	82.61	91.95	100.00 @
		1977	4	H	43.13	81.83	91.88	100.00 @
		1978	4	H	40.07	72.19	88.76	100.00 @
		1979	4	H	38.05	74.78	89.38	100.00 @
		1980	4	H	40.81	72.11	87.80	100.00 @
2.	Zinc	1969*	2	H	51.00	100.00		
		1975	2	H	55.22	100.00		
		1976	2	H	57.60	100.00		
		1977	2	H	53.76	100.00		
		1978	2	H	77.52	100.00		
		1979	2	H	87.19	100.00		
		1980	2	H	97.77	100.00		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	Copper	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			
4.	Lead	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			
5.	Cement	1964	18	M	39.80	54.60	63.80	76.60
		1975	(54)	N	35.66	42.02	46.78	53.45
		1976	(54)	N	36.43	44.20	49.26	55.66
		1977	(54)	N	34.10	41.20	45.95	52.83
		1978	(60)	N	32.70	40.40	44.90	51.80
		1979	(61)	N	32.32	39.48	44.68	52.38
		1980	(63)	N	31.33	37.54	42.64	51.14

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	BHC (Tech)	1964	3	H	49.00	80.50	100.00	
		1975	6	M	29.15	52.31	69.71	87.63
		1976	6	M	32.65	56.41	70.06	88.10
		1977	7	M	33.65	55.49	70.95	92.00
		1978	7	H	40.27	59.54	77.64	91.53
		1979	7	M	37.81	58.19	73.11	92.67
		1980	7	H	48.15	64.93	79.66	94.98
7.	DDT (Tech)	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			
II. <u>Intermediate Industries</u>								
8.	Newsprint	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
9.	Soda Ash	1964	4	H	50.90	80.44	95.25	100.00	@
		1975	4	H	54.33	79.14	89.61	100.00	@
		1976	4	H	54.46	79.88	90.07	100.00	@
		1977	4	H	57.35	83.41	92.19	100.00	@
		1978	4	H	52.58	85.55	96.61	100.00	@
		1979	4	H	53.78	86.50	97.66	100.00	@
		1980	4	H	57.68	85.54	97.92	100.00	@
10.	Stable Bleaching Powder	1964	1	H	100.00				
		1975	3	H	57.25	84.66	100.00		
		1976	3	H	57.13	78.62	100.00		
		1977	3	H	57.18	82.17	100.00		
		1978	3	H	53.18	79.94	100.00		
		1979	3	H	59.15	80.81	100.00		
		1980	3	H	62.25	85.34	100.00		
11.	Potassium Chlorate	1964	3	H	83.40	93.00	100.00		
		1975	4	H	49.81	80.95	93.50	100.00	@
		1976	4	H	42.96	75.99	93.93	100.00	@
		1977	4	H	47.12	69.21	94.80	100.00	@
		1978	4	H	40.13	68.34	96.03	100.00	@
		1979	4	H	33.14	65.81	98.37	100.00	@
		1980	4	H	37.33	67.11	96.11	100.00	@

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	Bromine	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	2	H	99.09	100.00		
		1979	2	H	98.74	100.00		
		1980	2	H	99.65	100.00		
13.	Borax	1969*	1	H	100.00			
		1975	2	H	98.10	100.00		
		1976	2	H	79.40	100.00		
		1977	2	H	80.53	100.00		
		1978	2	H	65.47	100.00		
		1979	2	H	70.87	100.00		
		1980	2	H	78.64	100.00		
14.	Boric Acid	1969*	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	2	H	92.55	100.00		
		1980	2	H	96.33	100.00		

(2)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15.	Industrial Explosives	1964	1	H	100.00			
		1975	2	H	81.40	100.00		
		1976	2	H	79.10	100.00		
		1977	2	H	74.60	100.00		
		1978	3	H	54.87	95.63	100.00	
		1979	3	H	56.43	89.42	100.00	
		1980	(6)	H	56.68	83.67	NA	
16.	Rubber Chemicals	1964	1	H	100.00			
		1975	3	H	50.66	96.90	100.00	
		1976	3	H	52.34	97.53	100.00	
		1977	3	H	53.37	95.95	100.00	
		1978	3	H	55.66	95.92	100.00	
		1979	3	H	53.46	95.46	100.00	
17.	Synthetic Rubber	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	2	H	87.80	100.00		
		1979	2	H	73.84	100.00		
		1980	2	H	70.37	100.00		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18.	PVC Resin/Compound							
		1964	2	H	60.20	100.00		
		1975	5	M	34.54	56.79	73.25	100.00
		1976	5	H	32.40	60.00	81.60	100.00
		1977	5	H	30.49	58.20	77.72	100.00
		1978	5	H	40.04	61.21	79.74	100.00
		1979	5	H	37.72	64.49	89.41	100.00 @
		1980	5	H	41.07	68.24	90.76	100.00 @
19.	Polythelene (L.D)	1964	2	H	62.40	100.00		
		1975	2	H	60.80	100.00		
		1976	2	H	58.50	100.00		
		1977	2	H	57.10	100.00		
		1978	3	H	46.21	75.21	100.00	
		1979	3	H	62.58	84.69	100.00	
		1980	3	H	60.72	85.66	100.00	
20.	Polythelene (H.D)	1969	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21.	Styrene	1964	1	H	100.00			
		1975	3	H	47.40	82.10	100.00	
		1976	3	H	45.50	85.50	100.00	
		1977	3	H	47.00	77.40	100.00	
		1978	3	H	41.59	73.89	100.00	
		1979	3	H	34.57	68.33	100.00	
		1980	3	H	NA			
22.	Polystyrene	1964	1	H	100.00			
		1975	2	H	80.35	100.00		
		1976	2	H	81.57	100.00		
		1977	2	H	71.64	100.00		
		1978	2	H	65.86	100.00		
		1979	2	H	53.86	100.00		
		1980			NA			
23.	<u>Man-made fibres</u>							
(a)	Nylon filament yarn							
		1964	3	H	54.0	89.80	100.00	
		1975	8	M	34.42	51.30	66.95	89.66
		1976	8	M	31.60	48.50	63.60	85.90
		1977	8	M	30.30	48.60	63.60	86.80
		1978	8	L	29.32	44.92	59.82	83.63
		1979	8	M	31.24	47.04	61.42	85.34
		1980	8	L	25.81	43.14	59.25	82.83

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(b)	Viscose filament yarn	1964	8	M	26.00	51.30	64.80	83.30
		1975	8	M	29.13	57.72	63.96	89.71
		1976	8	M	26.50	51.00	63.50	81.40
		1977	8	L	23.40	46.70	59.90	81.30
		1978	8	L	25.86	46.07	59.57	81.01
		1979	8	M	25.02	46.29	60.61	83.22
		1980	8	M	25.61	48.84	62.83	84.11
(c)	Viscose Rayon Staple fibre	1964	2	H	89.00	100.00		
		1975	2	H	96.11	100.00		
		1976	2	H	83.47	100.00		
		1977	2	H	91.60	100.00		
		1978	2	H	92.63	100.00		
		1979	2	H	92.99	100.00		
		1980	2	H	99.70	100.00		
24.	Rayon Grade Pulp	1964	1	H	100.00			
		1975	2	H	83.27	100.00		
		1976	2	H	79.50	100.00		
		1977	2	H	82.10	100.00		
		1978	2	H	75.96	100.00		
		1979	2	H	73.05	100.00		
		1980	2	H	74.81	100.00		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
25.	Automobile Tyres	1964	7	H	41.50	66.40	81.40	95.70
		1975	8	M	31.20	46.60	60.00	82.50
		1976	8	M	35.01	53.23	67.33	85.59
		1977	12	M	31.40	49.40	63.10	83.70
		1978	12	L	26.58	42.98	54.40	72.81
		1979	12	N	22.83	37.85	49.21	70.76
		1980	12	L	23.02	37.94	50.18	71.89
26.	Carbon Black	1964	1	H	100.00			
		1975	2	H	67.67	100.00		
		1976	2	H	65.96	100.00		
		1977	2	H	71.48	100.00		
		1978	3	H	56.21	83.46	100.00	
		1979	3	H	63.36	88.19	100.00	
		1980	4	H	37.56	61.66	85.33	100.00
27.	Ball and Roller Bearing	1964	5	H	68.67	93.25	98.35	100.00
		1975	6	H	38.10	75.80	86.30	99.90
		1976	7	H	32.85	64.56	76.24	88.29
		1977	(9)	M	30.94	60.66	71.10	83.69
		1978	(9)	M	30.75	54.48	63.67	74.14
		1979	(12)	H	35.17	64.48	74.83	89.66
		1980	(12)	M	32.10	62.31	71.43	83.01

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>III Capital Goods Industries</u>								
28.	Grinding Wheels	1964	7	H	47.70	83.10	95.20	99.50
		1975	(7)	H	51.52	93.55	94.82	NA
		1976	(7)	H	48.00	89.60	91.00	NA
		1977	(7)	H	49.90	95.87	97.74	NA
		1978	(9)	H	52.54	98.04	100.00	
		1979	(9)	H	46.72	89.68	NA	
		1980	(9)	H	47.61	92.82	NA	
29.	Twist Drills	1964	6	H	57.00	82.30	94.10	99.10
		1975			NA			
		1976	5	H	52.00	81.50	94.70	100.00
		1977	6	H	44.62	73.85	83.95	91.95
		1978	5	H	44.44	75.41	87.91	NA
		1979	5	H	43.05	78.94	87.58	NA
		1980	5	H	46.65	85.12	NA	
30.	Air and Gas Compressors	1964	7	H	36.10	66.20	80.10	93.80
		1975	(12)	H	35.70	62.60	76.40	87.90
		1976	(12)	H	32.50	55.90	76.10	90.20
		1977	(12)	H	30.40	57.19	75.07	90.84
		1978	(11)	H	42.74	66.76	82.45	94.88
		1979	(11)	H	49.09	70.20	81.71	91.25
		1980	(11)	H	55.47	80.46	90.43	100.00

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
31.	Agricultural Tractors	1964	4	H	54.10	78.50	92.50	100.00
		1975	12	L	22.85	43.07	57.59	82.55
		1976	12	M	28.10	46.20	63.60	85.10
		1977	12	L	20.63	37.17	53.05	75.04
		1978	12	N	19.43	36.64	49.89	74.00
		1979	12	L	20.35	35.98	50.00	73.99
		1980	12	N	17.29	34.12	49.97	73.71
32.	Passenger Cars	1964	3	H	66.10	83.30	100.00	
		1975	3	H	59.10	99.20	100.00	
		1976	3	H	51.95	99.32	99.83	100.00
		1977	4	H	53.28	99.26	99.71	100.00
		1978	4	H	61.07	98.70	99.66	100.00
		1979	4	H	59.94	99.45	99.81	100.00
		1980	4	H	71.83	99.81	99.97	100.00
33.	Jeeps	1964	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
34.	Commercial Vehicles							
	1964	5		H	42.90	69.00	83.80	100.00
	1975	7		H	59.00	76.50	86.90	96.50
	1976	7		H	56.43	76.43	83.37	95.02
	1977	7		H	56.59	75.49	86.95	95.38
	1978	7		H	54.44	74.91	87.06	95.09
	1979	7		H	53.08	73.71	83.60	93.20
	1980	7		H	46.50	65.43	79.78	92.21

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
35.	Scooters	1964	3	H	51.90	93.50	100.00	
		1975	10	H	59.70	88.90	99.30	100.00
		1976	10	H	53.52	75.32	93.86	99.21
		1977	10	H	51.90	66.37	79.85	95.31
		1978	10	H	46.18	62.96	78.86	95.82
		1979	10	H	40.24	61.48	78.70	97.62
		1980	10	H	52.39	69.63	81.54	97.72
36.	Motorcycles	1964	3	H	35.70	68.20	100.00	
		1975	4	H	38.29	72.67	99.71	100.00
		1976	3	H	40.40	75.75	100.00	
		1977	4	H	44.20	83.70	99.96	100.00
		1978	4	H	43.82	77.06	99.96	100.00
		1979	4	H	46.78	76.50	99.98	100.00
		1980	4	H	46.34	77.63	99.99	100.00
37.	3-wheelers	1964	3	H	67.50	96.20	100.00	
		1975	2	H	81.20	100.00		
		1976	2	H	82.42	100.00		
		1977	3	H	95.12	99.91	100.00	
		1978	3	H	89.08	99.78	100.00	
		1979	3	H	78.67	98.59	100.00	
		1980	3	H	81.22	98.00	100.00	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
38.	Mopeds	1964	2	H	100.00			
		1975	6	H	49.82	88.51	93.97	99.56
		1976	9	H	49.64	84.23	88.51	96.96
		1977	9	H	46.78	76.81	82.37	91.99
		1978	9	H	43.54	71.88	80.17	91.46
		1979	9	H	45.25	69.44	80.28	89.00
		1980	10	H	43.74	66.96	84.76	94.49
IV Consumer Products including								
39.	<u>Durables; Drugs</u>							
(a)	Insulin	1969*	1	H	100.00			
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978	1	H	100.00			
		1979	1	H	100.00			
		1980	1	H	100.00			
(b)	Pencillin	1964	3	H	59.70	84.10	100.00	
		1975	4	H	25.01	50.12	75.14	100.00 @
		1976	4	H	25.71	51.34	75.85	100.00 @
		1977	4	H	27.61	54.04	77.78	100.00 @
		1978			NA			
		1979			NA			
		1980	4	H	31.72	57.43	81.94	100.00 @

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(c)	Streptomycin	1964	2	H	55.60	100.00		
		1975	4	H	40.92	72.74	97.07	100.00
		1976	4	H	40.20	73.00	97.10	100.00
		1977	4	H	40.00	77.90	98.92	100.00
		1978	4		NA			
		1979			NA			
		1980	4	H	44.86	84.91	100.00	
(d)	Vitamin 'A'	1964	2	H	68.30	100.00		
		1975	2	H	76.47	100.00		
		1976	2	H	76.42	100.00		
		1977	2	H	71.57	100.00		
		1978			NA			
		1979			NA			
		1980	2	H	65.85	100.00		
(e)	Vitamin 'C'	1964	1	H	100.00			
		1975	3	H	77.16	100.00		
		1976	3	H	74.29	98.97	100.00	
		1977	3	H	57.75	99.76	100.00	
		1978			NA			
		1979			NA			
		1980	3	H	55.55	95.37	100.00	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(f)	PAS and its salts	1964	4	H	35.80	65.10	89.50	100.00
		1975	5	M	24.98	48.75	72.49	100.00
		1976	5	M	25.62	50.54	74.00	100.00
		1977	5	M	30.35	52.12	71.97	100.00
		1978			NA			
		1979			NA			
		1980	6	M	30.67	49.75	67.06	99.41
(g)	Chloroquin	1964	3	H	88.20	99.60	100.00	
		1975	3	H	76.53	92.86	100.00	
		1976	3	H	66.17	96.08	100.00	
		1977	3	H	66.92	99.55	100.00	
		1978			NA			
		1979			NA			
		1980	5	H	69.24	95.99	98.04	100.00
(h)	Aspirin	1964	3	H	82.10	98.70	100.00	
		1975	1	H	100.00			
		1976	1	H	100.00			
		1977	1	H	100.00			
		1978			NA			
		1979			NA			
		1980	2	H	97.37	100.00		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(i)	Chloranphenical	1964	2	H	58.80	100.00		
		1975	3	H	50.41	83.39	100.00	
		1976	3	H	46.50	83.30	100.00	
		1977	3	H	38.89	76.01	100.00	
		1978			NA			
		1979			NA			
		1980	4	H	46.64	78.19	97.73	100.00
40.	Soap(f)	1964	22	H	58.70	82.10	87.80	93.90 @
		1975	(39)	H	48.04	75.97	79.57	85.08
		1976	(39)	H	55.76	76.56	79.25	83.81
		1977	(39)	H	54.31	79.58	82.56	85.78
		1978	(44)	H	47.59	75.55	78.46	NA
		1979	(44)	H	52.64	71.39	75.18	NA
		1980	(44)	H	53.16	79.91	81.69	NA
41.	Synthetic Detergents	1964	2	H	67.60	100.00		
		1975	4	H	44.90	80.30	96.40	100.00 @
		1976	(8)	H	45.70	84.23	93.90	96.52 @
		1977	(8)	H	50.53	78.13	87.65	90.52 @
		1978	(14)		48.42	NA		
		1979	(14)		44.12	NA		
		1980	(18)		52.40	NA		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
42.	Leather footwear	1964	6	H	87.24	94.26	99.07	99.57
		1975	(7)	H	90.64	96.54	99.55	99.99
		1976	(7)	H	91.46	95.99	99.42	99.95
		1977	(7)	H	93.67	96.80	99.19	99.99
		1978	(8)	H	92.70	96.86	99.43	NA
		1979	(9)	H	91.61	94.47	96.81	NA
		1980	(9)	H	92.22	95.47	98.49	NA
43.	Rubber and Canvass Footwear	1964	16	H	59.10	70.30	75.20	84.20
		1975	(10)	H	69.54	88.83	92.17	96.97
		1976	(11)	H	67.70	88.69	91.79	97.06
		1977	(11)	H	69.15	90.97	93.49	97.30
		1978	(12)	H	63.24	87.22	NA	
		1979	(14)	H	70.02	89.91	91.45	NA
		1980	(14)	H	70.16	97.98	98.09	NA
44.	Dry Batteries	1964	2	H	82.00	100.00		
		1975	3	H	59.01	74.82	86.36	95.01
		1976	3	H	60.30	70.71	79.02	91.37
		1977	3	H	57.20	68.15	75.34	87.95
		1978	3	M	53.29	61.56	69.19	83.04
		1979	3	M	56.76	67.33	74.20	86.88
		1980	3	M	47.70	59.98	71.31	86.78

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
45.	Storage Batteries	1964	(12)	H	45.80	70.00	87.90	95.60
		1975	(8)	H	51.35	64.01	75.57	81.64
		1976	(8)	H	51.53	66.07	79.39	87.83
		1977	(8)	H	50.50	62.07	72.63	77.19
		1978	(8)	H	48.48	73.33	84.85	90.79
		1979	(10)	H	44.51	68.90	82.31	89.75
		1980	(10)	H	54.14	78.34	88.53	NA
46.	Electric Lamps	1964	12	M	29.50	53.60	68.70	85.90
		1975	12	M	26.14	48.39	63.02	85.93
		1976	(14)	L	22.45	40.52	57.15	84.97
		1977	(14)	M	26.78	45.93	62.24	87.96
		1978	(15)	L	20.31	35.80	50.31	73.28
		1979	(15)	L	21.82	38.40	53.52	79.55
		1980			NA			
47.	Domestic Refrigerators	1964	6	H	57.30	79.40	89.20	99.90
		1975			NA			
		1976	6	H	38.40	69.00	90.70	100.00
		1977	6	H	43.00	67.50	91.20	100.00
		1978	6	H	42.50	73.53	91.84	100.00
		1979	6		b			
		1980	6		b			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
48.	Room Airconditioners								
		1964	8	M	28.50	44.90	61.30	83.80	
		1975	6	H	54.37	70.37	79.90	96.58	
		1976	6	H	44.00	66.30	87.30	98.90	
		1977	6	H	48.40	73.10	87.30	96.90	
		1978	6	H	54.13	72.41	89.95	100.00	
		1979	7		36.99	NA			
		1980	7		49.84	NA			
49.	Typewriters	1964	4	H	62.10	86.70	97.40	100.00	
		1975	4	H	45.64	77.41	NA	NA	
		1976	4	H	44.41	75.57	NA	NA	
		1977	4	H	48.79	79.60	96.57	100.00	@
		1978	4	H	36.67	72.28	88.27	100.00	@
		1979	4	H	37.26	66.09	88.25	100.00	@
		1980	4	H	30.63	60.53	86.57	100.00	@

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
50.	Cigarettes	1964	9	H	46.20	66.10	83.30	99.30
		1975	(17)	H	52.24	72.67	84.23	NA
		1976	(17)	H	50.11	72.74	86.76	98.65
		1977	(17)	H	51.30	69.91	86.82	96.46
		1978	(18)	H	49.71	69.37	86.86	100.00
		1979	(18)	H	45.01	63.29	80.16	93.66
		1980	(18)	H	40.66	61.60	79.39	97.08
51.	Toothpaste	1964	8	H	42.20	65.00	77.60	94.20
		1975	(10)	H	55.40	76.56	89.90	100.00
		1976	(10)	H	54.91	73.56	89.88	98.77
		1977	(10)	H	55.74	75.55	91.04	99.67
		1978	(12)		54.91	NA		
		1979	(12)		57.02	NA		
		1980	(12)		63.63	NA		

Notes:

- * Production figures refer to the year 1969.
- @ Refers to the production of 4 units only.
- (£) Production figure of 1964 refer only to toilet soap.
- b Total production figure as supplied by the Office of the Directorate General of Technical Development (DGTD) is less than the sum of the production figures of the individual units. Since data from all the production units is not available, the actual production and therefore the market shares of the individual units cannot be calculated.

Figures in brackets under the column number of enterprises refer to DGTD units and not Enterprises.

Sources:

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2. DGTD; Handbook of Industrial Data, 3rd Edition, 1975.
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8. Ministry of Petroleum, Chemicals and Fertilisers, Monitoring and Evaluation (Drugs) Section, Indian Drugs Statistics, 1976-77, 1980-81.
9. Centre for Monitoring Indian Economy: Public Sector in the Indian Economy, September 1977, July 1978.
10. Balance Sheets of Companies.
11. ASSOCHAM Parliamentary Digest various issues.

APPENDIX 1.3

Names of Top Enterprises and the percentage share of production of each in 1964 and from 1975 to 1980.

<u>Sl.No.</u>	<u>Product</u>	<u>Name of Top Enterprises</u>	<u>1964</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
<u>I Basic Industries</u>									
1.	Aluminium	1. Indian Aluminium Corpn.	48.2	46.86	41.42	35.63	40.07	38.05	31.30
		2. Hindustan Aluminium Corporation	38.5	37.29	41.19	39.71	32.12	36.73	40.81
		3. Aluminium Corporation of India	13.3	NP	NP	NP	NP	NP	NP
		4. Madras Aluminium	NP	9.42	9.34	9.25	11.24	10.62	12.20
		5. Bharat Aluminium	NP	6.43	8.05	15.47	16.57	14.60	15.69
2.	Zinc (a)	1. Hindustan Zinc	51.00	55.22	57.60	53.76	77.52	87.19	97.77
		2. Cominco Binami	49.00	44.78	42.40	46.24	22.48	12.81	2.23
3.	Copper	1. Indian Copper Corpn. (Hindustan Copper)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
4.	Lead	1. Metal Corporation of India (Hindustan Zinc)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
5.	Cement	1. AOC	39.8	35.66	36.43	34.10	32.7	32.32	31.33
		2. Jaipur Udyog	14.8	2.39	0.55	3.78	NP	NP	NP
		3. Dalmia (Bharat) Cement Limited	9.2	3.03	3.39	3.06	2.70	2.80	2.73
		4. India Cement Limited	6.7	6.36	7.77	7.09	7.70	7.16	6.21
		5. Shree Digvijay Cement	6.1	4.76	5.06	4.76	4.5	5.2	5.1
		6. Saurashtra Cement	-	3.64	3.01	2.77	2.5	2.1	2.5
		7. Andhra Cements	-	1.23	-	-	1.4	1.42	2.15
		8. Bagalkot Udyog	-	1.42	1.25	0.93	0.90	0.97	0.82
		9. Birla Cement Works	-	5.90	5.35	3.94	2.0	2.50	1.75

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		10. Chettinad Cement	-	-	-	-	1.7	2.02	1.94
		11. Cement Corporation of India	-	-	-	-	2.4	3.26	4.41
		12. Century Cement	1.43	3.31	3.72	3.4	3.80	4.07	
		13. Dalmia Dadri Cement	-	-	-	0.8	0.62	0.05	
		14. Durgapur Cement	-	-	-	2.2	2.10	1.99	
		15. Hira Cement	-	-	-	2.1	2.20	2.30	
		16. J & K Minerals	-	-	-	0.1	0.03	0.05	
		17. J K Cement Works	-	-	-	2.1	2.40	3.18	
		18. Kalyanpur Lime and Cement	1.81	1.63	1.44	1.6	1.4	1.65	
		19. Kesoram Cement	1.69	2.59	2.70	2.9	3.9	4.04	
		20. Madras Cement	0.87	1.16	1.43	1.6	1.9	2.4	
		21. Manulu Cherra Cement	NP	NP	NP	0.3	0.3	0.3	
		22. Mysore Cement	2.28	2.52	1.69	2.2	2.1	2.2	
		23. Orissa Cement	2.68	2.56	2.53	2.4	2.5	2.3	
		24. Panyam Cement	2.06	2.47	2.27	1.9	1.0	1.6	
		25. Ramakrishna (KCP)	-	-	-	1.5	1.5	1.2	
		26. Rohas Industries	1.05	1.20	1.29	1.6	1.2	1.1	
		27. Maihar Cement	NP	NP	NP	NP	NP	0.2	
		28. Satna Cement	-	-	-	2.6	3.1	3.0	
		29. Sonevalley Portland Cement	1.58	1.13	0.49	1.1	0.8	1.02	
		30. Tamil Nadu Cement	NP	NP	NP	1.8	1.5	3.01	
		31. Travancore Cement	0.19	0.18	0.19	0.3	0.2	0.2	
		32. Udaipur Cement	NP	NP	NP	1.2	1.3	0.9	
		33. U.P. State Cement Corpn.	NP	NP	NP	3.2	2.7	2.8	
		34. Visvesvaraya Iron and Steel	NP	NP	NP	0.6	0.5	0.4	
		35. Kutch Cement	NP	NP	NP	NP	NP	0.1	
6.	BHC (Tech)	1. Tata Chemicals	49.0	29.15	23.76	21.84	19.27	20.38	16.83
		2. Alkali and Chemical Corporation	31.5	17.40	13.65	13.81	7.75	12.07	4.53
		3. Pesticides Limited (Pesticides & Brewers)	19.5	4.82	4.69	2.70	2.82	2.09	0.49

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		4. Kanoria	NP	23.16	32.65	33.65	40.27	37.81	48.15
		5. Hindustan Insecticides	NP	7.56	7.52	5.32	6.14	7.49	8.80
		6. Hindustan Organic Chemicals	NP	7.55	7.21	7.24	5.65	5.24	6.52
		7. Mico Farm Chemicals	NP	10.36	10.52	15.46	18.10	14.92	14.68
7.	DDT (Tech)	1. Hindustan Insecticides	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<u>II Intermediate Industries</u>									
8.	Newsprint	1. National Newsprint & Paper Mills Ltd.	100.00	100.00	100.00	100.00	100.00	100.00	100.00
9.	Soda Ash	1. Tata Chemicals	50.90	54.53	54.46	55.89	52.58	53.78	57.68
		2. Saurashtra Chemicals	29.54	24.81	25.42	31.04	32.97	32.72	27.86
		3. Dhrangadhra Chemicals	14.81	10.47	10.19	9.47	11.06	11.15	12.38
		4. Jahu Chemicals (New Central Jute Mills & now Orissa Cements)	4.75	10.29	9.93	3.60	3.39	2.35	2.08
10.	Stable bleaching powder	1. Mettur Chemical and Ind. Corpn.	100.00	27.41	21.49	17.13	20.06	21.66	23.09
		2. DCM Chemical Works	NP	57.25	57.13	57.18	53.18	59.15	62.25
		3. Kancra Chemicals	NP	15.33	21.38	25.69	26.76	19.19	14.66
11.	Potassium Chlorate	1. WIMCO Limited	83.40	49.81	42.96	41.12	40.13	33.14	29.78
		2. Travancore Chemical	9.60	31.14	33.03	28.09	28.21	32.67	37.33
		3. Mettur Chemical	7.00	6.50	6.10	5.20	3.97	1.63	3.89
		4. Pandian Chemicals	NP	12.55	17.94	25.59	27.69	32.56	29.00
12.	Bromine	1. Tata Chemicals	100.00	100.00	100.00	100.00	99.09	98.74	99.65
		2. Mettur Chemical and Ind. Corporation		-	-	-	0.91	1.26	0.35
13.	Borax (b)	1. Borax Morarji	100.00	100.00	79.40	80.53	65.47	70.87	78.64
		2. Southern Borax	NP	NP	20.60	19.47	34.53	29.13	21.36
14.	Boric Acid(c)	1. Borax Morarji	100.00	100.00	100.00	100.00	100.00	92.55	96.33
		2. Southern Borax	NP	NP	NP	NP	NP	7.45	3.67

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
15.	Industrial Explosives	1. Indian Explosives	100.00	81.40	79.10	74.60	54.87	56.43	56.68
		2. IDL Chemicals	NP	18.60	20.90	25.40	40.76	32.99	26.99
		3. Karnataka Explosives	NP	NP	NP	NP	NP	NP	0.83
		4. Indo-Burma Petroleum Company Limited	NP	NP	NP	NP	4.37	10.58	NA
16.	Rubber Chemicals	1. Alkali and Chemical Corpn.	100.00	50.70	45.19	42.58	40.26	42.00	37.67
		2. Bayer (India) Ltd.	NP	46.20	52.34	53.37	55.66	53.46	60.02
		3. Amar Dye Chemicals	NP	3.10	2.47	4.05	4.10	4.54	2.31
17.	Synthetic rubber	1. Synthetics and Chemicals	100.00	100.00	100.00	100.00	87.80	73.84	70.87
		2. Indian Petro Chemicals Ltd.	NP	NP	NP	NP	12.20	26.16	29.13
18.	PVC Resin/Compound	1. Rajasthan Vinyl and Chemicals (DCM)	60.20	34.54	32.40	27.71	40.04	37.72	41.07
		2. Jalico Mills	39.80	16.46	12.90	9.96	9.96	17.01	10.59
		3. NOCIL	NP	22.25	27.60	30.49	21.17	26.77	22.52
		4. Chemicals and Plastics	NP	15.12	21.60	19.52	18.53	24.92	27.17
		5. Plastic resins and Chemicals	NP	11.68	5.50	12.32	3.25	nil	nil
19.	Polythelene (L.D)	1. Alkali and Chemicals Corporation	62.40	39.20	41.50	42.90	24.49	15.31	14.34
		2. Union Carbide	37.60	60.80	58.50	57.10	29.30	22.11	24.94
		3. Indian Petro-chemical Industries	NP	NP	NP	NP	46.21	62.58	60.72
20.	Polythelene (H.D) (d)	1. Polyclefins	100.00	100.00	100.00	100.00	100.00	100.00	100.00
21.	Styrene	1. Synthetics and Chemicals	100.00	34.70	40.00	30.40	32.30	31.67	
		2. Polychem	NP	47.40	45.50	47.00	41.59	34.57	
		3. Hindustan Polymers	NP	17.90	14.50	22.60	26.11	33.76	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
22.	Polystyrene	1. Polychem	100.00	80.35	81.57	71.64	65.86	53.86	
		2. Hindustan Polymers	NP	19.65	18.43	28.36	34.14	46.14	
23.	<u>Man-made fibres</u>								
(a)	Nylon filament yarn.	1. Nirlon	54.0	15.65	15.10	15.02	14.90	14.38	17.33
		2. J.K. Synthetics	35.8	34.42	31.60	30.27	29.32	31.24	25.81
		3. Plastic Packaging Company	10.2	NP	NP	NP	NP	NP	NP
		4. Century Enka	NP	6.18	6.56	5.58	10.15	10.18	9.08
		5. Saree Synthetics	NP	2.63	5.21	5.85	7.16	6.08	9.00
		6. Baroda Rayon	NP	12.03	10.10	9.90	9.21	8.58	8.17
		7. Garware Nylon	NP	10.68	12.20	13.29	13.66	13.74	16.11
		8. Modiran Limited	NP	16.88	16.90	18.33	15.60	15.80	14.50
(b)	Viscose staple fibre	1. Gwalior Rayon Silk Mfg (Wvg) Company	89.00	96.11	88.47	91.57	92.63	92.99	99.70
		2. South India Viscose	11.00	3.89	11.52	8.43	7.37	7.01	0.30
(c)	Viscose filament yarn	1. Century Rayon (Century Spinning & Manufacturing Co.)	26.00	29.13	26.50	23.34	25.86	25.02	25.61
		2. National Rayon Corpn.	25.30	28.59	24.50	23.44	20.21	21.27	23.23
		3. Mesoram Industries & Cotton Mills	13.50	11.24	6.80	12.24	12.53	12.89	13.99
		4. South India Viscose	10.20	6.02	6.90	5.68	7.83	6.90	7.57
		5. Baroda Rayon	8.80	10.79	9.60	9.23	8.91	9.72	9.46
		6. Indian Rayon Corpn.		9.96	12.50	13.15	13.50	14.22	11.82
		7. J.K. Synthetics		nil	8.30	7.38	7.54	4.79	2.22
24.	Rayon Grade Pulp	1. Gwalior Rayon & Silk Mfg.(Wvg) Co.	100.00	83.27	79.50	88.08	75.96	73.05	74.81
		2. South India Viscose	NP	16.73	20.50	17.92	24.04	26.95	25.19
25.	Automobile Tyres	1. Dunlop	41.50	31.20	33.25	30.01	26.58	22.83	23.02
		2. Firestone (Bombay Tyres International)	24.90	15.40	13.39	10.92	11.42	11.16	10.06

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		3. Ceat	15.00	13.20	17.30	17.14	16.40	15.02	14.92
		4. Goodyear	9.10	10.70	9.77	9.59	8.66	6.72	8.25
		5. MRF	5.20	12.00	7.70	7.34	9.20	11.36	12.24
		6. Incheck		5.50	1.00	2.10	0.96	1.27	1.15
		7. Premier	-	7.20	5.70	3.73	3.51	4.36	2.63
		8. Falcon		-	-	3.72	5.97	6.49	6.57
		9. Modi		4.80	7.58	10.00	9.75	10.39	11.65
		10. J K Tyres		NF	NF	3.73	5.60	7.87	4.88
		11. Apollo		NF	NF	1.72	1.95	2.53	3.24
		12. Vikrant		NF	NF	NF	NF	NF	1.40
26.	Carbon Black	1. Phillips Carbon Black	100.00	67.67	65.96	71.48	56.21	63.36	37.56
		2. United Carbon	NF	32.33	34.04	28.52	27.25	nil	23.67
		3. Gujarat Carbon	NF	NF	NF	NF	NF	11.81	14.68
		4. Oriental Carbon	NF	NF	NF	NF	16.54	24.83	24.10
27.	Ball and Roller Bearing	1. National Engineering Industries	68.67	38.10	30.94	34.80	30.75	35.17	32.10
		2. Bharat Ball Bearing (Shriram Brgs)	24.58	7.70	4.94	5.50	5.39	7.80	6.98
		3. Antifiction Bearing	5.60	5.90	4.99	5.60	5.08	7.03	4.60
		4. Precision Bearing	0.98	10.50	10.44	11.80	9.19	10.35	9.12
		5. Associated Bearing	0.17	37.70	29.72	33.50	23.73	29.31	30.21
		6. Needle Roller Bearing	NF	NF	0.14	Neg	0.20	0.49	0.37
III Capital Goods Industries									
28.	Grinding wheels	1. Grindwell Abrasives Ltd	47.70	42.03	41.60	45.97	45.50	42.96	45.21
		2. Carborandum Universal	35.40	51.52	48.00	49.90	52.54	46.72	47.61
		3. Industrial Abrasives	12.10	NA	NA	NA	NA	NA	NA
		4. Krishnan Lal Thirani	3.30	1.27	1.40	1.87	1.96	NA	NA
		5. Thermal Products	1.00	NA	NA	NA	NA	NA	NA
29.	Twist Drills	1. Indian Tool Manufacturing Limited	47.00	25.67	29.50	31.70	30.97	35.89	38.47
		2. Addison and Co.Ltd.	35.30	50.00	52.00	48.50	44.44	43.05	46.65
		3. Jairamdas Udyog	11.80	NF	NF	NF	NF	NF	NF
		4. Burn & Co. Ltd.	3.4	NF	NF	NF	NF	NF	NF

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		5. New India Tool Manufacturing Co.	1.6	NF	NP	NP	NF	NF	NF
		6. Steel and Allied Products	NF	14.87	13.20	11.00	12.50	8.61	NA
		7. Taps and Dies	NP	2.91	4.30	6.10	NA	NA	NA
		8. Small Tool Manufacturing Company	NP	NA	1.00	2.60	NA	NA	NA
30.	Air and Gass Compressors	1. Kirloskar Pneumatic	36.10	13.81	9.30	9.31	8.25	5.69	6.21
		2. K.G.Khosla & Company	30.10	NA	23.40	17.88	15.69	11.51	9.97
		3. Elgi Equipments	13.80	35.70	32.50	26.79	24.02	21.11	24.99
		4. Atlas Copco	8.40	6.19	4.80	6.46	4.18	3.85	3.62
		5. Holman Climax	5.30	NA	1.20	1.08	NA	NA	NA
		6. Ingersoll-Rand		26.88	20.20	30.40	42.74	49.09	55.47
		7. Consolidated Pneumatics		5.43	4.50	5.34	NA	NA	NA
31.	Agricultural Tractors	1. TAFE	54.10	10.60	13.30	16.54	11.61	8.26	11.62
		2. Tractors and Bulldozers	24.40	NP	NF	NP	NF	NF	NP
		3. Escorts Limited	14.00	14.36	14.40	20.63	19.43	20.35	16.83
		4. Eicher Tractors	7.50	4.83	8.00	10.07	9.66	11.65	15.85
		5. Escorts Tractors Ltd.		14.52	13.70	15.89	12.50	12.34	8.94
		6. GICL		2.50	2.60	5.94	4.78	3.49	1.52
		7. Harsha		3.00	1.60	2.97	1.34	1.53	1.18
		8. HMT		20.22	18.10	11.94	17.21	14.02	11.25
		9. Mahindra and Mahindra (ITCI)		22.85	17.40	5.58	13.25	15.63	17.29
		10. Kirloskar Tractors		2.40	0.90	0.73	1.12	1.71	3.21
		11. Punjab Tractors		4.66	8.20	9.45	8.50	10.56	12.12
		12. Nitte Tools Private Ltd.		0.10	0.30	0.29	0.56	0.46	0.19
32.	Passenger Cars	1. Hindustan Motors	66.10	40.40	51.95	53.28	61.07	59.94	71.23
		2. Premier Automobiles	16.70	59.10	47.37	45.98	37.63	39.51	28.58
		3. Standard Motor Products	17.20	0.50	0.51	0.29	0.34	0.19	0.02
		4. Sunrise Auto Industries	NF	NP	0.17	0.45	0.96	0.36	0.16

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
33.	Geeps	1. Mahindra and Mahindra	100.00	100.00	100.00	100.00	100.00	100.00	100.00
34.	Commercial Vehicles	1. TELCO	42.90	59.00	56.48	56.59	54.44	53.08	46.50
		2. Premier Autos	26.10	6.80	4.95	4.52	2.15	1.55	1.46
		3. Hindustan Motors	14.80	2.80	2.37	2.33	4.46	4.35	7.14
		4. Ashok Leyland	11.10	17.50	19.95	18.90	20.47	20.63	18.93
		5. Bajaj Tempo	5.10	10.40	9.94	11.46	12.15	9.97	14.35
		6. Standard Motors		-	3.70	3.91	3.57	4.06	5.11
		7. Mahindra and Mahindra		-	2.63	2.29	2.53	5.17	5.29
35.	Scoters	1. API	51.90	29.20	21.80	13.48	15.90	17.22	11.15
		2. Bajaj Auto	41.60	59.70	53.52	51.90	46.18	40.24	52.39
		3. Enfield India	6.50	NP	NP	NP	NP	NP	NP
		4. A.P. Scooters Ltd.	NP	NP	2.42	5.17	5.66	6.18	5.03
		5. Aravalli Svachalit	NP	NP	0.02	0.42	0.53	NP	NP
		6. Escorts Limited	NP	0.50	0.45	0.34	0.22	NP	NP
		7. Gujarat State Industries Corporation	NP	0.10	0.22	0.12	0.11	0.50	1.63
		8. Karnataka Scooters Ltd.	NP	NP	0.09	2.10	1.98	1.88	0.65
		9. Maharashtra Scooters	NP	NP	2.93	14.47	16.78	12.74	11.91
		10. Punjab Scooters	NP	NP	NP	1.26	1.36	NP	NP
		11. Scooters India	NP	10.40	18.54	10.29	11.30	21.24	17.24
36.	Motorcycles	1. Enfield India	35.70	27.04	24.43	16.26	22.90	23.48	22.36
		2. Escorts Limited	32.50	34.38	35.17	44.20	43.82	46.78	46.34
		3. Ideal Jawa	31.80	38.29	40.40	40.00	33.24	29.72	31.29
		4. Saund Zweirad	NP	0.29	NP	neg	0.04	0.02	0.01
37.	3 wheelers	1. API	67.50	18.80	17.58	4.79	10.70	19.92	16.84
		2. Bajaj Auto	28.70	81.20	82.42	95.12	89.08	78.67	81.22
		3. Enfield India	3.80	NP	NP	NP	NP	NP	NP
		4. Scooters India	NP	NP	NP	0.09	0.22	1.41	1.95

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
38.	Mopeds	1. Saund Zweirad Union	100.00	5.46	4.22	4.51	6.59	4.49	1.57
		2. API	neg	NP	NP	NP	NP	NP	NP
		3. Indian Automotives Limited		NA	4.23	4.11	2.89	2.04	0.45
		4. Kinetic Engineering Limited		49.82	34.59	46.78	43.54	45.25	43.74
		5. Kirloskar-Ghatge Patil Limited		NA	2.16	5.10	8.29	4.23	7.05
		6. Majestic Autos Limited		NP	NP	NP	0.55	10.84	23.22
		7. Mopeds India Limited		38.69	49.64	30.03	28.34	24.19	17.80
		8. Raman Engineering Ltd.		NA	0.07	1.25	2.09	3.32	NP
		9. S & P Engineering Ltd.		NA	4.28	5.56	4.70	3.35	2.68
		10. Tamilnadu Mopeds		NP	0.25	0.93	3.00	2.30	1.09

IV Consumer Products including Durables.

39. Drugs

a)	Insulin	1. Boots Pure Drug (Boots India Ltd.)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
b)	Penicillin	1. Hindustan Antibiotics	59.70	25.02	25.51				31.72
		2. Alembic Chemical Works	24.40	25.10	25.71				24.51
		3. Standard Pharmaceuticals							
			15.90	25.02	24.15				25.71
		4. Indian Drugs and Pharmaceuticals Ltd.	NP	24.86	25.63				18.06
c)	Streptomycin	1. Hindustan Antibiotics	55.60	31.82	32.80				40.05
		2. Synbiotics	44.40	40.92	40.20				44.86
		3. Indian Drugs & Pharmaceuticals Ltd.	NP	24.33	24.10				15.09
		4. Alembic	NP	2.93	2.90				-
d)	Vitamin A	1. Roche	68.30	76.47	76.42				65.85
		2. Glaxo	31.70	23.53	23.58				34.15

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
e)	Vitamin C	1. Sarabhai Merck Private Limited(Sarabhai Merck Chemicals)	100.00	77.16	74.29				55.55
		2. Jayant Vitamins	NP	22.84	24.78				39.82
		3. Hindustan Antibiotics	NP	NP	1.03				4.63
f)	PAS & its salts	1. Bio-synth	35.80	23.77	25.62				17.31
		2. Biological Products (Bio-Evans)	29.30	12.98	10.58				15.88
		3. Pfizer	24.40	14.52	15.42				16.47
		4. Wander	10.50	23.74	24.92				19.08
		5. IDPL	NP	25.00	23.46				30.67
		6. Tuber Pharma	NP	NP	NP				0.59
g)	Chloroquin	1. Parke Davis	88.20	NP	NP				-
		2. Bengal Immunity	11.40	7.14	3.92				1.96
		3. Albert David	0.40	NP	NP				-
		4. Bayer	NP	76.53	66.17				69.24
		5. Suneeta	NP	16.33	29.91				2.05
		6. Ranbaxy	NP						26.75
h)	Aspirin	1. Alta Laboratories	82.10	100.00	100.00				97.37
		2. Martin and Harris	16.60	NP	NP				-
		3. Indosal Chemical	1.30	NP	NP				-
		4. Andhra sugar	NP	NP	NP				2.63
i)	Chloramphenicol	1. Boehringer-Knoll	58.80	50.41	46.50				46.64
		2. Parke Davis	41.20	37.98	36.80				19.54
		3. Dey-se Chemicals	NP	11.61	16.70				31.55
		4. Mac Laboratory	NP	NP	NP				2.27
40.	Soap	1. Hindustan Lever	58.70	48.04	55.76	54.31	47.59	52.64	53.16
		2. TOMCO	23.40	27.93	20.80	25.27	27.96	18.75	26.75
		3. Government Soap Factory	5.70	1.88	1.83	1.58	NA	NA	NA
		4. Calcutta Chemical Company	3.60	0.53	1.68	0.58	NA	NA	NA
		5. Swastik Oil Mills	2.50	2.46	1.91	1.64	NA	NA	NA
		6. Kusum Products	-	3.05	2.57	1.41	1.90	2.45	1.78
		7. Godrej soaps		3.60	2.69	2.98	2.91	3.79	NA

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		8. Berar Oil Industries		1.94	1.99	1.57	NA	NA	NA
41.	Synthetic Detergents	1. Hindustan Lever	67.60	44.90	45.70	55.80	48.42	44.12	52.40
		2. Swastik Oil Mills	32.40	35.40	38.53	30.50	NA	NA	NA
		3. TOMCO	NP	16.10	9.67	10.50	16.70	10.96	9.57
		4. Kusum Products	NP	3.60	3.02	3.20	1.89	1.88	1.99
		5. Godrej Soaps	NP	-	-	-	2.73	4.12	NA
42.	Leather footwear	1. Bata Shoe Company	87.27	90.64	91.46	93.67	92.70	91.61	92.22
		2. British India Corpn. (TAFCO)	6.99	5.90	4.53	3.13	4.16	2.34	3.25
		3. Carona Sahu	4.81	3.01	3.43	2.39	2.57	2.86	3.02
43.	Rubber & Canvas footwear	1. Bata Shoe Company	59.10	69.54	67.70	69.15	63.24	70.02	70.16
		2. Carona Sahu	11.20	19.19	20.99	21.82	23.90	19.89	27.82
		3. Swastik Rubber	NP	2.54	3.10	1.89	NA	1.54	0.11
44.	Dry Batteries	1. Union Carbide	82.00	59.01	60.30	57.20	53.29	56.76	47.70
		2. Estrela Batteries	18.00	12.04	8.31	7.19	5.77	5.28	1.44
		3. Lakhonpal National Limited	NP	1.76	3.49	4.94	7.63	3.72	12.28
		4. Indo-National Limited	NP	2.67	4.71	6.26	7.20	10.57	11.33
		5. Toshiba Anand Batteries	NP	5.48	7.64	6.35	6.65	6.87	6.36
		6. Punjab Anand Batteries	NP	2.21	2.96	3.47	5.90	6.27	6.60
		7. Geep Industrial Syndicate Ltd.	NP	15.81	10.41	10.95	8.27	6.41	8.87
		8. Straw Products Limited	NP	NP	1.98	3.64	5.29	4.11	5.42
45.	Storage Batteries	1. Associated Battery Makers (Chloride India)	45.80	51.35	51.53	65.42	48.48	44.51	54.14
		2. Standard Batteries	24.20	12.66	15.54	13.68	24.85	24.39	24.20
		3. Radio and Electrical Manufacturing Company	17.90	NP	NP	NP	NP	NP	NP
		4. Bharat Battery Manufacturing Company	4.40	NP	NP	NP	NP	NP	NP
		5. Mysore Electro Chemical Works	3.30	5.80	3.86	2.45	2.91	1.95	3.18
		6. Willard India		0.26	4.58	3.45	3.03	5.49	10.19
		7. AMCO Batteries		11.56	13.32	14.99	11.52	13.41	NA

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
46.	Electric Lamps	1. Electric Lamp Manufacturers	29.50	22.25	18.07	16.31	13.51	15.12	15.25
		2. Hind Lamp Limited	24.10	26.14	22.45	26.78	20.81	21.82	NA
		3. Bengal Electric Lamps	15.10	14.63	16.63	19.15	14.99	16.58	6.95
		4. Philips India Limited (Piecc)	8.80	12.65	16.13	15.57	14.51	11.79	12.54
		5. Bharat Electrical Industries	8.40	NP	NP	NP	NP	NP	NP
		6. Sylvania & Laxman	NP	10.26	11.69	10.15	14.46	14.24	16.78
		7. Mysore Lamps		6.05	6.06	6.21	6.99	4.98	5.17
47.	Domestic Refrigerators	1. Hyderabad Allwyn	57.30	35.00	30.60	23.70	18.31		
		2. Godrej & Boyce	22.10	20.99	21.70	24.50	31.03		
		3. Sur Industries	9.80	NP	NP	NP	NP		
		4. Kelvinator	8.10	35.00	38.40	43.00	42.50	£	£
		5. Kalinga Industries	2.60	NP	NP	NP	NP		
		6. Voltas		7.26	8.10	6.90	5.23		
		7. Fedders' Lloyd		NA	1.20	1.90	2.94		
48.	Room air-conditioners	1. Voltas	28.50	54.37	44.00	48.40	54.13	36.99	49.84
		2. Air conditioning Corpn.	16.40	9.14	4.40	3.10	6.10	5.81	8.88
		3. Electronics Limited	16.40	7.54	22.30	24.70	17.54	NA	19.72
		4. American Refrigerator	11.70	9.53	7.20	5.60	3.95	1.52	2.06
		5. Fedders' Lloyd	NA	16.00	21.00	NA	18.28	NA	NA
		6. Hyderabad Allwyn	NP	NP	NP	NP	NP	0.06	
		7. Premier Autos	NP	3.42	-	3.50	NP	NP	NA
49.	Typewriters	1. Remington Rand	62.10	45.64	44.41	48.79	38.60	37.26	30.63
		2. Rayala Corporation	24.60	22.59	24.43	16.97	11.73	11.75	13.43
		3. JK Business Machines	10.70	NP	NP				
		4. Godrej and Boyce	2.60	31.77	31.16	30.81	33.61	28.83	29.90
		5. Facit Asia	NP	NP	NP	3.43	15.99	22.16	26.04
50.	Cigarette	1. Imperial Tobacco Co.(ITC)	46.20	52.24	50.11	51.30	49.71	45.01	40.66
		2. Vazir Sultan	19.90	20.43	22.63	18.61	19.66	18.28	17.79
		3. National Tobacco (Duncans Agro Inds)	17.20	5.01	4.55	3.14	5.54	6.87	10.77
		4. Golden Tobacco	11.20	11.52	14.02	16.91	17.49	16.87	20.94
		5. Godfrey Phillips	4.80	6.42	7.34	6.50	7.60	6.63	6.92

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
51. Toothpaste	1. Colgate-palmolive	42.20	55.40	54.91	55.74	54.91	57.02	63.68	
	2. Geoffrey Manners	22.80	21.16	16.32	15.49	NA	NA	NA	
	3. Hindustan Lever	12.60	8.26	6.58	7.16	NA	NA	NA	
	4. Ciba of India (Ciba Geigy)	8.80	13.34	18.65	19.81	10.61	17.37	NA	
	5. Calcutta Chemical	7.80	1.84	2.31	1.47	NA	NA	NA	

NOTES: NF = No production of the product in the year specified

- = denotes negligible amount of production

NA = data not available

* = unit-wise data for drugs for the years 1978, 1979 not disclosed by the office of the DGTD

£ = Total production figures as supplied by the Office of the DGTD is less than the sum of the production figures of the individual units. Since data for all the production units is not available, the actual production and therefore the market shares of the individual units cannot be calculated.

- Source:
1. Balance sheets of individual companies.
 2. Assocham Parliamentary Digest, various issues.
 3. Report of the Panel on Production Targets and Inputs Required for automobiles ancillaries and allied industries, (Development Council for Automobiles and allied industries, 1975-77) Association of Indian Automobile Manufacturers, Bombay.
 4. India, Government of., DGTD, Statistics Relating to DGTD units, February 1978
 5. India, Government of., DGTD, Annual Report, 1978-79.
 6. India, Government of., DGTD, Ministry of Finance, Annual Report on the Working of the Commercial Undertakings of the Central Govt. 1975-76, 1976-77, 1979-80, 1980-81.
 7. India, Government of., DGTD, Ministry of Industry, Report, 1978-79, 1981-82.
 8. India, Government of., DGTD, Ministry of Petroleum, Chemicals & Fertilisers, Monitoring and Evaluation (Chem) Section, Indian Chemicals Statistics, 1981-82.
 9. India, Government of., DGTD, Ministry of Petroleum, Chemicals & Fertilisers, Monitoring and Evaluation (Drugs) Section, Indian Drugs Statistics, 1976-77, 1980-81.

APPENDIX 1.4Market Shares of Business-Houses, 1964, 1978 & 1980

1964			
Sl.No.	Name of Product	Names of Enterprises	Ownership % Share in Production
1.	Aluminium	1) Hindustan Aluminium	Birla 38.50
		2) Aluminium Corporation of India	J.K.Singhania 13.50
			52.00
2.	Cement	1) ACC	ACC 39.80
		2) Jaipur Udyog	Sahu Jain 14.80
		3) Dalmia (Bharat) Cement Ltd.	Dalmia Jai Dayal 9.20
		4) Shree Digvijay Cement	Bangur 6.10
			69.90
3.	BHC (Tech)	1) Tata Chemicals	Tata 49.00
		2) Alkali and Chemical Corporation	ICI 31.50
			80.50
4.	Soda Ash	1) Tata Chemicals	Tata 50.90
		2) Saurashtra Chemicals (Jiyajeerao Cotton)	Birla 29.54
		3) Dhrangadhra Chemicals	S.P.Jain 14.81
		4) Sahu Chemicals	Sahu Jain 4.75
			100.00
5.	Stable Bleaching Powder	1) Mettur Chemical and Industrial Corpn.	Seshasayee 100.00
6.	Potassium Chlorate	1) WIMCO Ltd.,	Swedish Match 83.40
		2) Mettur Chemical and Industrial Corpn.	Seshasayee 7.00
			90.40
7.	Bromine	1) Tata Chemicals	Tata 100.00
8.	Industrial Explosives	1) Indian Explosives	ICI 100.00
9.	Rubber Chemicals	1) Alkali and Chemical Corporation	ICI 100.00
10.	Synthetic Rubber	1) Synthetics and Chemicals	Kilachand (Tulsidas) 100.00

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
1.	Aluminium	1) Hindustan Aluminium	Birla	32.12
		2) Madras Aluminium	Naidu V.R.	11.24
				43.36
2.	Cement	1) ACC	ACC	32.70
		2) Shree Digvijay	Bengur	4.50
		3) Birla Cement Works	Birla	2.00
		4) Century Cement	Birla	3.40
		5) Kesoram Cement	Birla	2.90
		6) Mysore Cement	Birla	2.20
		7) Madras Cement	Madras Cement	1.60
		8) V. Ramakrishna (KCP)	V.Ramakrishna	1.50
		9) Rohtas Industries	Sahu Jain	1.60
				52.40
3.	BHC (Tech)	1) Tata Chemicals	Tata	19.27
		2) Alkali and Chemicals Corporation	ICI	7.75
				27.02
4.	Soda Ash	1) Tata Chemicals	Tata	52.58
		2) Jiyajeerao Cotton	Birla	32.97
		3) Dhrangadhra Chemicals	S.P.Jain	11.06
		4) Sahu Chemicals (New Central Jute Mills)	Sahu Jain	3.39
				100.00
5.	Stable Bleaching Powder	1) DCM Chemical Works	Shri Ram	53.18
6.	Potassium Chlorate	1) WIMCO Ltd.	Swedish Match	40.13
7.	Bromine	1) Tata Chemicals	Tata	99.09
8.	Industrial Explosives	1) Indian Explosives	ICI	54.87
9.	Rubber Chemicals	1) Alkali and Chemical Corporation	ICI	40.26
10.	Synthetic Rubber	1) Synthetic and Chemicals	Kilachand (Tulsidas)	87.80

1980

Sl.No.	Name of Product	Name of Enterprises	Ownership	% share in Production
<u>Basic Industries</u>				
1.	Aluminium	1) Hindustan Aluminium	Birla	40.81
		2) Madras Aluminium	Naidu, V.R.	12.20
				53.01
2.	Cement	1) ACC	ACC	31.33
		2) Shree Digvijay	Bangur	5.10
		3) Birla Cement Works	Birla	1.75
		4) Century Cement	Birla	4.07
		5) Kesoram Cement	Birla	4.04
		6) Mysore Cement	Birla	2.20
		7) Madras Cement	Madras Cement	2.40
		8) V.Ramakrishna (KCP)	V.Ramakrishna	1.20
		9) Rohtas Industries	Sahu Jain	1.10
		10) Orissa Cement	Orissa Cement	2.30
				75.49
3.	BHC (Tech)	1) Tata Chemicals	Tata	16.83
		2) Alkali and Chemical Corporation	ICI	4.53
				21.36
4.	Soda Ash	1) Tata Chemicals	Tata	57.68
		2) Jiyajeerao Cotton	Birla	27.86
		3) Dhamgadhra Chemicals	S.P.Jain	12.38
		4) Orissa Cements (formerly New Central Jute Mills Ltd)	Orissa Cement	2.08
				100.00
5.	Stable Bleaching Powder	1) DOM Chemical Works	Shri Ram	62.25
6.	Potassium Chlorate	1) WIMCO Ltd.,	Swedish Match	29.78
7.	Bromine	1) Tata Chemicals	Tata	99.65
8.	Industrial Explosives	1) Indian Explosives	ICI	56.68
		2) Karnataka Explosives	Chowgule	0.83
				57.51
9.	Rubber Chemicals	1) Alkali and Chemical Corporation	ICI	37.67
10.	Synthetic Rubber	1) Synthetic and Chemicals	Kilachand (Tulsidas)	70.87

1964			
Sl.No.	Name of Product	Name of Enterprises	Ownership % Share in Production
11.	PVC Resin Compound	1) Rajasthan Vinyl & Chemicals	Shri Ram 60.20
		2) Calico Mills	Sarabhai 39.80
			100.00
12.	Polythelene (L.D)	1) Alkali and Chemical Corporation	ICI 62.40
13.	Polythelene (H.D)	1) Polyolefins	Mafatlal 100.00
14.	Styrene	1) Synthetics and Chemicals	Kilachand 100.00
15.	Polystyrene	1) Polychem	Kilachand 100.00
16.(a)	Nylon filament Yarn	1) J.K. Synthetics	J.K.Singhania 35.80
(b)	Viscose Staple Fibre	1) Gwalior Rayon Silk Mfg (Wvg) Co.Ltd.,	Birla 89.00
		2) South India Viscose	Naidu, G.V 11.00
			100.00
(c)	Viscose filament Yarn	1) Century Rayon	Birla 26.00
		2) National Rayon Corpn.	Chinai 25.30
		3) Kesoram	Birla 13.50
		4) South India Viscose	Naidu, G.V 10.20
			75.00
17.	Rayon Grade Pulp	1) Gwalior Rayon Silk Mfg (Wvg) Co.,Ltd.,	Birla 100.00
18.	Borax	-	
19.	Boric Acid		

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
11.	PVC Resin Compound	1) DCM (Shriram Vinyl)	Shri Ram	40.04
		2) NOCIL	Mafatlal	21.17
		3) Calico Mills	Sarabhai	9.96
		4) Plastic Resins & Chemicals	S.P.Jain	3.25
				<u>74.42</u>
12.	Polythelene(L.D)	1) Alkali and Chemical Corporation	ICI	24.49
		2) Union Carbide	Union Carbide	29.30
				<u>53.79</u>
13.	Polythelene (H.D)	1) Polyolefins	Mafatlal	100.00
14.	Styrene	1) Synthetics & Chemicals	Kilachand	32.20
		2) Polychem	Kilachand	41.59
				<u>73.89</u>
15.	Polystyrene	1) Polychem	Kilachand	65.86
16.(a)	Nylon filament Yarn	1) J.K.Synthetics	J.K.Singhanian	29.32
		2) Shree Synthetics	Bangur	7.16
		3) Modipon Ltd.	Modi	15.16
				<u>52.08</u>
(b)	Viscose Staple Yarn	1) Gwalior Rayon Silk Mfg(Wvg) Co.Ltd.	Birla	92.63
		2) South India Viscose	Naidu,G.V	7.37
				<u>100.00</u>
(c)	Viscose filament yarn	1) Century Spg & Mfg Co.	Birla	25.86
		2) Kesoram Industries & Cotton Mills Ltd.	Birla	12.53
		3) South India Viscose	Naidu, G.V	7.83
		4) J.K.Synthetics	J.K.Singhanian	7.54
				<u>53.76</u>
17.	Rayon Grade Pulp	1) Gwalior Rayon Silk Mfg (Wvg) Co., Ltd.,	Birla	75.96
		2) South India Viscose	Naidu,G.V.	24.04
				<u>100.00</u>
18.	Borax	-		
19.	Boric Acid			

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
11.	PVC Resin Compound	1) DCM (Shri Ram Vinyl)	Shri Ram	41.07
		2) NOCIL	Mafatlal	22.52
		3) Calico Mills	Sarabhai	10.59
		4) Plastic Resins and Chemicals	S.P.Jain	Nil
				74.18
12.	Polythelene (L.D)	1) Alkali and Chemical Corporation	ICI	14.34
		2) Union Carbide	Union Carbide	22.94
				39.28
13.	Polythelene (H.D)	1) Polyolefins	Mafatlal	100.00
14.	Styrene	1) Synthetics & Chemicals	Kilachand	31.67*
		2) Polychem	Kilachand	34.57*
				66.24
15.	Polystyrene	1) Polychem	Kilachand	53.86
16.(a)	Nylon filament Yam	1) J.K.Synthetics	J.K.Singhanian	25.81
		2) Shree Synthetics	Bangur	9.00
		3) Garware Nylons	Garware	16.11
		4) Modipon Ltd.	Modi	14.50
				65.42
(b)	Viscose Staple Yam	1) Gwalior Rayon Silk Mfg (Wvg) Co.Ltd.	Birla	99.70
		2) South India Viscose	Naidu, G.V	0.30
				100.00
(c)	Viscose Filament Yam	1) Century Spg & Mfg.Co.	Birla	25.61
		2) Kesaram Industries & Cotton Mills Ltd.	Birla	13.99
		3) Indian Rayon Corpn.	Birla	11.82
		4) South India Viscose	Naidu, G.V.	7.57
		5) J.K. Synthetics	J.K.Singhanian	2.22
				61.21
17.	Rayon Grade Pulp	1) Gwalior Rayon Silk Mfg (Wvg) Co.Ltd.	Birla	74.81
		2) South India Viscose	Naidu, G.V.	25.19
				100.00
18.	Borax	1) Borax Morarji	Dharamsey Morarji	78.64

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Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
20.	Automobile tyres	-		
21.	Carbon Black	1) Phillips Carbon Black Goenka		100.00
22.	Ball and Roller Bearings	1) National Engineering Industries	Birla	68.67
		2) Bharat Ball Bearing	Shri Ram	24.58
				<u>93.24</u>
23.	Twist Drills	1) Indian Tool Mfrs.Ltd.	Birla	47.00
		2) Addison & Co.Ltd	Simpson	35.30
		3) Burn & Company	Martin Burn	3.40
				<u>85.70</u>
24.	Grinding Wheels	-		
25.	Air & Gas Compressors	1) Kirloskar Pneumatic Company.	Kirloskar	36.10
26.	Agricultural Tractors	1) Tractors & Farm Equipment (TAFE)	Simpson	54.10
27.	Passenger Cars	1) Hindustan Motors	Birla	66.10
		2) Premier Automobiles	Walchand	16.70
				<u>82.80</u>
28.	Commercial Vehicles	1) TELCO	Tata	42.90
		2) Premier Automobiles	Walchand	26.10
		3) Hindustan Motors	Birla	14.80
		4) Bajaj Tempo	Bajaj	5.10
				<u>88.90</u>

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
20.	Automobile tyres	1) Dunlop	Dunlop	26.58
		2) Modi Rubber	Modi	9.75
		3) J.K. Tyres	J.K.Singhania	5.60
		4) Apollo Tyres	Raunaq Singh	1.95
				43.88
21.	Carbon Black	1) Phillips Carbon Black	Goenka, K.P	56.21
22.	Ball and Roller Bearings	1) National Engineering Industries	Birla	30.75
		2) Shri Ram Bearings	Shri Ram	5.39
		3) Associated Bearings	Tata	23.73
				59.87
23.	Twist Drills	1) Indian Tool Mfrs Ltd.	Birla	30.97
		2) Addison & Co. Ltd.	Simpson	44.44
				75.41
24.	Grinding Wheels	1) Carborundum Universal	Murugappa Chettiar	52.54
25.	Air & Gas Compressors	1) Kirloskar Pneumatic	Kirloskar	8.25
		2) Holman Climax	Bird-Heilgers	NA
				8.25
26.	Agricultural Tractors	1) TAFE	Simpson	11.61
		2) Escorts Ltd.	Escorts	19.43
		3) Escorts Tractors Ltd.	Escorts	12.50
		4) ITCI	Mahindra	13.25
		5) Kirloskar Tractors	Kirloskar	1.12
				57.93
27.	Passenger Cars	1) Hindustan Motors	Birla	61.07
		2) Premier Automobiles	Walchand	37.63
				98.70
28.	Commercial Vehicles	1) TELCO	Tata	54.44
		2) Premier Automobiles	Walchand	2.15
		3) Hindustan Motors	Birla	4.46
		4) Ashok Leyland	Ashok Leyland	20.47
		5) Bajaj Tempo	Bajaj	12.15
		6) Mahindra & Mahindra	Mahindra	2.53
				96.20

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Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
20.	Automobile tyres	1) Dunlop	Dunlop	23.02
		2) Modi Rubber	Modi	11.65
		3) J.K.Tyres	J.K.Singhania	4.88
		4) Apollo Tyres	Raunaa Singh	3.24
				42.79
21.	Carbon Black			
22.	Ball and Roller Bearings	1) National Engineering Industries	Birla	32.10
		2) Shri Ram Bearings	Shri Ram	6.98
		3) Associated Bearing	Tata	30.21
		4) Precision Bearing	V.Ramakrishna	9.12
				78.41
23.	Twist Drills	1) Addison & Co. Ltd.	Simpson	46.65
24.	Grinding Wheels	1) Carborundum Universal	Murugappa Chettiar	47.61
25.	Air & Gas Compressors	1) Kirloskar Pneumatic	Kirloskar	6.21
		2) Holman Climax	Bird-Heilgers	NA
				6.21
26.	Agricultural Tractors	1) TAFE	Simpson	11.62
		2) Escorts Ltd.	Escorts	16.83
		3) Escorts Tractors Ltd.	Escorts	8.94
		4) ITCI	Mahindra	17.29
		5) Kirloskar Tractors	Kirloskar	3.29
				57.97
27.	Passenger Cars	1) Hindustan Motors	Birla	71.23
		2) Premier Automobiles	Walchand	28.58
				99.81
28.	Commercial Vehicles	1) TELCO	Tata	46.50
		2) Premier Automobiles	Walchand	1.46
		3) Hindustan Motors	Birla	7.14
		4) Ashok Leyland	Ashok Leyland	18.93
		5) Bajaj Tempo	Bajaj	14.35
		6) Mahindra & Mahindra	Mahindra	5.29
				93.67

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Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
29.	Scooters	1) Bajaj Auto	Bajaj	41.60
30.	Motor Cycles	-		
31.	3 wheelers	1) Bajaj Auto	Bajaj	28.70
32.	Jeeps	1) Mahindra & Mahindra	Mahindra	100.00
33.	<u>Drugs:</u>			
(a)	Pencillin	1) Alembic Chemical Works	Amin	24.40
		2) Standard Pharmaceuti- cal Works	Sarabhai	15.90
				40.30
(b)	Streptomycin	1) Synbiotics	Sarabhai	44.40
(c)	PAS & its salts	-		
(d)	Chloramphenicol	1) Boehringer - Knoll	Rallis	58.80
34.	Soap	1) Tata Oil Mills	Tata	23.40
		2) Swastik Oil Mills	Sarabhai	2.50
				25.90
35.	Synthetic Detergents	1) Swastik	Sarabhai	32.40
36.	Leather Footwear	1) British India Corpn.	BIC	6.99
		2) Carona Sahu	S.P. Jain	4.81
37.	Rubber & Canvas Footwear	1) Carona Sahu	S.P. Jain	11.80 11.20

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
29.	Scooters	1) Bajaj Auto	Bajaj	46.18
		2) Escorts Ltd.	Escorts	0.22

				46.40
30.	Motor-cycles	1) Escorts Ltd.	Escorts	43.82
31.	3-wheelers	1) Bajaj Auto	Bajaj	89.08
32.	Jeeps	1) Mahindra & Mahindra	Mahindra	100.00
33.	<u>Drugs:</u>			
(a)	Pencillin	1) Standard Pharmaceuticals	Sarabhai	NA
(b)	Streptomycin	1) Synbiotics	Sarabhai	NA
(c)	PAS & its salts	-		
(d)	Chloramphenicol	-		
34.	Soap	1) Hindustan Lever	Hindustan Lever	47.59
		2) TOM Co.	Tata	27.96
		3) Godrej Soaps	Godrej & Boyce	2.91
		4) Swastik	Sarabhai	NA

				78.46
35.	Synthetic Detergents	1) Hindustan Lever	Hindustan Lever	48.42
		2) Swastik	Sarabhai	NA
		3) TOM Co.	Tata	16.70
		4) Godrej Soaps	Godrej & Boyce	2.73

				67.85
36.	Leather Footwear	1) Carona Sahu	S.P.Jain	2.57
37.	Rubber & Canvas Footwear	1) Carona Sahu	S.P.Jain	23.98

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Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
29.	Scooters	1) Bajaj Auto	Bajaj	52.39
		2) Escorts Ltd.	Escorts	NF

				52.39
30.	Motor Cycles	1) Escorts Ltd.	Escorts	46.34
31.	3-wheelers	1) Bajaj Auto	Bajaj	81.22
32.	Jeeps	1) Mahindra & Mahindra	Mahindra	100.00
33.	<u>Drugs:</u>			
(a)	Pencillin	1) Standard Pharmaceuticals	Sarabhai	25.71
(b)	Streptomycin	1) Synbiotics	Sarabhai	44.86
(c)	PAS & its salts	1) Pfizer	Pfizer	16.47
34.	Soap	1) Hindustan Lever	Hindustan Lever	53.16
		2) TOMCO	Tata	26.75
		3) Godrej Soaps	Godrej & Boyce	NA
		4) Swastik	Sarabhai	NA

				79.91
35.	Synthetic Detergents	1) Hindustan Lever	Hindustan Lever	52.40
		2) Swastik	Sarabhai	NA
		3) TOMCO	Tata	9.57
		4) Godrej Soaps	Godrej & Boyce	NA

				61.97
36.	Leather Footwear	1) Carona Sahu	S.P.Jain	3.02
37.	Rubber & Canvas Footwear	1) Carona Sahu	S.P.Jain	27.82

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Sl.No.	Name of Product	Names of Enterprises	Ownership % Share in Production

38.	Dry Batteries		
39.	Storage Batteries		
40.	Electric Lamps	1) Hind Lamps	Bajaj 24.10
41.	Domestic Refrigerators	1) Hyderabad Allwyn	Birla 57.30
42.	Room Airconditioners	1) Voltas	Tata 28.50
		2) Airconditioning Corporation	Birla 16.40

			44.90
43.	Typewriters	1) J.K.Business Machines	J.K.Singhanian 10.70
44.	Cigarettes	1) National Tobacco Company	B.N.Elias 17.20
45.	Toothpaste		

Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
38.	Dry Batteries	1) Union Carbide	Union Carbide	53.29
		2) Straw Products	J.K.Singhania	5.29

				58.58
39.	Storage Batteries	1) AMCO Batteries	Simpson	11.52
40.	Electric Lamps	1) Hind Lamps Ltd.	Bajaj	20.81
		2) Electric Lamps Mfrs. India Ltd.	Philips	13.51
		3) Philips India Ltd.	Philips	14.51

				48.83
41.	Domestic Refrigerators	1) Godrej & Boyce	Godrej & Boyce	31.03
		2) Voltas	Tata	5.23

				36.26
42.	Room Airconditioners	1) Voltas	Tata	54.13
		2) Airconditioning Corporation	Birla	6.10

				60.23
43.	Typewriters	1) Godrej & Boyce	Godrej	33.61
44.	Cigarettes	1) ITC	ITC	49.71
		2) National Tobacco (Duncan Agro-Industries)	Goenka, K.P	5.54
		3) Golden Tobacco	Golden Tobacco	17.49

				72.74
45.	Toothpaste	1) Hindustan Lever	Hindustan Lever	NA
		2) Ciba Geigy	ICI	10.61

				10.61

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Sl.No.	Name of Product	Names of Enterprises	Ownership	% Share in Production
38.	Dry Batteries	1) Union Carbide	Union Carbide	47.70
		2) Straw Products	J.K.Singhania	5.42
				<u>53.12</u>
39.	Storage Batteries	1) AMCO Batteries	Simpson	13.41*
		2) Mysore Electro-chemical Works	United Breweries	1.95*
				<u>15.36</u>
40.	Electric Lamps	1) Hind Lamps Ltd.	Bajaj	21.82*
		2) Electric Lamps Mfrs. India Ltd.	Philips	15.12*
		3) Philips India Ltd.	Philips	11.79*
				<u>48.73</u>
41.	Domestic Refrigerators	1) Godrej & Boyce	Godrej	£
		2) Voltas	Tata	£
42.	Room Airconditioners	1) Voltas	Tata	49.84
		2) Airconditioning Corporation	Birla	8.38
				<u>58.72</u>
43.	Typewriters	1) Godrej & Boyce	Godrej	29.90
44.	Cigarettes	1) ITC	ITC	40.66
		2) Duncans Agro-Industries	Goenka, K.P.	10.77
		3) Golden Tobacco	Golden Tobacco	20.94
				<u>72.37</u>
45.	Toothpaste	1) Hindustan Lever	Hindustan Lever	NA
		2) Ciba Geigy	ICI	17.37*
				<u>17.37</u>

Notes:

N.P.: No production of the product for the year specified.

*: data refer to the year 1979

£: Total production figures of the product concerned as supplied by the office of the DGTD is less than the sum of the production figures of the individual units. Since data for all the production units is not available the actual production and therefore the market shares of the individual units cannot be calculated.

APPENDIX 1.5Shares of FERA Companies in Production

Average Share in Production (1975-80)

Sl.No.	Product	Name of FERA Company	Percentage of Non-Resident Holding	Company Share in Total Production (%)	Total Share of FERA Companies in Production (%)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Polythelene (L.D)	a) Alkali and Chemical Corporation	51.00	29.62	
		b) Union Carbide	50.92	42.13	71.75
2.	Grinding Wheels	a) Carborandum Universal	50.00	49.38	
		b) Grindwell Norton	50.00	43.88	93.26
3.	Automobile Tyres	a) Dunlop	50.16	27.82	
		b) Ceat	50.15	15.66	
		c) Bombay Tyres International	74.00	12.06	
		d) Goodyear	59.93	8.95	64.49
4.	Ball and Roller Bearing	a) Associated Bearing	51.00	30.70	30.70
5.	BHC (Tech)	a) Alkali and Chemical Corporation	51.00	11.54	11.54
6.	Insulin	a) Boots Co. (India) Ltd.	53.00	100.00	100.00
7.	Vitamin 'A'	a) Roche Products	89.00	72.91	
		b) Glaxo Laboratories	75.00	27.09	100.00
8.	Chloroquin	a) Bayer	51.00	70.65	70.65
9.	Chloramphenicol Powder	a) Parke Davis	83.33	31.44	31.44
10.	PAS and its salts	a) Pfizer	70.00	15.47	15.47
11.	Rubber Chemicals	a) Bayer	51.00	53.51	
		b) Alkali and Chemical Corporation	51.00	43.07	96.58
12.	Industrial Explosives	a) Indian Explosives	50.30	67.18	67.18

(1)	(2)	(3)	(4)	(5)	(6)
13.	Air & Gas Compressors	a) Ingersoll-Rand	73.99	37.46	
		b) Holman-climax	60.00	NA	
		c) Consolidated Pneumatic Co.	63.80	NA	37.46
14.	Aluminium	a) Indian Aluminium Company	55.56	30.89	30.89
15.	Cement	a) Saurashtra Cement and Chemical Industries Ltd.	50.85	2.50	2.50
16.	Zinc	a) Cominco Binani Zinc	40.02	28.49	28.49
17.	Commercial Vehicles	a) Ashok Leyland	50.61	19.40	19.40
18.	Tractors	a) Tractors and Farm Equipment	49.00	11.99	11.99
19.	Mopeds	a) Sundaram Clayton	48.96	*	
20.	Dry Batteries	a) Union Carbide	50.92	55.71	55.71
21.	Storage Batteries	a) Chloride India	50.77	52.57	52.57
22.	Electric Lamps	a) Electric Lamp Mfrs.India Ltd.	100.00	16.75	16.75
23.	Soap	a) Hindustan Lever	51.00	51.92	51.92
24.	Synthetic Detergent	a) Hindustan Lever	51.00	48.56	48.56
25.	Toothpaste	a) Ciba-Geigy	65.00	15.96	
		b) Hindustan Lever	51.00	7.33	23.29

Notes: * Production of Mopeds began only in 1980.

NA Not Available.

Source: Names of FERA companies and percentage of Non-Resident holding contained in Loksabha answer to unstarred question No.6251, Answered on 31.3.1982. Quoted in Assocham Parliamentary Digest, No.7, 1982, 29.3.1982 to 3.4.1982 pp.52-72.

APPENDIX 1.6Market-Shares of Subsidiaries of Foreign Multinational Corporations: 1976 and 1980

Sl.No.	Product	Name of the Company	1976		1980	
			Co. share in Total Production	Total share of companies	Co. share in Total Production	Total share of companies
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Insulin	a) Boots Co. (India) Ltd.	100.00	100.00	100.00	100.00
2.	Vitamin 'A'	a) Glaxo Laboratories	23.58		34.15	
		b) Roche Products	76.42	100.00	65.85	100.00
3.	Chloroquin	a) Bayer India	66.17	66.17	69.24	69.24
4.	PAS and its salts	a) Pfizer Ltd.	15.42	15.42	16.47	16.47
5.	Chloramphenicol Powder	a) Farke Davis	36.80	36.80	19.54	19.54
6.	Rubber Chemicals	a) Alkali and Chemical Corporation	45.19		37.67	
		b) Bayer(India)	52.34	97.53	60.02	97.69
7.	BHC (Tech)	a) Alkali and Chemical Corporation	13.65	13.65	4.53	4.53
8.	Polythelene (L.D)	a) Alkali and Chemical Corporation	41.50		14.34	
		b) Union Carbide	58.50	100.00	24.94	39.28
9.	Automobile Tyres	a) Dunlop	33.25		23.02	
		b) Firestone (Bombay Tyres)	13.39		10.06	
		c) Good year.	9.77	56.41	8.25	41.33
10.	Potassium Chlorate	a) WIMCO Ltd.	42.96	42.96	*	
11.	Aluminium	a) Indian Aluminium Company	41.42	41.42	31.30	31.30
12.	Industrial Explosives	a) Indian Explosives	79.10	79.10	56.68	56.68
13.	Dry Batteries	a) Union Carbide	60.30	60.30	47.70	47.70
14.	Storage Batteries	a) Chloride India	51.53	51.53	54.14	54.14

(1)	(2)	(3)	(4)	(5)	(6)	(7)
15.	Typewriters	a) Remington Rand	44.41	44.41	*	
16.	Commercial Vehicles	a) Ashok Leyland	19.95	19.95	18.93	18.93
17.	Soap	a) Hindustan Lever	55.76	55.76	53.16	53.16
18.	Synthetic Detergent	a) Hindustan Lever	45.70	45.70	52.40	52.40
19.	Electric Lamps	a) Philips India (Pieco)	16.13	16.13	12.54	12.54
20.	Leather footwear	a) Bata (India) Ltd.	91.46	91.46	*	
21.	Rubber and Canvas Footwear	a) Bata (India) Ltd.	67.70	67.70	*	
22.	Cigarettes	a) ITC	50.11		*	
		b) Godfrey Philips	7.34	57.45	*	
23.	Toothpaste	a) Colgate	54.91		*	
		b) Hindustan Lever	6.58		NA	
		c) Ciba-Geigy	18.65	80.14	17.37 [@]	
24.	Ball and Roller Bearing	a) Associated Bearing	29.72	29.72	30.21	30.21
25.	Air and Gas Compressors	a) Ingersoll-Rand	20.20		55.47	
		b) Atlas Copco	4.80		*	
		c) Consolidated Pneumatic Tools	4.50		NA	
		d) Holman Climax	1.20	30.70	NA	55.47

Notes: * No longer a subsidiary of a foreign multinational corporation but an Indian company.

@ Data on refer to 1979.

NA Not Available.

Source: 1. For 1976, names of subsidiaries of foreign MNCs taken from Company News and Notes, Vol. XVI, No. 9 Sep. 1978, pp. 47-52. 2. For 1980, names of subsidiaries of foreign MNCs taken from Company News and Notes, Vol. XIX, No. 9 March, 1981, pp. 66-70.

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APPENDIX 1.7

Capacity Utilisation of Leading Companies

1.No.	Product	Name of the Company	Public Sector/ Private Sector (Foreign)	Capacity Utilization (%)		
				1978	1979	1980
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Aluminium	a) Bharat Aluminium	Public Sector	67.00	60.00	57.54
		b) Hindustan Aluminium	Private Sector	34.02	30.94	29.00
		c) Indian Aluminium	Private Sector (F)	65.98	77.81	75.44
2.	Zinc			85.58	83.82	65.16
		a) Hindustan Zinc	Public Sector	72.87	53.55	47.83
3.	Lead			68.00	59.39	59.20
		a) Hindustan Zinc	Public Sector	58.00	53.00	75.00
4.	Copper			58.00	53.00	75.00
		a) Hindustan Copper	Public Sector	35.00	35.00	63.16
5.	Cement			35.00	35.00	63.16
		a) ACC	Private Sector	81.25	70.02	72.67
6.	DDT			89.89	83.39	74.13
		a) Hindustan Insecticides	Public Sector	102.00	114.00	102.74
7.	BHC (Tech)			102.00	114.00	102.74
		a) Kanoria Chemicals	Private Sector	89.00	90.00	80.94
		b) Hindustan Organic Chemicals	Public Sector	109.85	102.74	123.09
		c) Hindustan Insecticides	Public Sector	61.67	57.00	66.67
8.	Newsprint			67.00	81.40	90.00
		a) National Newsprint and Papers Mills Ltd.	Public Sector	65.00	65.00	63.00
9.	Soda Ash			65.00	65.00	63.00
		a) Tata Chemicals	Private Sector	94.00	87.00	79.00
		b) Saurashtra Chemicals	Private Sector	84.89	82.69	87.92
				114.05	107.86	91.01

(1)	(2)	(3)	(4)	(5)	(6)	(7)
10.	Bromine			74.00	40.00	48.00
	a) Tata Chemicals	Private Sector		91.58	50.10	60.42
11.	Borax			50.00	46.00	40.00
	a) Borax Morarji	Private Sector		61.77	58.94	58.66
12.	Boric Acid			86.30	63.00	82.00
	a) Borax Morarji	Private Sector		86.30	69.97	94.73
13.	Industrial Explosives			73.00	69.00	70.35
	a) Indian Explosives	Private Sector (F)		75.28	83.57	95.24
14.	Stable Bleaching Powder			90.35	85.61	74.74
	a) LJM	Private Sector		88.40	93.18	85.24
15.	Rubber Chemicals			42.00	42.00	37.27
	a) Bayer India	Private Sector (F)		65.85	63.34	65.42
16.	PVC Resin/Compound			76.00	76.00	36.38
	a) DCM	Private Sector		96.56	77.42	49.81
17.	Synthetic Rubber			55.00	60.00	43.40
	a) Synthetics and Chemicals	Private Sector		76.10	69.36	49.39
18.	Polythelene(H.D)			95.53	86.37	41.80
	a) Polyolefins	Private Sector		95.53	86.37	41.80
19.	Carbon Black			68.00	66.00	67.71
	a) Philips Carbon Black	Private Sector		100.23	110.91	76.45

(1)	(2)	(3)	(4)	(5)	(6)	(7)
20.	Styrene			80.00	70.00	
	a)	Synthetics and Chemicals	Private Sector	95.12	81.43	
	b)	Polychem	Private Sector	78.74	57.16	
21.	Polystyrene			61.00	51.00	
	a)	Polychem	Private Sector	59.34	40.51	
22.	<u>Man-made fibres</u>					
(i)	Nylon filament yarn			111.00	108.00	85.91
	a)	J.K.Synthetics	Private Sector	101.04	107.89	94.70
(ii)	Viscose filament yarn			106.00	107.00	103.16
	a)	Indian Rayon Corporation	Private Sector	87.82	93.23	77.14
	b)	Century Spg and Mfg. Co.	-do-	156.23	152.29	155.14
	c)	Kesaram Industries	-do-	114.26	118.49	127.90
(iii)	Viscose Staple fibre			101.91	88.79	86.35
	a)	Gwalior Rayon	Private Sector	107.71	94.21	98.23
23.	Rayon Grade Pulp			60.43	82.02	76.30
	a)	Gwalior Rayon	Private Sector	60.91	79.39	75.23
24.	Ball and Roller Bearing			94.00	91.00	84.10
	a)	National Engineering Industries	Private Sector	87.87	74.10	67.82
25.	Grinding Wheels			69.73	86.80	92.00
	a)	Carborandum Universal	Private Sector (F)	82.87	91.74	97.33
	b)	Grindwell Norton	Private Sector	63.14	74.21	82.77

(1)	(2)	(3)	(4)	(5)	(6)	(7)
26.	Twist Drills			79.56	83.00	92.00
	a) Addison and Co.,	Private Sector		105.85	108.69	129.82
	b) Indian Tool Mfrs. Ltd.	Private Sector		61.98	75.23	80.65
27.	Commercial Vehicles			64.00	71.00	81.00
	a) TELCO	Private Sector		80.86	88.02	88.24
	b) Ashok Leyland	Private Sector (F)		84.21	94.73	99.45
28.	Passenger Cars			66.00	55.00	58.00
	a) Hindustan Motors	Private Sector		70.00	58.41	72.51
29.	Jeeps			84.69	94.92	115.91
	a) Mahindra and Mahindra	Private Sector		84.69	94.92	115.91
30.	Motor Cycles			64.90	65.13	76.03
	a) Escorts	Private Sector		63.32	67.84	78.44
	b) Ideal Jawa	Private Sector		68.62	61.57	75.68
31.	Scooters					51.08
	a) Bajaj Auto	Private Sector		*	*	68.75
	b) Scooters India	Public Sector		18.99	32.49	36.20
32.	3-Wheelers					44.20
	a) Bajaj Auto	Private Sector		*	*	143.59
	b) Scooters India	Public Sector		0.14	0.80	1.72

(1)	(2)	(3)	(4)	(5)	(6)	(7)
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33.	<u>Drugs (P)</u>					
(i)	Insulin					88.80
	a)	Loots India Ltd.	Private Sector (F)			88.80
(ii)	Chloroquin					22.19
	a)	Bayer	Private Sector (F)			199.75
(iii)	Aspirin					60.72
	a)	Alta Labs	Private Sector			89.92
(iv)	Vitamin 'C'					68.76
	a)	Sarabhai M Chemicals	Private Sector			137.67
	b)	HAL	Public Sector			22.04
(v)	Vitamin 'A'					133.00
	a)	Roche Products	Private Sector (F)			262.73
(vi)	Streptomycin					51.09
	a)	HAL	Public Sector			53.56
	b)	IDPL	Public Sector			40.36
	c)	Synbiotics	Private Sector			59.98
(vii)	Pencillin					63.55
	a)	IDPL	Public Sector			26.45
	b)	HAL	Public Sector			66.78
	c)	Alambic	Private Sector			82.56
	d)	Standard Pharmaceuticals	Private Sector			216.45

(1)	(2)	(3)	(4)	(5)	(6)	(7)
34.	Soap			150.66	136.48	148.84
	a) Hindustan Lever	Private Sector (F)		205.59	205.01	186.82
35.	Synthetic Detergent			50.83	64.04	66.42
	a) Hindustan Lever	Private Sector (F)		253.16	290.63	357.96
36.	Rubber and Canvas Footwear			73.91	77.10	81.59
	a) Bata India	Private Sector (F)		58.77	67.88	71.98
37.	Leather Footwear			52.99	61.80	56.65
	a) Bata India	Private Sector (F)		54.98	63.37	58.48
38.	Storage Batteries			59.78	59.42	56.88
	a) Chloride India	Private Sector (F)		66.10	60.25	70.43
39.	Refrigerators			57.35	63.67	82.10
	a) Kelvinator	Private Sector		82.72	99.91	129.84
	b) Godrej	Private Sector		60.40	78.73	105.32
40.	Room Airconditioners			48.90	73.47	55.38
	a) Voltas	Private Sector		78.52	80.58	81.85
41.	Typewriters			56.56	60.18	64.69
	a) Remington Rand	Private Sector		66.02	67.69	59.80
	b) Godrej and Boyce	Private Sector		55.06	50.80	56.64
42.	Dry cell batteries					79.23
	a) Union Carbide	Private Sector (F)		*	*	59.82
43.	Cigarettes			68.29	74.09	72.49
	a) ITC	Private Sector		88.18	86.64	76.57

Notes: * Both Bajaj Auto and Union Carbide were in the process of enhancing their installed capacities in a substantial way. Hence capacity utilization figures have been calculated for the terminal year when capacity actually materialized.

(P) Data on installed capacity for the drug producing units was not made available for the years 1978 and 1979.

Source: 1) Data on capacity utilization for the product as a whole taken from the Centre for Monitoring Indian Economy's "Production and Capacity Utilization in 650 Industries: 1970 to 1981", January 1983.

2) Data on capacity utilization for individual companies taken from their respective Balance Sheets.