SPATIAL CONCENTRATION OF INDUSTRIES IN INDIA—WITH SPECIAL REFERENCE TO CLASS I CITIES

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MASTER OF PHILOSOPHY

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1988

DEDICATED TO,

MY PARENTS

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I certify that the dissertation entitled " Spatial Concentration of Industries in Inda - with Special reference to class I cities." submitted by Ms. Padmini Ravindr Nath for the degree of Master of Philosophy (M.Phil.) of the University, is a bonafide work to the best of my knowledge and may be placed before the examiners for their consideration.

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CHAPTER I

INTRODUCTION

1. The Regional Industrial structure of the colonial economy although eminently suited to the purpose of imperialistic exploitation was not capable of providing a firm base for the balanced Industrial growth in the post Independence period. The impulses of industrialization generated during the British period were feeble as well as inverted in character, with special emphasis on development of export oriented consumer goods industry. Thus a markedly distorted regional structure of industries emerged with the ports as enclaves of economic development. The vast resource rich inner tracts of the country were became suppliers of raw materials to the port based industries.

To facilitate this scheme of colonial exploitation a port-oriented centrifugal network of transport was established, which rendered the development of the interior regions almost impossible. In addition, the systematic policy of deindustrialization followed by the British resulted in the atrophy of urban centres like Dacca, Murshidabad, and Surat as well as many other small towns. Thus we were deprived of many potential growth centres which would have emerged as the nucleii of rapid industrial development in the post Independence era.

As soon as the country achieved its independence, a programme of planned economic development was launched in order to restore balance in the spatial pattern of Industrial growth.

This aim was sought to be achieved by evolving a rigourous network of controls on the private sector, together with massive Public sector investments in the backward areas.

However, some of these policies and controls have helped the developed areas in an indirect way to exploit the backward Regions. Almost all the All India level studies conducted during the last three decades reveal that there has been a decrease in inter state inequality whatever might be the indicator they have used. However, Inter state inequalities seem to be on a sharp rise. It is the developed areas of the states that are cornering a lion's share of the various incentives offered for setting up of new industries.

This is chiefly because only a few of the state government subsidy schemes have an inbuilt proviso guaranteering the Backward areas a prefential treatment over the developed regions. In addition to this problem of continuing concentration of Industries in the urban centres especially the class I cities, the growth of Industrial output has also started stagnating ever since the mid sixties. More often than not we have been unable to achieve our plan targets in the case of Industrial growth.

In view of this Macro scenario of industrial development an attempt has been made in the present study to identify the factors that have been responsible for the slowdown in the tempo of

industrial growth and more importantly its regional concentration. An analysis has also been attempted to see how the various subsidies and development packages ostensibly for the promotion of industrial growth in the backward areas have in fact helped the developed regions to grow further.

Chapter I being introduction, the second chapter analyses the patterns of Industrial growth as well as regional dispersal of industries at inter state level. In addition to analysing the state level employment data in order to identify specific trends in the regional development of industries, an attempt has been made to assess the role of various structural forces in the stagnation of the Industrial growth.

Chapter III deals with the objectives and effectiveness of the various governmental policies aimed at the promotion of industrial growth in the backward areas. We have tried to observe, how the developed areas are in fact benefitting from the various schemes meant for the creation of an Industrial base in the underdeveloped regions.

Chapter IV is devoted to the public sector pricing policies and their role in the changing regional structure of Industries. The public sector is the most important tool in the hand of the government to generate employment and income in the economy. However in actuality the backward areas with heavy industries have been reduced to raw material appendages of the developed

areas. In this chapter an analysis has also been made to identify the peculiarities in the pricing policy responsible for the industrial concentration as discussed in the following chapters.

CHAPTER II

PATTERNS OF INDUSTRIAL DEVELOPMENT

2.1 The colonial past had serious & long term effects on the post independence pattern of Industrial growth in India. The Industrialisation pattern during the colonial period was structurally inverted with extreme regional distortions. The port oriented centrifugal network of transport and communication[1] led to the establishment of a controted industrial pattern with the three ports at the apex fed by a large surrounding enclave of industrial under development. This pattern served best to further the interests of the British Raj which wanted India to play the Dual role of a raw material appendage as well as a captive market for British Industrial goods. The vast resource rich regions remained pathetically underdeveloped with only a few modern industries coming up in the port enclaves and some selected centres in the interive. The decay of traditional industries due to a multitude of causes like isolation from foreign markets, destruction of fudal protection and competition from cheap imported and later on locally produced factory goods led to the slow atrophy of large urban centies like surat Dacca Murshibabad & Patan as well as a large number of small towns. This was a tragidy because in the post independence of industrialization they could have served as probable growth points.

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[1] Kundu & Raza (1982).

2.2 INDUSTRIALIZATION DURING BRITISH PERIOD

2.2.1 In the case of the unorganized sector the colonial domination tended to preserve the lower forms of industry, and even encouraging them in certain cases.[2] The backward nature of agriculture preserved certain industries catering to agricultural needs for example blacksmithy, carpentry, tanning and pottery most of which survive to this day in rural India. Although the highly specialized line arts and handicrafts industry withered away, but the small domestic business could hold their own. This was primarily because they could keep their prices low, due to lack of restrictions on the number of working days, age of employment, working hours and pay scales. The availability of cheap labour and raw material helped some of these domestic industries to evolve into lower forms of capital industry. The unorganized sector continued to grow slowly but steadily right up to independence as will be revealed by the following table.

GROWTH OF UNORGANISED INDUSTRY IN INDIA

	1917	1929	1939	1947
1) Small enterprises				
a) Number of enterprises	538	1354	1579	2990
b) Number of workers ('000)	12.9	34.2	50.8	83.4
2) Entire Industry				
a) Number of enterprises	4827	80127	8973	11961
b) Number of workers ('000)	1293.1	1799.3	2086.9	2690.6
3) Small Enterprises as % of the Industry				
a) Number of enterprises	11.1	16.9	17.6	25.0
b) Number of workers	1.0	1.9	2.1	3.1

Source: Shirokov (1973)

2.2.2 The first stage of the growth of the organized industry in the colonial period coincides with the rule of the East India Company. During this time the company directly or indirectly promoted the growth of light export oriented industries. However once the British crown took over the reins of the government a long period of total indifference followed which lasted till the mid ninteenth century. The revalt of 1957 followed by the opening of the Suez canal in 1870 made the British realize the economic and strategic benefits of locating heavy industries.in India itself[3]. In order to facilitate their own objectives all the new industries with the exception of those connected with the mining industry were concentrated in the ports of Bombay, Calcutta & Madras. Kanpur which evolved into a base of military equipment production was the role inland centre of development. No attention was paid to the growth of a balanced regional pattern of development. It was carrectly observed that the choice of location had been determined exclusively by business motives and that those sites have been selected which appeared to afford. The greatest advantage to the particular enterprise.

After the first world war certain key industries were allowed to be set up in India. However the increased competition from the west European countries resulted in strict import controls. This was quite damaging in the long run because Indian enterpreneurs were compelled to import higher priced British goods.

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[2]Shirokov (1973)

[3]Cambridge Economic History of India (1967)

However by the end of the second world war we had a smattering of industries notably cotton textiles Iron & Steel and cement.

Thus on the eve of independence India was left with a regionally distorted and structually imbalanced industrial framework. This mainly came because our industries developed in sits and starts according to the whims & necessities of the British Raj. In the post independence period, the country undertook a massive programme of industrial reconstruction which however quickly ran into troubled waters a decade and a half after the inception of the first plan.

2.3 AN ANALYSIS OF THE GROWTH & STAGNATION IN INDIAN INDUSTRY.

The pattern of industrial growth shows a miarked and persistent slowdown after the mid 1960's. In 1965-70 the compound annual growth rate works out to be 3.3% as compared to 8.9% in the previous five years. In the time period 1970-74 things became even worse with the Compound Growth Rate falling to 2.8%. A look at the following table reveals that the maximum deceleration was in the Metal based industries as well as the machinery manufacturing industries. In comparitive terms the retardation in agro based industries was much less.

Annual Rates of Growth of Industrial Production in Factory Enterprises

Category of industry	Annual compound rates of growth (in percentage			
	1947-51	1951-56	1961-65	1965-70
Agro-based industries	0.3	4.0	3.8	4.4	1.7
Mineral-based industries	5.1	7.2	7.7	7.0	4.6
Metal-Based industries	4.5	7.5	14.1	12.2	2.3
Chemicals and chemical-based industries	26.2	8.5	12.2	7.9	9.0
Machinery manufacturing industries	2.2	32.1	7.8	18.2	0.3
Electricity, gas and steam	-	10.4	14.7	13.2	11.9
ALL INDUSTRIES	4.8	7.4	6.8	8.9	3.3

Source: K.N. Raj (1976)

We will now observe the trends in indices of industrial production during the period 1961 to 1983.

INDEX OF INDUSTRIAL PRODUCTION

1960 = 100

	Weights	1961	1962	1963	1964	1965	1966	1967	1968
BASIC INDUSTRIES	25.11	112.7	128.2	146.5	152.1	164.3	172.9	176.4	193.9
CAPITAL GOODS INDUSTRIES	11.76	118.0	153.0	170.0	206.1	244.2	210.1	205.2	210.9
INTERMED GOODS INDUSTRIES	25.88	105.8	113.6	122.9	132.2	140.1	136.7	139.6	148.2
CONSUMER GOODS INDUSTRIES	37.25	106.6	108.0	110.4	118.6	127.5	131.3	125.6	131.9
GENERAL	100.0	109.2	119.7	129.7	140.9	153.7	152.4	151.4	160.9

1970 = 100

	Weights	1971	1972	1973	1974	1975	1976	1977	1978
BASIC INDUSTRIES	32.28	104.6	113.0	109.5	113.8	129.0	147.5	154.2	165.2
CAPITAL GOODS INDUSTRIES	15.25	105.4	106.2	123.6	129.5	130.1	143.8	156.9	162.5
INTERMED GOODS INDUSTRIES	20.95	104.0	111.2	114.2	112.3	113.7	122.2	127.5	133.5
CONSUMER GOODS INDUSTRIES	31.52	103.4	108.2	107.8	109.8	107.4	118.4	126.4	139.9
GENERAL	100.0	104.2	110.2	112.0	114.3	119.7	131.4	138.3	147.8

1970 = 100

	Weights	1980	1981	1982	1983
BASIC INDUSTRIES	32.28	164.6	188.5	203.6	214.8
CAPITAL GOODS INDUSTRIES	15.25	168.1	181.8	180.1	187.9
INTERMED GOODS INDUSTRIES	20.95	140.7	145.9	148.6	160.3
CONSUMER GOODS INDUSTRIES	31.52	135.9	135.9	147.0	155.1
GENERAL INDUSTRIES	100.0	150.7	164.6	172.0	179.7

If we analyse the trends in the index Nos. we will find that there has been a marked decelaration in all the sectors. However this slowdown is much more marked during the late sixties and early seventies in the case of basic goods industries as compared to consumer goods or intermediate goods. This implies that there is some kind of an infra-structural constraint operating on the economy.

The persistence of this sluggishness in Industrial growth has proved that it is not a fluctuation which can be explained away in terms of short term factors like wars, draughts etc. Such a persistent sluggishness in insutrial growth can come about only due to deepseated structural factors. Numerous explanations have been offered for this stagnation since the mid sixties i.e. showdown in the agricultural sector, worsening income distribution, severe investment constraints and a faulty policy of Import substitution.

In the following sections we shall try to examine each of the above explanations in order to understand how the industrial sector ultimately reached such a sorry stage.

2.3.1 Agricultural constraints on Industrial growth

The agricultural sector effects the pattern of growth in the industrial sector because they have strong demand and supply linkages with each other. An agricultural constraint starts working in the economy when the agricultural prices increase relative to the prices of the manufactured goods. These prices can increase when

(a) the net availability of agricultural commodities especially foodgrains starts falling.

(b) the government policies result in the terms of trade swinging drastically in favour of agricultural sector.

Any increase in the price of agricultural commodities especially foograins will force a large number of rural and urban consumers to cut back on non food expenditure. At the same time an increase in the raw material costs could lead to an increase in the price of industrial goods, thus further contracting the demand for industrial goods. As a result of increasing agricultural prices, the wage rates too are revised upward leading to a further profit squeeze[5] and reduction in the investible surplus in the Industrial sector. The benefits of these increased agricultural prices however do not accrue to the vast majority of the rural poor but are appropriated by a small class of landowners.[6] This extra income is spent by them mostly in conspicuous consumption leading to distorted demand patterns or in speculative activities. This

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5. Narayan (1976)
6. Mitra (1977).

coupled with the food intensive consumption pattern of the major chunk of population sets inflationary forces into motion in the economy. In order to counteract this the government has to cut back on its own expenditure.[7] All these factor individually and collectively retard the development of the industrial sector.

The crux of the matter is now to see whether there has been an agricultural constraint on the economy or not. A look at the following table reveals that in 1966 and 1967 the net availability of foodgrains had reached on all time low level in three decades. However after that the production and net availability staged a slow but steady recovery while no corresponding trends were displayed by the industrial sector. In fact during the last four years the country has been suffering from repeated droughts without any marked negative effects on the Industrial growth rates.

M/n Tons

(Foodgrains)

Net availability, production & Import

Year	Net production	Net Imports	Net availability
1	2	3	4
1961	72.04	3.49	75.69
1962	72.10	3.63	76.08
1963	70.29	4.54	74.85

[7]Mitra (1977).

1	2	3	4
1964	70.61	6.25	78.11
1965	78.20	7.44	84.57
1966	63.30	10.31	73.48
1967	64.95	8.66	73.87
1968	83.17	5.67	86.81
1969	82.26	3.82	85.81
1970	87.06	3.55	89.49
1971	94.87	2.01	94.31
1972	92.02	(-)0.51	96.22
1973	84.90	3.59	88.79
1974	91.58	5.16	97.14
1975	87.35	7.53	89.33
1976	105.91	0.67	95.83
1977	97.27	0.10	98.99
1978	110.61	(-)0.60	110.25
1979	115.41	(-)0.20	114.86
1980	95.99	(-)0.34	101.43
1981	113.39	0.66	114.29
1982	116.63	1.58	116.88
1983	113.33	4.07	114.74
1984	133.33	2.37	128.63
1985	127.35	(-)0.35	124.34
1986	131.64	(-)0.06	133.15
1987	124.36	(-)0.29	132.74

Source: Economics Survey, Government of India.

It has often been alleged that over the last three decades the terms of trade between agriculture and industry have swung in favour of the agricultural sector. Many empirical studies,[8] have been undertaken to test this contention. In fact the terms of trade at the beginning and the end have been almost the same. In the mid sixties and early seventies a perceptible shift in favour of agriculture is noticed. However after 1970, the terms of trade are not loaded in the favour of agricultural sector, although the sluggishness in the industrial sector persisted. This conclusion can be supported with the help of the following table summarising the various empirical studies which have been undertaken in connection with this issue.

(1970-71 = 100)

Terms of Trade between Agriculture & Industry

Year	Ahluwalia	Thamarajakshi	Kahlon & Tyagi
1	2	3	4
1960-61	82.9	78.5	
1961-62	80.4	79.1	
1962-63	81.2	77.8	
1963-64	83.9	76.5	
1964-65	100.6	85.4	
1965-66	100.3	89.9	
1966-67	106.0	96.7	

8. Kahlon & Tyagi (1983). Ahluwalia (1985), Thamarajakshi (197

1	2	3	4
1967-68	119.1	98.2	115.6
1968-69	104.7	91.4	105.1
1969-70	108.2	98.7	101.8
1970-71	100.0	100.0	100.0
1971-72	94.4	94.3	97.5
1972-73	98.0	93.4	103.6
1973-74	101.7	107.5	108.3
1974-75	116.0	105.2	99.6
1975-76	101.7		84.6
1976-77	87.2		89.3
1977-78	95.1		90.8
1978-79	96.2		85.4
1979-80	85.9		88.6
1980-81	84.4		87.5
1981-82	87.4		
1982-83	91.5		

Thus it is possible to argue that although a slowdown in the agricultural growth, could have contributed to industrial decelaration it cannot be held as the only or the most important factor.

2.3.2 Inequalities in income distribution as an explanation of Industrial stagnation

The income distribution in the economy determines the pattern of demand and thus effects the composition and growth of industrial output. A certain section of economists believe that, increasing income inequalities in our country are distorting the patterns of demands with the productive resources being chanelized into the output of luxury and semi-luxury goods,[9] thus retarding the pace of industrial development. The rural landlord as well as the industrial capitalist appropriate most of the surplus value generated in the economy.[10] However these are not invested in productive activities but are used up in conspicuous consumption or speculative activities that lead to inflation. While observing the effects of income inequalities Mitra[11] has limited his analysis to the rural landlord class while Patnaik extends it to all cases. Wherever the share of the capitalist class has increased as a percentage of the value added.

Before analysing the arguments in favour or against this thesis, it is absolutely imperative to examine whether the

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[9] Nayyar (1978), Mitra (1977).

[10] Patnaik (1981).

[11] Chakravarty (1979).

inequalities have in fact increased over a point of time. Certain empirical studies have covered the situation in the rural sector while others have limited themselves to the study of variation in urban poverty. The NSS data, has been analysed by Ahluwalia[12] as well as Datta[13]. Both of whom have come to the conclusion that there has been a decrease in relative inequality from 1960-61 to 1973-74.

In the case of industrial wages while the National Commission of labour concluded that real industrial wages remained constant in the pre stagnation period, Sau[14] observed that in the sixties and early seventies the earnings of the lower paid workers rose less rapidly. The statement implicitly means that with increases in income the relative inequality is also on a rise. It is important to note here that we are not studying the earnings of the same group of workers but are observing the workers in an unchanging industry or occupation.[15] This approach thus does not, take into account productivity changes.

Inspite of evidence to the contrary the income distribution and consumption pattern debate often goes on in India. It has been argued by the section of scholars that income distribution worsens resulting in distortion in the demand pattern. However an increase demand for luxury and semi-luxury goods is often utilised as an indicator of skewed income distribution.

12Aluwalia (1977).

13Dutta (1980).

14Sau (1978).

15Desai (1981).

At this point it is pertinent to observe that even if the per capita income increases with the income distribution remaining unchanged, the purchase of luxuries will rise faster than the comsumption of necessities because all income groups have a tendency to spend their incremental income on less necessary goods than those on which they spend their income. Thus increase in the luxury consumption does not necessarily reflect the increase in income inequality.

Thus while we may accept that inequality in income distribution has a hand in producing a distorted pattern of industrial growth, but its role seems to have been overestimated.

2.3.3 Investment constraints & Industrial growth

The public investment in an economy has far reaching effects of the Industrial growth, not only because it generates the infrastructural facilities but also because public expenditure is the main source of demand for the private sector output. A section of Scholars[16] has argued that a rapid fall in the real investment after 1965 has been the chief cause of the deceleration in Industrial growth.

In the pre stagnation period, massive public investment ensured a steady supply of basic industrial inputs, While the public expenditure generated a constant demand for the goods manufactured in the private sector.

From 1964-65 there was a pointed slow down in the growth of public investment and expenditure as a result of which a squeeze was applied on the growth of public sector from both supply and demand sides. The basic inputs provided by the public sector became scarce while the demand for the output of the private sector decreased considerably at the same time.

Many hypothesis have been put forward to explain this decrease investment. Patnaik & Rao link the low level of investment in the economy the failure of the government to mobilise resources for

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16. Chakrawarty (1974) Patnaik & Rao (1977), Nayyar (1978), Bagchi, (1978). Mitra (1976).

for the public sector. At the same time the private sector appropriates the increases in the economic surplus. However this is not reinvested into productive chanels but is chalized into speculative activities or conspicuous consumption.

S. Chakravarty as well as A. Mitra [17] have tried to link the agrasian stagnation and rural income distribution to the slow down in investment in the economy. Chakeravarty's argument is that the existing agrarian relations keeps the mass market for industrial goods constricted. In addition as the majority rural population can make barely both ends meet, there are not enough productive resources generated to reinvest. Mitra believes that a shift of agrarian terms of trade particularly in favour of the rural landlords is always in danger of sparking off a cumulative inflationary spiral in the economy. This will happen if the landlords increase their prices and hence incomes, using the extra income for expenditure in avenues relatively more food intensive. It will force a cut bank in public investment because extra demand generated for food will not be satisfied even with the total disappearance of extra food stocks in the economy.

Patnaik expands this theme to include industrial capitalists too. According to him two sets of forces bring industrial stagnation into play. An increase in the share of private sector in India's economic surplus and willingness on part of the government to liquify

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[17] Mitra : Terms of Trade & class relations (1977).

this surplus. At the time of slump unsold stocks pile up in the eoonomy. Increased agricultural production at the end of the slump in addition to unutilized capacity induces the government to expand its investment - The slight increase in the real wages and salaries leads to an increase in demand for industrial goods sparking off a boom. Private investment rapidly expands. The boom ends when inflationary forces compel the government to cut back on its investment.

A.K. Bagchi elaborates on this theme when he notes that public enterprises were made to subsidize private business in the name of promoting growth. Public Financial institutions ended up serving not only the priorities of private industry and trade, but became a tool in the hand of aid disbursing agencies.

Many reasons have been advanced for the deceleration in private corporate investment;

i) Decline in the public sector investment

ii) low rate of returns on the capital employed

iii) Stagflation in the economy from 1966/7 to 1974/5.

The private sector has often complained about the paucity of funds. But the actual situation happens to be dramatically different. Almost all the major term lending institutions were floated, in decade previous to when the secession set in[18]. In addition till 1969 all the major commercial banks were managed by the private sector.

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[18] ICICI 1956 Industrial Refinance Corp. of India 1958
Industrial Development Bank of India 1964.

A major reason for believing the contention that finance was a major bottle neck in the growth of large scale industry is the supposed low rate of return in manufacturing activities. However quite a bit of data on this can be explained in terms of the financial jugllery performed by confgomerates, wherein the profits of one enterprise are linked up with the expenses of another. The aluggishness of the share market too cannot be blammed as, the amount caused as share capital forms only a small percentage of the total capital and generally a big chunk of the share capital is under-written by the various term lending institutions. The Dutt committee report brought out the inequalities in the distribution of bank credit which was mainly concerned by large & medium Industrial houses.

A look at the following table will help us examine whether there has been indeed any slow down in the investment rates in the economy.

GROSS DOMESTIC CAPITAL FORMATION IN THE INDIAN ECONOMY.

(as % of GDP) at market prices.

Year	Public Sector	Private Sector	Total
1960-61	7.6	9.6	16.9
1961-62	7.2	9.6	15.3
1962-63	8.5	9.4	17.1
1963-64	8.5	9.4	16.6
1964-65	8.4	9.2	16.2
1965-66	9.2	9.2	18.2
1966-67	7.7	11.5	19.7

Year	Public Sector	Private Sector	Total
1967-68	7.2	10.5	16.5
1968-69	6.5	10.1	15.4
1969-70	6.1	11.5	17.1
1970-71	6.8	11.4	17.8
1971-72	7.3	12.1	18.4
1972-73	7.5	10.4	17.0
1973-74	8.2	11.1	20.0
1974-75	8.1	12.8	19.2
1975-76	10.3	11.9	19.9
1976-77	10.6	11.5	20.8
1977-78	8.3	12.4	20.9
1978-79	9.9	13.6	24.8
1979-80	11.0	13.3	23.5
1980-81	11.0	13.7	24.7
New Series			
1980-81	10.3	13.9	22.7
1981-82	11.1	15.0	22.8
1982-83	11.4	12.0	21.0
1983-84	10.5	12.8	21.0
1984-85	11.4	12.2	21.0
1985-86	11.7	14.4	24.4
1986-87	11.6	12.9	23.4

Source : Economic Survey, Ministry of Finance.

The look at the above table shows that over 1964-68 public as well as private investment fell in the economy and this was the time when there was a beginning of the deceleration in the industrial sector. However we cannot be hasty in tracing relationships because

in the previous years, the public and private investments have been at unusually low levels without corresponding effects on the industries. At the same time in the following years the total investment in the economy has peaked due to increases in public investment without any benefical effects on the industrial sector.

It is also wrong to contend that the public investment has directly slowed the private investment. Although broadly they do move in the same direction but that could be largely because both of them are affected by the same negative forces operational in the economy.

Thus the main factors leading to a overall slow down of investment and growth have been lack of proper controls to chanelize the utilization of bank credit, extremely non socialist distribution of the available funds and a tendency on part of the private corporate sector to indulge in quick profit ventures and speculative activities and of course a decrease in public investment whose role has been seriously exaggerated.

2.3.4 IMPORT SUBSTITUTION AS AN EXPLANATION FOR STAGNATION IN INDUSTRIAL GROWTH

A section of scholars[19] have argued that the import substitution policies as formulated and implemented in the Indian economy were not conducive to easing out the teething problems of infant industries. The simple principle of indigeneous availability[20] was used as the single criterion of elegibility for protection. Considerations of competability in the International markets as well as productivity and efficiency were relegated to a back place. The rationale of the infant industry argument was extended to all the incompetent industrial units too which had already been in the red for many years. As a result over a few years we consciously developed a high cost industrial structure which had to depend on protected domestic markets for its very existence. In addition we did not have the necessary technological experties to back up a policy of sudden import substitution. As a result most of these projects ran into escalating costs, & errection delays thus preparing the ground for ensuring low capacity utilization and industrial sickness. The import quota system too promoted inefficiency. The actual user licensing system alloted licenses on a fair share basis. This meant that the efficient units could not expand their production, while the sick units or the less efficient units wasted most of their import quota.

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19. Bhagwati & Desai (1970)

20 Ahluwalia (1985).

It is very unfortunate that this policy of import substitution was followed at the cost of our share of exports in the world market. From 1960 to 1974 out share fell steeply from 1.04% to a mere 0.47%. The impact of this fall in exports was felt equally by both traditional and non traditional industries. Emperical studies undertaken by certain scholars[21] reveal that although the demand for manufactured goods was growing very fast. India was not able to compete with the other third world countries. The compound growth rate of manufactured exports from 1965 to 1973 was 8.6% in the case of India, as compared to 33.3% in the case of Brazil and 36.1% for Argentina. In numerous cases we were unable to fulfill even our total quotas in exports to certain countries. Thus the first school of thought links faulty policies of import substitution and neglect of the export sector and the resultant growth of a high cost, inefficient industrial structure to the slow down in Industrial growth. However there is a second school of though which links the slow down in the pace of import substitution to the deceleration in Industrial growth. The emperical studies[22] conducted to test this hypothesis have come out with mixed results. For example in the capital goods sector import substitution continued at same pace but this sector nevertheless experienced marked slow down in Industrial growth. In the case of consumer goods continued import substitution was accompanied by continuing growth in the value and output.

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21 Mellor & Lele (1975).

22 Ahluwalia (1985).

Thus we can conclude that it was not the slow down in the rate of import of substitution, but the faulty formulation and implementation which was the chief culprit. However import substitution cannot be pinpointed as the only single government policy which inspite of best intentions has gone against national interests.

2.4 The Regional Structure of Industrial growth - An Overview

On the eve of independence India exhibited a imbalanced pattern of industrialization with the ports emerging as the centres of Industrial concentration and the vast resource rich areas acting as their hinterlands supplying raw materials. In fact the situation was so bad that the British realized it themselves. The ECONOMIC ADVISORS REPORT ON LOCATION OF INDUSTRY and noted that Induatrial location was governed only by consideration of various costs to an individual thus giving rise to a variety of social and economic evils.....There is a need for a more even distribution of industry as between regions. Two years later the

Continued next page

partition of the country further aggravated the regional imbalances in industrial development.

In the post independence era numerous studies have been undertaken on the subject of interregional disparities in the Industrial structure. However most of them have confirmed themselves to analysing the imbalances within the states using the districts as the basic units of study.[23] We shall limit ourselves to a quick overview of the various All India Studies conducted on the issue of inter-state industrial disparities.

Yogendra K. Alagh[24] in his interstate study tries to differtiate the specific patterns in the industrial clusterings. According to this study the highly developed states like, Punjab, Delhi, West Bengal, Tamil Nadu, Haryana & Maharashtra have a very strong infrastructure which can support a fairly diversified industrial mix. The middle level regions like Gujarat, Uttar Pradesh and to some extent Rajasthan have a predominantly resource based pattern of industrialization. In the backward states like most of the hill states Jammu & Kashmir and Assam the industries are resource based to some extent. However the vast majority of the industries are a result of active policies of governmental promotion.

The survey conducted by Dantwala Alagh & Sharma[25] more or less arives at the same results as the previous study. However

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23 Godbole (1978), Popola (1980), Kaur (1984).

24 Alagh (1973).

25 Dantwala, Alagh & Sharma (1975).

they especially highlighted the importance of economies of scale by identifying the existence of 'Technological clusters'. The developed states of Maharashtra, West Bengal, Tamil Nadu and Punjab as well as Gujarat have the maximum number technological clusters. Thus they pinpoint the role of cheap and quick transport, electricity and water in the development of the industrial base of a state.

A study which concentrated on the changes in the relative shares of the various states was carried out by Bhagwati & Desai[26] who based their study on the data collected by J.Krishnamurty in the 1960's. They calculated that the share in manufacturing went up for Kerala , Madras, Maharashtra and West Bengal, while declining for Orissa and Rajasthan. This is the only study which contends that, inter state disparities have increased.

The states can be broadly grouped into the developed, developing and backward states with the middle order states moving very fast to catch up with their advanced counterparts. However the extremely backward states have been unable to glean any benefits from the development of the country as a whole. It has also been observed in the various studies that there is a direct correlation between the level of industrialization and degree of diversificaton. Those states which are going in for a more diversified mix are industrializing at a faster rate as compared to others.

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26 : Bhagwali & Desai (1970).

2.5 Patterns of Industrial Growth - A State Level Analysis

In the present section an attempt has been made using the data on the male work force from the census of India to examine.

(a) the growth of the manufacturing sector as a whole and seperately for its Household and Non household components.

(b) any specific patterns of concentration and dispersal which may emerge in the statewise employment structure.

The following two statistical techniques have been applied in the analysis

(a) Location quotient

(b) Shift analysis

27

Location quotient is a method to help us understand whether there is concentration or dispersal of the industry in the regions under study.

$$L.Q. = \frac{M\%}{P\%}$$

$$= \frac{\text{\% share of region in total workers employed in a particular industry}}{\text{\% share of region in total working population}}$$

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27 . Developed by Prof.Sargant Florence

To complete the location Quotient for the manufacturing industry the formula has been applied in the following forms:

$$\text{L.Q. Manufacturing} = \frac{\text{\% share of the state in the total male manufacturing workers}}{\text{\% share of the state's total male main workers}}$$

Shift analysis is helpful in explaining the changes in the employment structure over a period of time. In this case the shift analysis has been done, for 2 segments of time i.e. 1961-71 and 1971-81. The data base is the male workers in manufacturing as a whole, in household manufacturing and Non household manufacturing.

The Shift = $T_A - T_E$

T_A = Actual employment in terminal period

T_E = Estimated employment in terminal period

I_A = Actual employment in Initial period

$T_E = g.I_A$

where g = $\frac{\text{Total actual employment in Terminal period}}{\text{Total actual employment in initial period}}$

$$\text{Shift ratios} = \frac{T_A - T_E}{(T_A - T_E)} \times 100$$

[Computed separately for positive and Negative values of the shift]

2.5.1 The following are the main trends emerging through the analysis of the Location Quotients :-

(i) In 1961 there was a very high concentration of industries in seven states i.e. West Bengal, Kerala, Maharashtra, Tamil Nadu, Gujarat, Punjab and Andhra Pradesh. All of these states had Location Quotients of more than unity. The states with the least level of concentration were Jammu & Kashmir (0.53), Orissa (0.55), Rajasthan (0.58), & Bihar (0.65).

(ii) Among the previously developed states the pace of growth slowed down in Andhra Pradesh during 1961-71. The rest of the developed states maintained their advantage. Karnataka was a new addition to the list of the states with high location Quotients in 1971. With the exception of Jammu & Kashmir and Rajasthan, the condition of the other underdeveloped states like Bihar, Orissa and Madhya Pradesh further deteriorated.

(iii) In 1981 the Leaders in the industrial development were Gujarat, Kerala, Tamil Nadu, Maharashtra, Punjab and West Bengal. Thus one can see that these states have maintained their supermacy through 1961 to 1981. Karnataka slipped into the middle order after reaching the developed category once in 1971. However within the developed category the relative position of Kerala, Maharashtra and Tamil Nadu deteriorated. The middle order states like Andhra Pradesh, Bihar, Jammu & Kashmir, Rajasthan and Karnataka emerged showed significant imppnovement in their Location Quotient during 1971-81.

We can now have a comparison in the trends between the two segments of time i.e. 1961-71 & 1971-81 on the basis of the ratios of the location quotients. In the developed category with the exception of West Bengal, Kerala , Gujarat all the other states grew at a slower pace in the latter period as compared to the former. Most of the middle order states improved their position comparitively in 1971-81. However the situation of the two really backward states Madhya Pradesh and Uttar Pradesh worsened. The conclusion derived from the ratios of the Location Quotients are thus similar to those obtained earlier by the analysis of the Quotients at three points of time.

2.5.2 The following trends emerge in interstate employment structure through the analysis of shifts.

(i) During 1961 to 1971, the number of Male workers in the manufacturing sector as a whole as well as in the Non Household sector increased. But the overall number of make workers in the Household sector fell.

(ii) In the manufacturing sector as a whole the states which displayed a Positive shifts (i.e. a growth rate greater than the national average) were Gujarat, Jammu & Kashmir, Mahrasthra, Karnataka and Rajasthan. The maximum recorded increase was in the case of Maharashtra and Gujarat. The gorwth of the rest of the states were sluggish, notably in U.P. where the Negative Shift Ratio is 28.70.

(iii) In the Household manufacturing sector in addition to Gujarat, Jammu & Kashmir, Maharashtra, Karnataka and Rajasthan the states of West Bengal too displayed a positive shift. West Bengal and Rajasthan contributed most to the increasing household employment. Maharashtra and Gujarat notably contributed the least among the statesthat made a positive contribution. Punjab & T.N surprinsingly contributed most to the Negative pull.

(iv) In the Non household manufacturing sector M.P., Karnataka and Orissa too contributed to positive shifts. Here the highest Negative contribution was by West Bengal.

(v) In 1971-81, taking the total manufacturing the number of States displaying positive, trends has increased surprisingly (Andhra Pradesh, Bihar, Punjab, Orissa and West Bengal in addition to all the states which has contributed positively in 1961-71, now contribute to the positive shift. The highest contributions are from Gujarat, Rajasthan and Punjab. In 1971-81 however Uttar Pradesh and Tamil Nadu have become the maximum contributers to the negative shift.

(vi) In household manufacturing however Gujarat, Kerala, Mahrashtra and Punjab too display negative trends, whereas in U.P., Tamil Nadu, West Bengal and Rajasthan it is positive.

RATIOS OF LOCATION QUOTIENTS

State	$\frac{LQ_{71}}{LQ_{61}}$	$\frac{LQ_{81}}{LQ_{71}}$
A.P.	0.94	0.97
Bihar	0.76	1.12
Gujarat	0.07	1.09
Jamu & Kashmir	1.01	1.39
Kerala	0.01	0.87
M.P.	0.94	0.80
Tamil Nadu	1.06	0.81
Maharashtra	1.11	0.94
Karnataka	1.08	0.97
Orissa	0.96	1.37
Punjab	1.01	1.06
Rajasthan	1.18	1.17
Uttar Pradesh	0.93	0.79
West Bengal	0.95	0.01

LQ - Location Quotient

LOCATION QUOTIENT (1961)

	Male workers in manu-fact.	M%	Total male main work-ers	P%	L.Q.
A.P.	1206589	9.52	12812485	8.99	1.05
Bihar	873676	6.89	15047304	10.56	0.65
Gujarat	723792	5.71	7072557	4.63	1.23
J & K	61321	.48	1290570	0.89	0.53
Kerala	577296	4.50	4764582	3.21	1.40
M.P.	796874	6.29	11529022	8.14	0.77
T.N.	1382174	10.91	11667065	8.24	1.32
Maharashtra	1680930	13.27	13603032	9.51	1.39
Karnataka	680614	5.37	8144665	5.73	0.93
Orissa	303039	2.39	6107993	4.34	0.55
Punjab	644344	5.12	3838517	4.70	1.08
Rajasthan	371148	2.93	7024665	5.00	0.58
U.P.	1840681	14.53	25562058	18.33	0.79
West Bengal	1515550	11.96	11444111	8.18	1.46

M% % share of the State in total male workers in manufacturing

P% % share of the State in total male main workers

$$\text{Location quotient (L.Q.)} = \frac{M\%}{P\%}$$

LOCATION QUOTIENT 1971

State	Male Worker in Manufact-uring	M%	Total Male main Workers	P%	L.Q.
A.P.	1289329	9.19	12812485	9.20	0.99
Bihar	807103	5.75	15047304	10.83	0.50
Gujarat	946131	6.75	7072557	5.09	1.32
J & K	86754	0.61	1290570	0.92	0.66
Kerala	680978	4.85	4764582	3.43	1.41
Madhya Pradesh	852546	6.08	11529022	8.29	0.73
Karnataka	834095	5.95	8144665	5.86	1.01
Orissa	331227	2.36	6107993	4.39	0.53
Punjab	429912	3.06	3838517	2.76	1.10
Rajasthan	490428	3.49	7024665	5.05	0.69
U.P.	1854028	13.22	24562058	17.68	0.74
W.Bengal	1631285	11.63	11444111	8.23	1.39

TABLE - III

LOCATION QUOTIENTS (1981)

State	Male workers in Manufacturing	M%	Total male main workers	P%	L.Q.
A.P.	1775641	9.35	15485825	9.63	0.97
Bihar	1181694	6.22	17675805	10.99	0.56
Gujarat	1571158	8.28	9160398	5.69	1.45
J & K	178557	0.94	1651846	1.02	0.92
Kerela	754589	3.97	5141149	3.19	1.24
M.P.	1022685	5.34	14389522	8.94	0.59
Tamil Nadu	1852509	9.76	13677055	8.50	1.14
Maharashtra	2920198	15.39	17019598	10.58	1.46
Karnataka	1190376	6.21	10199007	6.34	0.98
Orissa	631336	3.32	7238326	4.50	0.73
Punjab	657230	3.46	4749646	2.95	1.17
Rajasthan	858590	4.52	8912491	5.64	0.81
U.P.	2064027	10.87	29590130	18.40	0.59
W.Bengal	2313930	12.19	13913066	8.65	1.40

1961 - 71 SHIFT ANALYSIS

(Male workers in Total Manufacturing Sector)

	61_A	71_E	71_A	Shifts +	Shifts -	SR +	SR -
AP	1206589	14470106	12.89329	-	-1558577		12.83
Bihar	873676	092095	807103		-289992		23.05
Gujarat	723792	868550	946131	77581		29.26	
J & K	61321	73585	86754	13169		4.96	
Kerala	577296	692755	680978		-11777		0.95
M.P.	796874	956248	852546		-103702		8.39
Maharashtra	1680930	2017116	2129057	111941		42.22	
Karnataka	680614	816736	834095	17359		6.54	
Orissa	303039	363646	331227		-32419		2.62
Punjab	649344	779212	683070		-96142		7.77
Rajasthan	371148	445377	490428	45051		16.99	
Tamil Nadu	1382174	1658608	1652507		-6101		0.49
U.P.	1840681	2208817	185028		-354789		28.70
W.Bengal	1515550	1817660	1631285		-187375		15.16

$$G = \frac{14268538}{11558485} = 1.23 \qquad \frac{[\text{Total Act Nat. EMP (71]}}{[\text{Total Act Nat. EMP (61]}}$$

i.e. $71_E - 61_E$ for positive values = 265101
for negative values = 1235874

$$\text{Shift Ratios} = \frac{(71_A - 71_E)}{(71_A - 71_E)} \times 100$$

1961-71 (SHIFT ANALYSIS)

Male workers in Non Household Manufacturing

State	61_A	71_E	71_A	Shift +	Shift -	S.R. +	S.R. -
A.P.	387729	527311	636680	109369		15.16	
Bihar	385396	524138	434098		-90040		13.56
Gujarat	500109	680148	737008	56860		7.88	
J & K	31298	42565	37193		-5372		0.80
Kerala	392950	534412	533353		-1059		0.15
M.P.	302703	411676	432744	21068		2.92	
T.N.	750585	1020795	1166113	145318		20.14	
Maharashtra	1191921	1621012	1704645		-83633	11.59	
Karnataka	359351	488717	526549	37832		5.24	
Orissa	72998	99277	142424	43147		5.98	
Punjab	338910	460917	311148		449769		22.56
Rajasthan	15184	20650	244655	334005		31.05	
U.P.	771059	1048640	961167		-87473		13.17
W.Bengal	1243617	1691319	1361230		-330089		49.72

$$g = \frac{\text{Act Nat. Total emp (71)}}{\text{Act Nat. Total emp (61)}} = \frac{9229007}{6743810} = 1.36$$

$(71_A - 71_E)$ for positive values = 721232
for nevative values = 663802

$$S.R. = \frac{71_A - 71_E}{\Sigma(71_A - 71_E)} \times 100$$

SHIFT ANALYSIS(71-81)

(Total Male workers in Manufacturing)

State	71_A	81_E	81_A	Shift Ratios +	-
AP	1289329	1740594	1775641	2.77	
Bihar	807103	1089589	1181694	7.29	
Gujarat	946131	1277276	1571158	23.28	
J & K	86754	117117	178557	4.86	
Kerala	680978	919320	754589		14.83
M.P.	852546	1150937	1022685		11.55
T.N.	1652507	2230884	1852509		34.07
Maharashtra	2129087	287422	2920198	3.6	
Karnataka	834095	1126028	1190376	5.09	
Rajasthan	490428	662077	858590	15.57	
Punjab	429912	580381	657230	14.01	
Orissa	331227	447156	631336	14.59	
U.P.	1854028	2502937	2064027		39.53
W.Bengal	1631285	2202234	231390	8.85	
				100	100

$$E^{81} = \frac{\text{Total actual National employment (81)}}{\text{Total actual National employment (71)}} \; 71$$

$$g = \frac{18972520 \text{ (Act Emp. of all staes in 81)}}{14015380 \text{ (Act Emp. of all sttes in 71)}} = 1.35$$

$(81_A - 81_E)$ for positive = 1262031 for Negative = 1110268.

SHIFT ANALYSIS (71-81)

(Male workers in Household Manufacturing)

State	71_A	81_E	81_A	Shifts +	Shifts -	S.R. +	S.R. -
A.P.	652647	724438	697040		27398		12.37
Bihar	373005	414035	410220		3815		1.72
Gujarat	209123	232126	222025		10101		4.32
J & K	49561	55012	78600	23588		9.17	
Kerala	147625	163863	124635		39498		17.8
M.P.	419802	465980	483990	18010		7.0	
Maharashtra	424412	471097	445354		25743		17.63
Karnataka	307546	341376	334931		6445		2.92
Orissa	188803	209571	205678		3893		1.75
Punjab	200930	223032	118534		104498		47.20
Rajasthan	245773	272808	296597	24149		9.38	
Tamil Nadu	486394	539897	561138	21241		8.25	
Uttar Pradesh	892861	991075	1053716	62641		24.35	
W.Bengal	290055	321961	429535	107574		41.82	
						100	100

$$81_E = g\ (71_A) = 1.11\ (71_A)$$

$$g = \frac{\text{Total Act. Nat Emp. (81)}}{\text{Total Act. Nat.Emp (71)}} = \frac{5462083}{4888537} = 1.11$$

$$\text{Shift Ratios} = \frac{81_A - 81_E}{\sum (81_A - 81_E)}$$

$E(81_A - 81_E)$ for

Positive shifts = 257203

Negative shifts = 221391

SHIFT ANALYSIS (71-81)

(Male Workers in Non Household Manufacturing)

State	71_A	81_E	81_A	Shifts +	Shifts -	S.R. +	S.R. -
A.P.	636680	923186	1078601	155415		13.72	
Bihar	434098	629442	771474	142032		12.54	
Gujarat	737008	1068661	1349133	280372		24.75	
J & K	37193	53929	99957	46028		4.06	
Kerala	533353	713361	630224		-143137		12.24
M.P.	432744	621478	538696		-88782		7.5
Maharashtra	1704645	2471735	2474844	3109		0.27	
Karnataka	526549	763496	8555445	91949		8.11	
Orissa	142424	206514	325658	119144		10.52	
Punjab	311148	451164	538696	87532		7.72	
Rajasthan	244655	354729	561633	20633	206884	18.26	
Tamil Nadu	1166113	1690863	1291371		-399492		-34.17
U.P.	961167	1393692	1010311		-383381		-32.79
W.Bengal	1405710	2038279	1884395		-154334		-13.20
						100	100

$$g = \frac{\text{Total actual Nat. Emp. (81)}}{\text{Total actual Nat. Emp. (71)}} = \frac{13410438}{9273487} = 1.45$$

$81_E = 71_A\ (1.45)$

$E\ (81_A - 81_E)$ for positive = 1132425

$E\ (81_A - 81_E)$ for Negative = 1169126

Shift ratios (S.R.) = $\frac{81_A - 81_E}{\Sigma(81_A - 81_E)} \times 100$ separately for positive & Negative.

$E(81_A - 81_E)$ for positive = 1132425
for negative = 1169126

Thus on the basis of the review of the work done by other economists, as well as the interstate analysis undertaken by us we can conclude that without doubt the interstate disparties have, gone down. The states developing at the fastest pace are the middle order states which are emerging as centre of industrial concentration. However it cannot be said that the interstate disparties too are showing the same trend. In fact the developed districts within these states as demonstrated by certain micro level studies seem to be growing at the expense of the resource rich backward regions. However in this chapter we have confind ourselves mainly to a Macro level analysis of the patterns of the industrial development.

In addition to decreasing regional industrial disparities the second aim of the planning policies was to achieve a rapid rate of industrial growth. However after the mid sixties there was a marked decelaration in the industrial growth. Various explanations were advanced to explain this hypothesis. However it is not logical to hold any one cause as responsible for this sorry state of affairs. Rather all these factors i.e. slowdown in the agricultural sector, changes

in income distribution, faulty Import substitution and a constraint on public sector investment combined to act as a negative check on the industrial growth rate.

The government policies too had a massive role to play in the, distortion in regional patterns. This will be taken up in the next chapter.

CHAPTER III

GOVERNMENT POLICIES AND INDUSTRIAL DISPERSAL

3.1 The main aim of the various regulatory measures applied on the Indian Industrial Structure has been the achievement of the avowed Socialistic objectives of the economy. The need for decreasing inter regional disparities has been one of the objectives of the planning sector since its inception. On the eve of Independence some regions had started with an head and shoulder start above the others in infrastructural facilities as indicated in the previous chapter. The industrial policy of the British had the chief objective of transforming India into a supplier of raw materials and buyer of finished goods manufactured in Britain. This distorted policy of deindustrialization followed by the British led to a systematic lequidation of Household industries in the, vast rural areas as well as the growth of an invested industrial structure with the three ports of Bombay, Calcutta and Madras as the apex.

In the post independence era, the government had to combat this distortion through various promotional and preventive measures like licensing, provision of fiscal incentives and the development of Industrial estates.

In this chapter we shall try to analyse the evolution of these measures, the objectives behind them and the extent to which they have been successful in achieving their aim of reduction in regional disparities.

3.2 Identification of a Backward Area

It is essential to formulate a very precise criterion for the identification of a Backward area in order to ensure the proper implementation of the various policy measures. This problem becomes especially serious when we observe that many areas adjoining the big cities and the towns have been declared as Backward AReas by the Union as well as state governments. Some examples of such Backward areas adjoining big cities are Hosur near Bangalore, Uppal near Hyderabad and Gurgaon as well as Dharuhera near Delhi.[1] The Political pressure exerted by the entrepreneurs (who find it convenient to operate from the big city while locating their units in the nearby Backward Area and drawing all the benefits) has generally speaking confined the industrialisation of Backward areas to those adjoining big cities & towns.

The first attempt for the identification of Backward Areas was made by the committee on dispersal of Industries.[2] It listed the following variables which were to form the basis for formulation of further criteria :-

i) Poverty of People

ii) Density of population in relation to development of productive resources and employment opportunities

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1. Indian Press June 11, 1988

2. Small Scale Industries Board, 1960

iii) Poverty of communication and transport as indicated by inadequate lengths of railways and metalled roads per square kilometer.

iv) High incidence of unemployment or under employment.

v) Consumption of electric power

The foundation stone of the formulation of the criteria for identification of a Backward area were laid by the N.D.C. and the Pande Working Group.[3] The various criteria suggested by them are discussed below:-

N.D.C. Criteria

i) Total per capita income

ii) Per capita income from industry and mining

iii) Number of Workers in secondary and tertiary sectors

iv) Per capita annual consumption of electricity

v) Length of the surfaced roads in relation to

1. Population
2. Area of the state

Pande Working Group Criteria

a) Poverty of people reflected by low per capita income (more than 25% below state average)

b) High density of Population in relation to utilization of productive resources and employment opportunities as indicated by

1. Low percentage of population engaged in secondary & Tertiary sectors

2. Low percentage of factory employment

3. Low utilization ratios of Natural resources

4. Availability of electric power, transport and communication and water supply

c) The identified districts should be outside a radius of 50 k.m from large cities or industrial projects.

Perhaps the Chief problem associated with the identification of a Backward ARea is the choice of an appropriate Geographical unit. The district was chosen as a basic unit chiefly on the grounds of administrative convenience. This however is not a particularly good solution as backwardness can cut over political boundaries of the districts. This drawback was realized at the time of the disbursal of Central Investment subsidies. Thus in this case blocks consisting of adjoining areas of different districts were identified to preserve the Geo-economic unity.

Now, the main criteria for the identification of backwardness are per capita income, work force distribution and availability of

infrastructural as well as essential raw materials. However such a formulation of an inflexible set of criteria using the respective state averages as a reference points bring on par quite often the Backward areas of developed and developing states which may be actually on two different levels altogether. Thus the need is to link up the various criteria with national averages in order to incorporate a greater amount of uniformity into the whole procedure and preventive measures like licensing, fiscal incentives and Industrial estates. In the following pages we shall try to analyse the basic objectives behind these measures and the extent to which they have been successful in achieving, their goal of reduction in regional disparities.

3.3 Industrial Licensing

The licensing policy in India is not only a means of controlling the concentration of wealth and growth of monopoly but is not used to regulate. Efforts have also been made to bring about a proper utilization of the raw materials available in different parts of the country while granting the licenses[4] so that the backward states can have a larger share in the total licenses issued.

The experiences of the past few years have prompted the government to look up delicensing with the setting up of industrial units in Backward Areas in its recent policy package. However this measure will succeed only if applied in conjunction with the creation of massive infrastructure in the Backward areas. In the words of Manmohan Singh[5] in principle delicensing is good but mere pronouncements will not work. There are too many problems involved in the setting up of units outside the metros. This point seems to have been realized by the government too as it is combining the move towards delicensing with the creation of infrastructure via the growth centres. To increase the effectiveness of these measures the delicensing facility has been firmly linked with moving the industry away from the urban centres towards the really backward areas. On June 2,1988 the government

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4. Hazari (1967)

5. Ex Chairman PHDCCI. Comments on new Industrial Package. June, 1988.

announced that projects involving investments upto Rs. 15 crores in non backward areas and Rs. 5 crore in notified Backward Areas. This measure was combined with the reduction of the number of Industries requiring licenses from 56 to 21 only.

In order to bar loopholes and avoid the development of areas adjacent to the class I cities under the pretext of being backward, several provisions have been attached in the new scheme. The delicensing provisions mentioned in the previous paragraph will be available only if the Industries are located at least 50 km from the periphery of cities having a population of more than 25 lakhs, 30 km in case of cities with population of 15-25 lakhs, and 15 km in the case of cities having a population of 7.5 - 15 lakhs. In the case of other cities and towns the proposed plant should be outside the standard urban area/ Municipal limit in order to benefit from the delicensing facilities. The above mentioned concessions however do not apply to the M.R.T.P - F.E.R.A. Companies as well as those projects which require more than 30% of the value of EX factory production in the form of foreign exchange for importing raw materials and components.

The problem of extreme industrial concentration in the big cities and the attendant evils were realized only in the 1970's. It was observed that the large industries were locating in'Backward areas' within commutable distances of the Class I cities. Thus grabbing the financial incentives provided to the Backward areas without giving up the advantages of a Metro location. This meant that the large cities and the ancilliary units supported by them clustered around

the cities. Examples of this kind are the Hosur belt around Bangalore, Uppal and Sannat Nagar around Hyderabad, as well as Gurgaon and Dharuhera around Delhi. Thus the really backward areas in the interior remained economically underdeveloped. At the same time the Class I cities expanded rapidly and their neighbouring areas became their extensions and part of the urban agglomerations in due course of time. As a result of all this for the first time in 1977[6] the government decided that no more licenses should be issued to new industrial units located within certain distances of large metropolitan areas having a population of more than one million and urban areas with a population of more than 5 lakhs as per the 1971 census.

In order to understand why the licensing policy has not been as effective as it could be it is essential to have a look at its scope and coverage. According to the Industrial Development and Regulation ACt[7] licenses are issued for a new undertaking,substantial expansion of an existing enterprise, manufacture of a new article by an existing unit, change in the location of a whole or part of an industrial undertaking and for carrying on business in the case of an working industrial unit which should have but did not apply for a license. Thus licensing turns out to be a preventive instrument of industrial dispersal in that it can discourage the location of

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6. Industrial Policy statement(December 23, 1977)

7. Industrial Development Regulation Act (1948)

industries in specific areas but cannot do much to promote their location in others.

The faulty working of the licensing system has brought about regional as well as productwise disparities in the licenses issued. Over the years it has been shown that the percentage of share of Backward states in the licenses granted has steadily increased. However the bulk of the licenses for the production of commodities with rapidly developing markets and increasing industrial importance for example:- machine tools, agricultural machinery, Industrial Machinery, Metal and non metal based industry Railway and Transport industry have been cornered by the developed states of Maharashtra, Gujarat, West Bengal, Punjab and Haryana.[8] In addition in many backward states uneconomic units too have been granted licenses first to permit these states a greater share in the total licenses issued.

The licensing of uneconomic units means that a large part of the licensed capacity lies unused. In addition the generation of Industrial employment too proceeds at a very slow rate. Thus the faculty implementation of the licensing policy has been one of the causes behind the high degree of industrial sickness prevalent in the economically backward states.

A common accusation levelled against the underdeveloped states is that only a small percentage of total applications made originally

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8. Hazari (1968)

from these states. In order to examine this claim we will divide the states into two categories and examine them at two points of time.

SHARE IN LICENSES APPLIED FOR & ISSUED

	(1981-83) % share in applies made	% share in issued	(1955-66) % share in applics made	% share in issued
ANDHRA PRADESH	8.37	7.80	3.46	3.31
ASSAM	1.20	0.53	1.08	0.95
BIHAR	2.00	2.16	4.88	5.16
GUJARAT	10.35	11.48	8.66	8.89
HARYANA	6.88	7.46	7.46	6.31 (P+H)*
HIMACHAL PRADESH	3.12	1.74	N.A.	N.A.
JAMMU & KASHMIR	1.36	1.19	N.A.	N.A.
KARNATAKA	6.17	7.33	2.98	3.26
KERALA	1.94	2.75	3.11	3.61
MADHYA PRADESH	5.54	5.13	2.85	2.47
MAHARASHTRA	15.65	15.21	25.88	27.37
MANIPUR	0.08	0.08	N.A.	N.A.
MEGHALAYA	0.55	0.76	N.A.	N.A.
NAGALAND	0.31	0.38	N.A.	N.A.
ORISSA	3.17	3.35	1.40	1.18
PUNJAB	3.91	4.11	(P+H) See * above	
RAJASTHAN	4.36	4.79	1.97	1.76

	(1981-83) % share in applics made	% share in issued	(1955-66) % share in applics made	% share in issued
SIKKIM	0.16	0.08	N.A.	N.A.
TAMIL NADU	6.22	6.27	8.97	9.68
TRIPURA	0.03	0.04	N.A.	N.A.
UTTAR PRADESH	11.55	10.64	7.72	6.71
WEST BENGAL	3.72	3.73	16.30	16.46

Source : R.K.Hazari (1968)

: Kundu & Rao(1986)

In the category A we include those states whose share in the total applications made is greater than their share in the total licenses issued. In the category B we have included those states whose share in applications made is less than their share in licenses issued. The following TAble will bring this out clearly.

State	1955-66	1981-83
Andhra Pradesh	A	A
Assam	A	A
Bihar	B	B
Gujarat	B	B
Punjab & Haryana	B	B

State	1955-66	1981-83
Karnataka	B	B
Kerala	B	B
Madhya Pradesh	A	A
Maharashtra	B	A
Orissa	A	B
Rajasthan	A	B
Tamil Nadu	B	A
Uttar Pradesh	A	A
West Bengal	B	B

The above table shows that in fact it is NOT the developing but the developed states like Maharashtra, Tamil Nadu and West Bengal whose shares in the licenses applied for are less than licenses issued. Bihar was the only backward state whose share in licenses issued was greater as compared to licenses applied for. Thus in the late fifties and early sixties there was a marked bias against the underdeveloped states. By 1980 the situation had improved considerably. By 1981-83 most of the Backward states are having a greater share in licenses issued as compared to applications made by them.

3.4 Fiscal incentives to Backward Areas.

3.4.1 The private entrepreneurs always prefer safe locations like established industrial centres. They can be motivated to locate their industries in the backward areas only if special incentives are offered with this perspective in mind certain schemes of subsidies and incentives have been introduced from time to time.

It was the wanchoo working group[9] which first highlighted the importance of financial incentives in attracting private enterprise to Backward areas. The various incentives suggested by it were as follows:-

(i) Higher development rebate for the industries located in Backward areas.

(ii) Exemption from Income Tax including corporate tax for a period of 5 years after providing for development rebate in Backward Areas.

(iii) Exemption for a period of 5 years from import duties on the various components imported by a unit to be set up in a Backward Area.

(iv) Exemption from Sales Tax on raw material and finished goods to the units in the Backward Areas upto a limit of 5 years.

(v) Transport subsidies upto 400 miles for all n w units, and subsidy for the whole distance for the finished product when it is in a Backward area.

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9. Final Report, Wanchoo Working Group (1968).

The wanchoo committee was thus the foundation stone for all subsequent incentives and subsidies offered by the government. Over the years the central and state governments evolved a massive structure of incentives and subsidies aimed at attracting capital and enterprise into Backward areas. In the following sub sections we shall attempt to analyse how the central government subsidies like transport subsidy and central Investment subsidy, various state government incentives and tax exemptions have in fact promoted the further development of class I cities and other centres of Industrial urban growth at the expense of the Backward Areas they were supposed to help.

3.4.2 Transport subsidy scheme:-

In our country the rail and road arteries converge at the metropolises, while the vast part of the country some of it with high potential for growth is virtually inaccessible. Thus time and again it has been felt that these Backward Regions will catch up with the pockets of Industrial growth if the locational disadvantages in terms of transport cost are offset. The wanchoo working group put forward the first practical format for a Transport subsidy scheme in 1968; in which it was suggested that the freight cost for finished products should be subsidized for selected Backward Areas by the central government. However the scheme as it works now has been largely based on the recommendations of the swaminathan committee on transport subsidy.

The transport subsidy scheme, subsides the cost of transportation to and fro from some defined railhead to the plant site. Certain railheads have been defined for each of the identified Backward areas and the subsidy is granted from the plant site upto the nearest railhead. A look at the following table reveals that most of the identified railheads are urban centres and in some cases are even class I cities.

Identified Backward Area	Defined Railhead
Jammu & Kashmir	Pathankot/Jammu
North East Region (Assam, Meghalaya, Nagaland, Manipur, Tripura & NEEA)	Siliguri
Himachal Pradesh	Pathankot/Kutpur Sahib/ Nangal/Kalka/Ghanauli/Yamuna Nagar/Barara/Hoshiarpur.
Hilly Districts of Uttar Pradesh (Dehradun, Nainital, Almora, Pauri Garhwal, Tehri Garwal, Pithoragarh, Uttarkashi & Chamoli)	Dehradun/Rishikesh/Moradabad/ Bareilley/Kotdwar/Shahjahanpur/ Rampur.
Andaman & Nicobar	Madras Port
Lakshadweep	Cochin port
Sikkim	Siliguri

In the words of the N.C.D.B.A.[10] report. These railheads are situated at a considerable distance from major markets and raw material sources

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10 Planning Commission 1980.

in Metropolitan cities. Ports and other industrial centres. The scheme as presently designed subsidises the cost of Transport of raw materials and finished goods from some defined railhead to the plant site. The cost of transportation from defined railhead to these centres of demand and raw material availability is not subsidised. Hence the real advantage accruing from the, subsidy may not be a very substantial portion of the total transport costs. The low amount of Transport subsidy drawn by the various states as shown in the following Table proves that the scheme has been almost non functional from its very inception.

Disbursement of Central Transport Subsidy (Rs.cr)

State	76.77	77.78	78.79	79.80	80.81
Assam	1.82	1.76	0.14	-	-
Manipur	-	0.30	-	-	-
Nagaland	-	-	-	-	-
Tripura	-	2.00	-	-	-
Himachal Pradesh	-	0.46	-	-	0.44
Jammu & Kashmir	-	-	1.55	-	12.23
Andaman & Nicobar	-	-	-	-	0.15

Source: N.C.D.B.A. report on Backward areas

Not only has the amounts drawn been very low but in almost all the states over a period of 10 years the amount drawn has fallen.

Thus the transport subsidy scheme has not really succeeded in achieving its objective of offsetting the cost advantages faced by a Backward area.

3.4.3 Central Investment Subsidy Scheme:-

Under this scheme the state governments identify backward blocks for the purpose of granting subsidy to the industrial units locating there . This outright subsidy received from the central government will be a fixed percentage of the total fixed capital cost of the project & subject to a upper limit. At present the scheme has a three tiered structure with the Backward Areas divided into three categories:-

(Rs.lakhs)

Category	Description	Rate of subsidy	ceiling
A	Districts with no large or medium industry	25%	25L's
B	Districts eligible for CIS till April 1983 (excluding those in A category)	15%	15L's
C	Districts eligible for CIS till April 1983 (excluding B & C categories)	10%	10L's

The scheme aspires to be a kind of protectionist measure which will help the industries through the initial teething period. But this scheme suffers from many draw backs in the formulation itself, for example

(i) Many of the identified districts though underdeveloped themselves are on the periphery of class I cities. Thus it is the

entrepreneurs in the metropolises who really benefit.

(ii) the outright subsidies have been linked to the fixed working capital rather than efficiency or capacity utilization. A look at the following table which shows the disbursement of subsidies state wise, reveals that, when the scheme was originally introduced it was the developed states like Maharashtra whose, backward district were cornering a large share of the total disbursements. However this imbalance was corrected to a large extent in the following years yet the developed states are having as much a share as the backward states. This is unfair especially as in real terms the backward area of a developed state will be much better off than a corresponding area of a backward state.

Share of different States in Reimbursement made under CIS scheme (RS CRS)

	72-78	78-80	80-83	83-85
Andhra Pradesh	13.39	9.47	8.05	81.52
Assam	1.75	2.55	2.42	3.62
Bihar	1.93	1.35	1.21	0.59
Gujarat	5.84	12.22	11.85	5.61
Haryana	2.79	1.91	3.1	2.94
Himachal Pradesh	4.08	2.50	4.4	7.73
Jammu & Kashmir	1.84	4.24	2.87	4.36
Karnataka	7.50	6.09	6.61	6.90
Kerela	4.96	5.15	3.51	3.35
Madhya Pradesh	6.00	3.43	4.53	8.37
Maharashtra	12.56	8.59	6.72	4.53
Manipur	0.15	0.22	0.46	0.35

Meghalaya	0.46	0.01	0.01	0.45
Nagaland	0.92	0.55	0.55	1.20
Orissa	0.80	2.27	2.27	3.00
Punjab	3.48	5.11	5.11	3.71
Rajasthan	8.50	9.65	9.65	9.47
Sikkim	0.03	0.13	0.22	0.43
Tamil Nadu	16.43	11.81	13.03	11.99
Tripura	0.12	0.70	0.10	0.12
Uttar Pradesh	2.63	1.35	2.30	3.64
W.Bengal	1.05	3.94	1.94	1.22
Union Territories	2.78	6.75	7.01	7.98

Source: N.C.D.B.A. Report.

The various drawbacks of the scheme were realized by the government too. Thus on June 2, 1988 a press note describing the new industrial package was announced which said 'At present about Rs. 180 cr is being spent every year on providing capital investment subsidy for the location of industrial units in the Backward Areas. Since substantial resources have to be found for the development of growth centres it has been decided to phase out the C.I.S. over a period of years along with the establishment of growth centres.[11]

However as usual various political pressures made the government retract its own words and announced that it will have a fresh look at the subsidy scheme whose extended term is to expire in September.

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11. New Industrial policy package. Press Note Paras 6 & 7(June 2, 1988)

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However ... final faux pas has been in keeping with the tradition of bungling in the central Investment subsidy scheme.

3.4.4 State Government Incentives:

The state governments provide a large number of tax concessions as well as incentives to new and expanding units especially in the small scale sector. However in many cases the state government concessions apply across the board and do not have any inbuilt. Preferences for Industrially Backward Areas. Thus there is a total lack of coordination between the central and state government policies. It is indeed unfortunate that the state government measures have not been linked to the locational policy because the quantum of concessions offered is substantial. This point will be brought about by a look at the following table which brings out the lack of preference for Backward Areas in most state government schemes:-

Subsidy/concession	offered by	in built preference for backward areas in
a) Power subsidy (for small scale units)	A.P. Assam, Bihar, Dadra & NH Goa, Gujarat, J&K, Manipur, M.P. Meghalaya, Nagaland, Orissa, Pondocherry, Punjab, T.N., U.P., W.Bengal, (18)	Madhya Pradesh (1)

b)	Water subsidy (All new industrial units for a fixed period varying from state to state)	Karnataka, Maharashtra, Meghalaya, T.N., M.P. (5)	Karnataka Maharashtra M.P. (3)
c)	State investment Subsidy (Mainly for SSI with exception of Rajasthan)	A.P., Gujarat, J & K, Rajasthan, T.N., W.Bengal (5)	W. Bengal, A.P., Gujarat (3)
d)	Sales tax concession (on raw material & Machinery mainly. Extends to only SSI's in some states & to all in others)	A.P., Assam, Arunachal Pr. Bihar, Dadra & N.H., Goa Gujarat, Haryana H.P., J&K., Karnataka, M.P., Maharashtra, Meghalaya, Orissa, Pondicherry, Punjab, Rajasthan, Tamil Nadu, U.P. (20)	Gujarat, M.P., Maharastra, U.P. (4)
e)	Octroi concessions (extends mainly to small scale units)	Dadra & N.H., Goa, Daman & diu, Haryana, J&K, Madhya Pr. Maharashtra, U.P., Rajasthan, Punjab, Orissa, Kerla, Gujarat (12)	Haryana, M.P. (2)

Commonsense reasoning indicates that given the same incentives an entrepreneur would obviously like to locate his unit in an established centre of industrial growth and preferably a class I city. This is especially so in the case of small scale industries most of which are ancilliary units to medium and heavy industries. Thus we can conclude

that the various state government incentives for development have only served to increase the intra state disparities.

The failure of the financial incentive approach which either helped developed areas or subsidized uneconomic units in Backward areas promoted the government to concentrate instead on the provision of infrastructural facilities to the economically underdeveloped areas.

In the subsequent subsections we shall try to study the role and effectiveness of Industrial estates and Growth centres in Industrial dispersal.

3.5 Industrial Estates as a measure of Industrial dispersal

The location of industries in different parts of the country is often determined not only by the availability of necessary raw materials and natural resources but also by infrastructural facilities like power and water supply and efficient transport network. Thus from the Second Plan onwards it was realized that the main advantage which the urban areas have over the rural areas is the provision of cheap and infrastructural facilities.

The concept of Industrial Estate was introduced in order to provide the backward areas with the necessary infrastructure so that private enterprise could be attracted to these areas. Thus the aim of the Industrial Estates is two fold, to promote the rapid development of Small Scale Industries and facilitate the industrialization of economically backward and rural areas.

However during the first two plans itself about 120 Industrial estates were sanctioned out of which about 58% were located in places with population above 50,000.[12] The Industrial estates instead of being used for backward area development were utilized for meeting the pressure on factory accommodation in the developed areas. But at the same time it is true that the Industrial estates in the backward areas have not been as successful as those located in big towns and cities

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12. Alexander (1972)

due to poor procurement and distribution of raw materials, paucity of skilled labour and the reluctance of entrepreneurship to move to smaller towns.

In addition it has often been seen that the more efficient entreprises would always like to concentrate near the developed Industrial centres which generally happen to be class I cities. Thus, the main problem of the I.E.'s located in backward areas is to get any firm to locate there whatever may be its level of efficiency, capacity utilisation or productivity. Such a frantic scramble would certainly do nothing to promote industrialization in these areas.

Many enterpreners officially shifted into these estates because it helped them get an allocation of scarce raw materials. Which was siphoned off to their other branches in the nearby developed areas.

Production is never started in the sheds that have been allotted to them. The main works are concentrated in the nearest class I city. This is mainly because there is no check on the kind of 'branches' which an industry in a class I city is opening in a backward area.

At the same time the I.E.'s located in backward areas have provided accommodation to many industries which are normally not eligible for such facilities.

Everytime the government has indicated the industries which have to be given higher priority in the development programmes . But

ultimately when the matter of admission to I.E.'s comes up, these have been overlooked. This is mainly because the industries in the priority sector rarely ever want to locate in these I.E.'s which are not on the periphery of big cities.

In order to arrive at an economically viable solution it is essential to settle for a compromise between the productivity and Regional dispersal motives. Even in backward areas, the Industrial estates should be located in a place which has the best potential for development. Preference to industries which are specifically suitable for location in a small town or backward area and encouragement of concerns existing in Metros to open their branches in Backward areas economically viable propositions.

3.6 Growth Centres as a measure of Industrial dispersal

The N.C.D.B.A.[13] report on Industrial dispersal had for the first time suggested the growth centre approach. This approach was much more efficient in that attention was paid to take care that anamalous situations of Backward areas adjoining industrial centres do not occur. The cut off criterion for the development of medium and large industry was that they should have a population of atleast 50,000 and that they should be situated at a minimum distance from an existing industrial centre. For this purpose the existing industrial centres would be all town/urban aggromerations with an employment in non household manufacturing of over 10,000.

The minimum distance should be 150 kms for centres with an employment of over 150,000; 100 kms for centres with an employment of 50.150,000; 75 kms for centres with an employment of 25.50,000 and 50 kms for centres with an employment of 10.25,000.

Five major types of development were foreseen which would create growth centres with substantial potential for generating all around development in backward areas surrounding the projects, namely:-

i) Industrial complexes

ii) Growing urban complexes

iii) Complexes based on Raw material exploitation

iv) Large Irrigation projects

v) Hydel and thermal projects

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13. Planning Commission (1980)

Although these recommendations were put forward in 1981. It was only in 1988 that their full value was realised and the importance due to them was given.[14]

To begin with initially 100 growth centres are supposed to be developed throughout the country over the next five years. Each centre would be provided with funds of RS.25.30 crore to create infrastructural facilities of a high order. In the original pressnote receased to the chambers of industries it was mentioned that as the growth centre approach will need massive financial inputs the C.I.S. would be gradually phased out: However there paras were later on rapidly deleted and stutements to the contrary were issued.

The growth centre approach is an improvement in that, it has been realized that financial incentives are not sufficient to wean the industries away from the cities into backward areas. A parallell and comparable infrastructure has to be created there if the present trend of further concentration in industrial centres has been reversed.

3.7 AN OVERVIEW OF THE POLICY OF INDUSTRIAL DISPERSAL OF THE GOVERNMENT OF INDIA :

The Governmental aim of balanced regional growth of the economy. has been expressed in the five years plan drafts as well as statements of the Industrial Policy resolutions announced from time to time. The first post independence attempt at thrashing out an overall policy guidline for development was made by the economic programme committee of the A.I.C.C. in 1947. It suggested that there should be a clear cut demarcation of the industries, to be developed in a decentralized way and those which promised to be large scale affairs and there should be integration between the two. Measures like control of investment and licensing of new undertakings were envisaged for the purpose of effective coordination and complimentary development of the different regions and industries. The first Industrial policy resolution of 1948 stressed the progressively active role to be played by the government in the guided promotion of the private enterprise.

The begining of the first five year plan was marked by the ratification of the Industries Development and Regulation Act in 1951. This bill was introduced in 1949 and became a law in 1951, just before the draft of the first Five Year Plan was finalized.

The first five year plan specifically emphasized that the state not only had to develop various new industries in the public sector but had to ensure that the private enterprise has a public function. Drastic measures like nationalisation were strictly avoided and the I.D.R.A.

received considerable importance. Thus the first five year plan sandwitched as it was between the two Industrial Policy resolutions ended up as a weak statement of the various government policies.

The Industrial policy resolution of 1956 succeded the previous one by about 8 years. During these years certain fundamental and far reaching changes had been effected in the Indian economy. The constitution had been enacted thus guaranteeing certain fundamental rights and enunciating the directive principles of state policy. In addition the first five year plan had just completed a rather successful term. Thus the I.P.R. of 1956 emphasized that the main aim was to reduce the disparities in income and wealth to prevent private monopolies and the concentration of economic power in the hands of a small number of individuals.

Industries were divided into Schedules A, B, & C containing industries which henceforth would be open to state only, both state and private enterprise and private sector only. It was realized that for Industrialisation to benefit the economy of the country as a whole it is essential that disparties in level of development between different regions should be progressively reduced.

This consideration prompted the Five Year Plan government to introduce the concept of Industrial Estate during the second five year plan It was observed that Industries concentrated in certain parts of the country due to the availability of necessary raw materials or the ready availability of power, water supply and transport facilities. Therefore,

it became an aim of national planning to see that these facilities are made available in areas which are lagging behind industrially or wherever there is a greater need for generating opportunities of employment provided of course that the location is otherwise suitable.

In the III Five Year Plan for the the first time, the problem of regional development was speciafically dealt with on its own as a seperate unit. It was observed that in spite of the efforts to the contrary industrial development had tended to favour the well established industries as well as developed areas. Thus the disparities within and without the states were not being reduced.

It was felt that it was wrong to rely too much on the public sector for industrial dispersal and a greater controlled development of private sector was required. At the same time it was realized that for the basic industries the location has to be generally guided by technical and economic considerations. This is especially true in the case of those industries which earn a lot of foreign exchange. In such cases optimal locations are very important in the case of national interest as considerations of competitiveness in international markets assume paramount importance.

The III plan had started emphasizing the need for small scale industries and rural industries as a means of industrial development of backward areas. At the same time during the III Five Year Plan many attempts were made to study the effects of the development plans implemented by the government on the concentration of economic power in the country. The Manalanobis committee in 1964 pointed out how the

Institutional finance and tax concessions had helped the growth of Big companies. The Monopolies inquiry commission in its report of 1965 suggested the establishment of a permanent body known as Monopoly and Restrictive trade practices commission. The MIC also favoured liberalizing the licensing policies in order to help the small scale industries so indirectly promote industrial dispersal.

The Hazari committee on Licensing submitted its final report in 1967 to the planning commission. It made two important points i.e. there was a marked bias in the favour of developed states (perhaps because they constituted a high er percentage of application also) and licenses for the products with expanding markets were also going to the developed states.

The fourth five year plan was the period when the policy of regional dispersal received its full momentum. In the memorandum of the plan the following steps were laid down clearly which were supposed to accelerate the process of decentralisation : -

i) Reservation

Certain selected industries which can be located anywhere may be reserved for the small investors artisan and workers.

ii) Location

A dispersed growth of small industrial units in towns should be aimed at by making widespread provisions of economic and social overheads.

iii) Industrial Estates :

By creating economics of scale new unit can be weaned away from again concentrating in areas of high industrial development.

iv) Supply of Raw Materials

The small industries turn out to be economically unfeasible quite of ten beceause they are not able to obtain the essential raw materials. The fr eight equlisation scheme was introduce to neutralise high transport costs which promote a source based location. During the fourth plan period in 1969, the M.R.T.P. bill too was passed by the government.

In February 1970, the government had announced certain charges in its licensing policy. New undertakings or substantial expansions of existing units requiring investment of Rs. 1 crore or less would not require a license provided the undertaking had existing assets of less than Rs. 5 crores. The other qualifications were as follows :

i) It should not belong to the large industrial house or foreign concerns or be included in the dominant undertaking category.

ii) It should not require more than Rs.10 lakhs or 10% of the investment by way of foreign exchange for import of machinery and equipment.

iii) And should not require foreign exchange except for marginal needs. The existing reservations for S.S.I.'s was however expected to continue in the same way.

It was assumed that the liberalization of the licensing procedures would promote, industrial development and dispersal. However these measures became only counter productive with the small and medium scale industries to clustering around metropolises.

The Industrial policy statement 1973 was supposed to reflect its attitude towards the Vth Plan. A list of 19 groups of industries in core sector having national importance were announced. It is indeed unfortunate that these industries of socalled'strategic importance' included casette players, detergents, synthetic fibre and yarn and decorative laminates.

In June 1973 it was decided to set up a secretariat for Industrial Approval in order to streamline bureaucratic procedures. The fourth plan had failed to achieve much by way of reduction of regional disparities although it made a very ambitious beginning as was noticed in the mid term appraisal document which noted that 'Unbalanced licensing as between established and new entrepreneurs substantial and small enterpreneurs, expansions and new applicants, public and private agencies and developed and backward area locations have resulted in a high proportion of infructuous licenses'

The V Five Year Plan was mainly a non starter due to numerous political reasons. It was introduced in 1974, when the country was facing a serious economic crisis. 1977 saw a change of government and the Janta Party at the helm of the affairs which terminated the plan in 1978.

In the Janta industrial policy announced in 1977 a lot of attention was paid to the goal of balanced regional development. Tiny sector industries of investments less than Rs. 1 lakh were to be encouraged to set up industries in towns and villages of a population less that 50,000/-. It was correctly observed that the various sources of institutional finance were mainly helping out the large Industrial houses and this loop hole was sought to be plugged. Also for balanced regional development licenses were NOT to be issued to new industrial units in urban areas with a population of more than 5 lakhs. Assistance was to be forthcoming in cases of existing units desivous of shifting to backward area.

This game of musical chairs continued and another Industrial policy statement was issued in 1980, after the congress government came into power. The concept of Nucleus plants was introduced which would be set in industrially backward areas to help develop as many ancilliary and small cottage industries as possible. A linkage system would be developed between these nuclear large plants and satellite ancilliaries forming an integrated whole of development.

Maximising production was supposed to be the most important goal. It was not supposed to be in public interest to permit licensing procedures or a rigid locational policy to stand in the way of maximising production.

It was thus that a slow trend towards liberalization of the industrial control started. The trend towards liberalization followed and on April 21, 1982 the government issued a press note in which it reviewed the list of industries open to large and F.E.R.A. Companies. They were made eligible to participate in the industries in this list, along with other applicants provided the specific item of manufacture was not reserved, for the public or small scale sector. This concession extends to M.R.T.P./F.E.R.A. companies located in industrially backward areas. They can also enter into the non Appendix I industries (which are not reserved for small scale sectors) within an export obligation of 50% in B & C districts and 30% in A; districts.

M.R.T.P./F.E.R.A. companies were, not entitled to central investment, subsidy w.r.t. nucleus plants. However, the following incentives can be availed of by all nucleus plants including the M.R.T.P./F.E.R.A. companies.

(i) Inter corporate investments will be allowed on case basis upto a ceiling of 30%(instead of the previous 10% under section 372 (i) of companies act).

(ii) The converlibility clause of term lending institutions will not be applicable to nucleus plants located in categories A,B,C for a period of 7 years from date of sanction of 5 years from date of disbursement, whichever is less.

(iii) The state governments will extend to nucleus plants packages of assistance on the lines of the pioneer unit scheme in Maharashtra.

Appendix I industries of the press note of April 21, 1982

1. Metallurgical industries
2. Boilers and stream generating plants
3. Prime movers (other than electric generators)
4. Electrical equipment
5. Transportation
6. Industrial Machinery
7. Machine Tools
8. Agricultural Machinery
9. Earth moving machinery
10. Industrial Instruments
11. Scientific and electromedical instrument and laboratory equipment

12. Certain Nitrogenous & phosphatic inorganic Fertilizers

13. Chemicals (other than fertilizers

14. Drugs & pharmaceuticals for F.E.R.A. companies

    a. Drug intermediates from the basic stage for production of high technology bulk drugs

    b. High technology bulk drugs from basic stages and formulations based thereon with an overall ratio of bulk drug consumption (Form own manufacture) to formulations from all sources of 1:5.

15. Paper & pulp products & laminates

16. Rubber Products

17. Plate Glass

18. Ceramics

19. Cement products

20. High technology reproduction and multiplication equipment

21. Carbon and carbon products

22. Pretensioned high pressure R.C.C. pipes

23. Rubber machinery

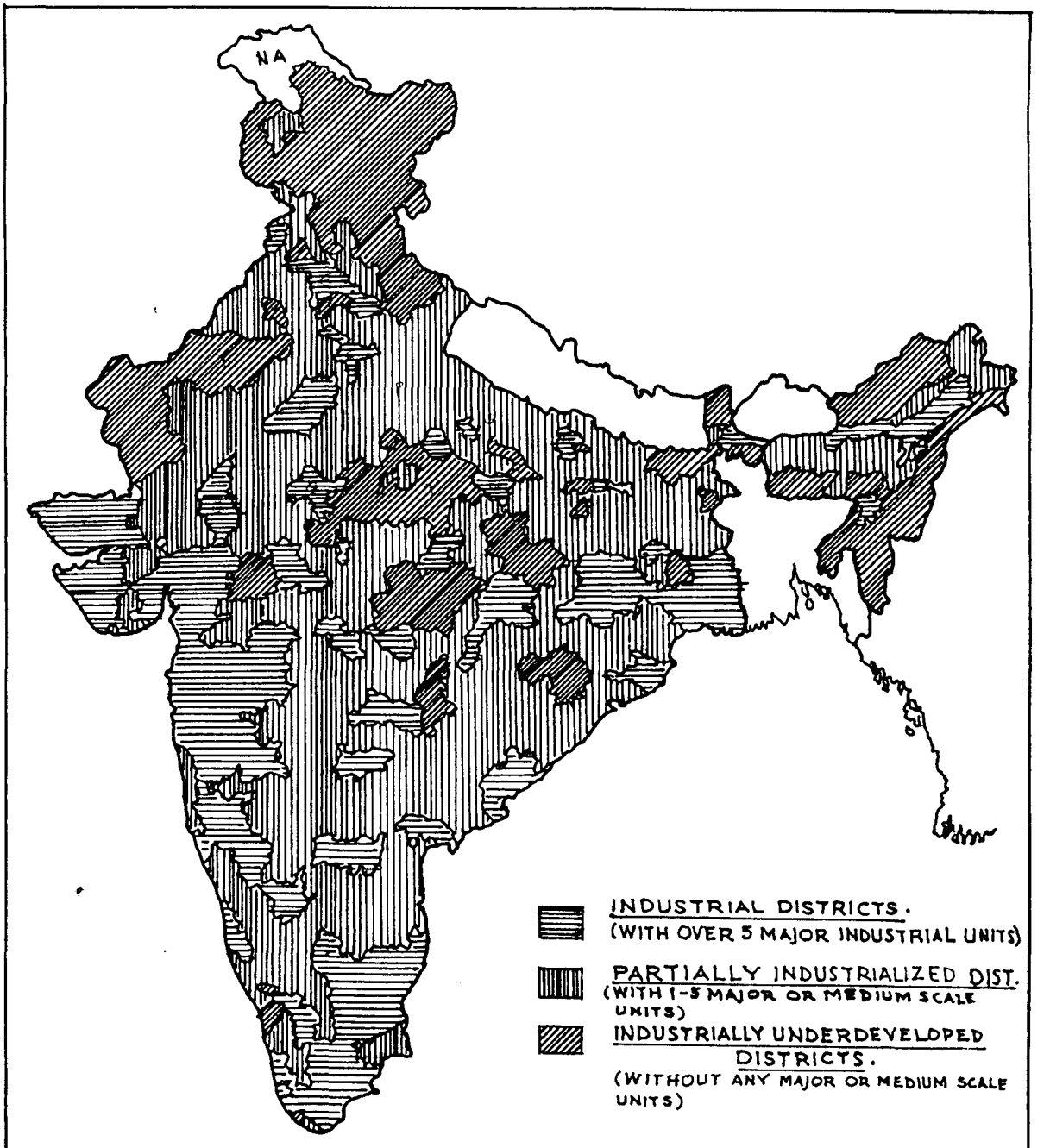
24. Printing machinery

However, it is only in the recent past, that it has been observed that all the governmental policies aimed at developing the backward areas have in fact ended up supporting the class I cities to develop all the more.

This is mainly because the government has just been holding out various financial incentives, without in fact providing the backward areas with the essential parallel infrastructure. In many cases the backward areas identified are those which are on the periphery of the class I cities. In its new Industrial package released. on June 2, 1988, there has been a specific attempt to correct this approach. The idea of growth centres was introduced 6 years after it was suggested by the shivaraman committee report. The emphasis in the latest package is on creation of infrastructure not incentives. The growth centres will be genuinely backward areas. But it is quite likely that these growth centres will again develop into new nodes of colonial exploitation instead of the trickle down effects spreading over the whole area they might start acting as suction points a la. class I cities drawing away labour and capital from all the nearby areas. However the effectiveness of this policy of growth centred cannot really be assessed till they are identified. The development of growth centres is being expanded to most of the backward areas in the next 10-15 years. The ultimate objective is to have one growth centre in each of the 430 add districts in the country.

The government is now following a deliberate policy of liberalization combining planned delicensing with the development of planned infrastructure in underdeveloped areas. How far this

measure is going to succeed time alone can tell. Yet it is a significant step forward in that the government has finally realised how its industrial policy of the last four decades has promoted a pattern of lopsided industrialisation on colonial line.



INDUSTRIALIZATION

CHAPTER IV

PUBLIC SECTOR PRICING POLICIES AND CONCENTRATION OF INDUSTRIES

4.1 The public sector pricing policy is one of the most important tool in the hands of the government to ensure that the operation of the economic system does not result in an increase in inter regional disparities. The scope as well as the effects of the pricing policies for different commodities are so varied and diverse that they have to be analysed seperately and in detail. In addition the pricing policy has turned out to be the least successful in all the government locational policies although maximum attention was paid to it.

The massive public sector investments in the backward areas were supposed to generate large scale employment and income in these regions by way of forward linkages. Ironically, however, it was the pricing policy followed in the case of the goods procuded in the public sector which deprieved these regions of their low cost advantage and the resultant economic growth. Over the decades it has been gradually felt that in fact the underdeveloped areas have just been reduced to the level of captive hinterlands supplying industrial inputs to the various centres of urban and Industrial growth dotting all over the country. The trend of partial decontrol in cement, proposal for scrapping of freight equalization in steel and increased privatisation of the power sector reveals that the government has finally opened its eyes to the true situation.

However how far this policy will be helpful in the industrial development of backward areas is a matter which has to be

watched and examined. In this chaper we shall attempt to analyse the role played by the pricing and distribution policies of the government in the case of three important commodities i.e. Iron and steel, cement and power. These three have been identified for the purpose of our study not only because they are one of the most important inputs for industrial growth, but because over the last few years an increased policy of decontrol has been followed in their cases.

4.2 Iron & Steel

The iron & steel industry is one of the basic building blocks of any economy as it is one of the major contributors to the National Income and employment. In India Iron and steel technology was introduced with the setting up of TIISCO at Jamshedpur in 1912. The industry has now come a long way with the establishment of six integrated plants, the seventh under Construction and one hundred and sixty odd mini steel plants.

The location of the main steel plants is resource based while the demand for the finished products of the industry is from the developed areas. The pricing policy of the government however neutralizes the cost advantage which can be enjoyed by the backward areas as steel can be obtained at uniform prices all over the country. This also implies that the entrepreneur would obviously like to locate his engineering and other industrial units using Iron and steel as a major input in a class I city or a large urban centre because once the disadvantage of higher transport costs is neutralized the urban areas can offer much better infrastructural facilities as compared to the backward areas.

An analysis of the production, distribution and consumption patterns of Iron and steel industry reveals how the developed areas are turning the economically under-developed areas into a raw material appendage. Currently all the steel plants except Bhilai are located in the ore coal belt of India. A look at Table I shows that the maximum distance of a main plant from any given raw material is 736 kilometres in the cases of Bhilai and Karagil coking coal mines. Thus the main consideration in the location of Iron and steel plants has been the minimizing of raw material assembly costs.

LOCATION OF IRON & STEEL PLANTS

d - distance in kms.

	d from Iron Ore							d from Cokingcoal					d from Limestone & Dolamite.					
	bhilai	goa	chirla	Meghta buru	Bolani	Kaita Baisua	Noa Mundi	Jhalia	Raniganj	Bokaro	Barakar	Karagil	Bir-mira Pur	Sha'ibad	Purna-pani	Pam-posh	Nand-ini	Hirri
Burnpur	NA	282	250	323	-	-	-	63	18	-	-	-	325	-	-	-	-	-
Bokaro	NA	-	261	380	-	-	-	-	-	6	-	-	-	341	-	-	-	-
Durgapur	NA	-	-	-	341	-	-	110	-	-	59	-	367	-	-	-	-	-
Rourkela	NA	-	-	-	-	80	-	237	-	-	-	298	-	-	32	-	-	-
Jamshedpur	NA	-	-	-	-	-	126	193	-	-	-	-	187	-	-	177	-	-
Bhilai	85	-	-	-	-	-	-	725	-	-	-	736	-	-	-	-	23	161

While the Iron and Steel production centres are concentrated in the resource rich areas which are also economically under-developed, the major consumption centres are the cities and big towns situated at great geographical distances from the production points. The following table shows that the minimum distance between a major steel mill and a market is between Bokaro and Guwahati which is 119 kilometres while the maximum distance is between Bangalore and Rourkela which is 2143 kilometres.

Distance between markets & steel mills (in kms)

Consumption Centre	Burnpur	Bokaro	Durgapur	Rourkela	Jamshedpur	Bhilai
Guwahati	990	119	1032	1289	1179	1727
Patna	249	204	291	492	382	930
Cuttack	507	577	445	591	427	901
Delhi	1270	1225	1312	1485	1375	1327
Ludhiana	1581	1536	1623	1796	1686	1683
Jaipur	1338	1293	1300	1553	443	1418
Kanpur	835	790	877	1050	940	922
Ahmedabad	1973	1971	2015	1674	1838	1236
Bhopal	1405	1407	1448	1107	1271	669
Bombay	1853	1854	1895	1554	1718	1116
Hyderabad	1674	1748	1716	1672	1598	856
Madras	1754	1828	1796	1842	1678	1332
Bangalore	2055	2129	2097	2143	1979	1033

Thus the various policies of the government, notably that of uniform pricing has permitted the various Iron and Steel based

industries not to locate near the mills that are in Backward Areas, but instead in far flung industrial centres. This is the reason, why the exreemely resource rich states of Bengal, Bihar and Orissa have not benefited form the steel plants in the form of forward linkage effects.

Although most of the main consumers of the finished products of the Iron and Steel Industry are located in the urban centres, certain cities emerge as specific centres of concentration Bombay, Calcutta, New Delhi, Bangalore and Ahmedabad make up for most of the demand for the finished products of the Iron and Steel Industry to substantiate our point we will have a look at the spatial concentration of the various industry groups which utilize the products of the Iron and steel industry as the basid output.

Industry group	Concentration mainly around
Defence	Hyderabad, Madras, Bangalore, Poona.
Drums & Barells	Calcutta, Bombay,Thana.
Engineering Goods	Calcutta, Bombay, Bangalore, Poona, Madras, Gandhi Nagar, New Delhi.
Oil & Gas	Bombay, Calcutta, New Delhi, Madras, Baroda.
Electrical Equipment	Ernakulum, Bombay, Calcutta Hyderabad, Bangalore, Faridabad, New Delhi.

Cycle Manufacture	Faridabad, Ludhiana, Rajpura (Near Patiala)
Bright Bros.	Ghaziabad, Calcutta.
Reroller Industry	Ludhiana, Jalandhar, Ahmedabad, Mandi, GovindGarh(near Chandigarh), Hyderabad, Madurai, Ajmer, Batala, Bombay, Coimbatore, Calcutta, Madras, Nagpur, Indore, Kanpur, Faridabad, New Delhi, Coimbatore, Bangalore, Jaitu, Ghaziabad, Secunderabad, Patiala, Cuttack, Jalandhar, Meerut, Calcutta.
Tube Making	Hyderabad, Cuttack, Howrah. Bombay, Agra, Calcutta, Ghaziabad, New Delhi, Hardoi, Madras, Jamshedpur.
Wire Drawing	Hissar, Indore, Ahmedabad, Bombay, Secunderabad, Faridabad, Hoshiarpur, Calcutta, Modi Nagar, Bharat Pur, Bhilai, Kanpur, Baroda, Madras.
Auto Manufacture	Calcutta, Faridabad, Chitranjan, Bombay, Madras, Pimpri.

Source : Document on the 'customers of main producers of Iron & Steel' , June 1984, J.P.C. Calcutta.

The concentration of the consumers in the urban centres takes place in two stages. First the Iron and Steel based industries, get located away from the steel mills situated in Backward areas, because once the transport cost disadvantage is offset the preference will naturally be for the developed centres. Secondly, even among the urban locations the bigger cities are preferred because they can offer the best infrastructural and marketing facilities.

The chief cause of this mismatch between production and consumption centres is the uniform pricing policy persued by the government. The original intention of freignt equilization was to promote Industrial development of areas located farther away from major sources of raw materials and production centres in an effort to promote balanced regional development of different regions of the country through dispersal of Industrial activity. It was hoped that by eliminating the disadvantage in transport costs, steels and pig iron based industries would be located even in the far flung backward areas. However, in actual practice the policy of uniform pricing only succeeded in neutralizing the cost advantage enjoyed by the Backward areas thus depriving them of the Industrial growth based on forward linkages. In addition the self balancing nature of the freight equalization scheme was such that the steel bases industrialises in W. Bengal, Bihar and Orissa were subsidizing the rest of the country. After repeated protests especially from W. Bengal, the Marathe Commission was appointed to look into the nature and working of the freight

equalization scheme. The commusion realized that in principle there was a need for the elimination of the freight equalization policy. However, instead of scrapping it out right a it was suggested that the scheme should be gradually phased out because many investment decisions have already been taken and implemented assuming the existence of such a scheme. More or less the same views were echoed by the B.D. Pande Committee. As a result of repeated discussions and these reports a decision was taken by the Government in March 1982 in principle to phase out the frieght equalization scheme. However, it was only in 1986 that the J.P.C. circulated a working paper outlining the way the phasing out scheme will actually be put into practice. This delay is totally unexplainable except perhaps in terms of political pressure.

The distribution system of the finished products of the Iron & Steel industry too is tilted suspiciously in favour of the class I centres. We can test this Hypothesis by having a quick look at the following table which lists the various stockyards where Iron & Steel products are made available to the consumers at uniform prices.

STOCKYARDS BRANCHWISE (EXCL IISCO)

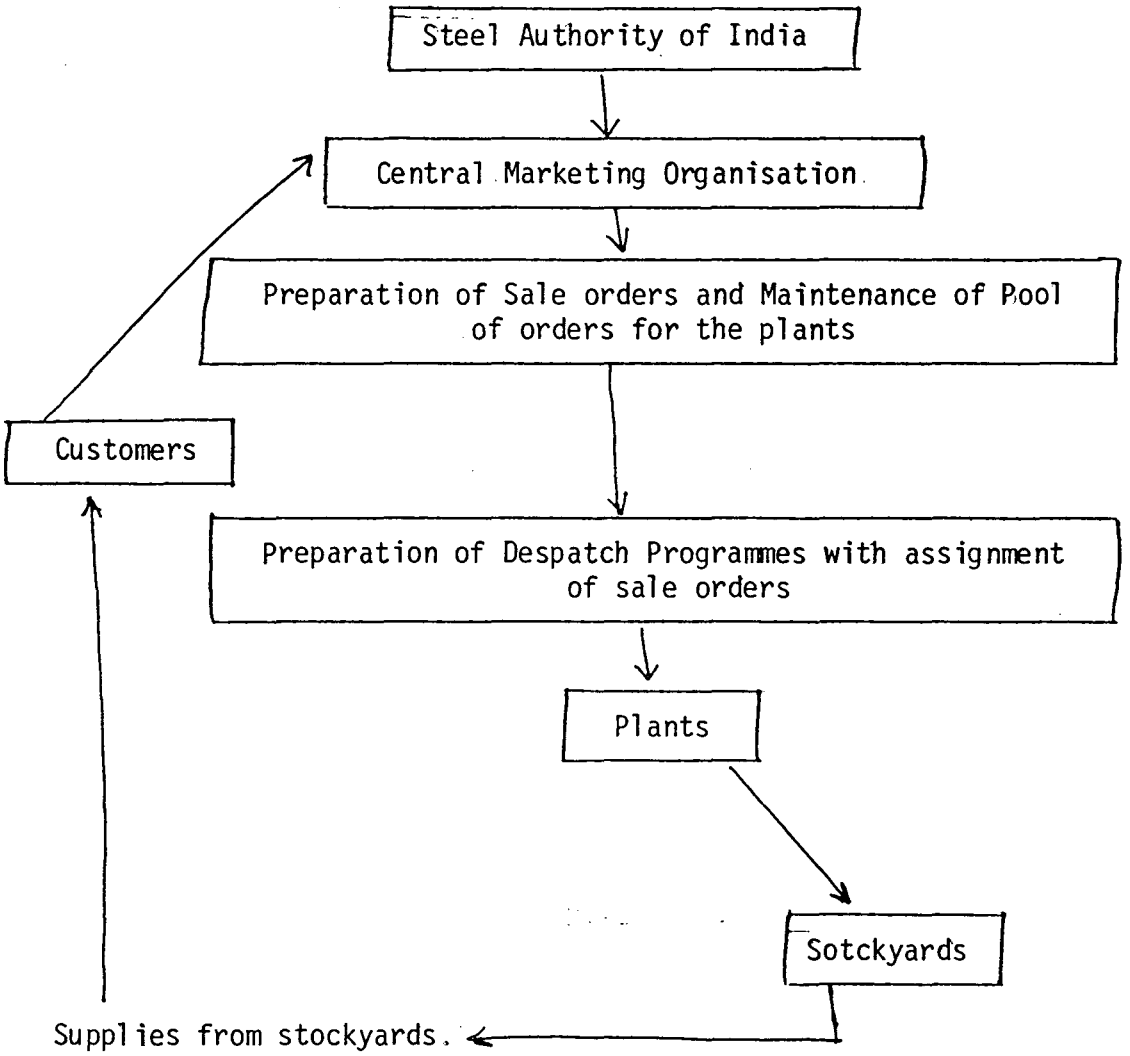
Branch	Receipt	Delivery	Closing
Calcutta	25927	23703	3415
Howrah	3795	3361	-
Durgapur	2075	1904	96
Bhubaneswar	-	-	-
Rourkela	3362	3348	7
Patna	1992	2204	-
Bokaro	4568	5779	40
Kanpur	3675	3544	62
Allahabad	5617	5130	-
Lucknow	2273	1866	202
Gauhati	-	-	-
New Bougaigaon	56	381	-
Dimapur	-	-	-
Dharmanagar	107	64	43
Delhi	25276	25050	317
Ghaziabad	12770	12626	68
Faridabad	12770	12626	68
Agra	55855	55187	1974
Ghaziabad	31439	31756	1479
Faridabad	12770	12626	68
Jammu	1142	1287	55
Srinagar	100	100	-

Branch	Receipt	Delivery	Closing
Chandigarh	17610	16432	-
Parvanoo	1177	1178	-
Bombay	9825	9610	34
Thane	-	-	-
Pune	9742	7796	1864
Nagpur	5102	5102	-
Bhilai	954	946	-
Indore	11040	10164	-
Jabalpur	-	-	-
Ahmedabad	44740	44572	330
Baroda	9596	9967	-
Jaipur	15299	15144	-
Kote	-	-	-
Madras	12237	11569	-
Coimbatore	71195	68206	1290
Trichy	4244	4248	-
Cochin	4565	4469	2
Seconderabad	9042	9545	-
Vizag	-	-	-
Bangalore	15033	144724	296
Agra	55855	55187	1974
Gwalior	5160	5886	-
Jalandhar	44729	43906	33
Ludhiana	32385	32365	32
Mandigobin	-	-	-

It is interesting to note that the maximum receipts and deliveries are enjoyed by the stockyards of Calcutta, Delhi, Ghaziabad, Jullundur, Ludhiana, Chandigarh, Ahmedabad and Bangalore which have been previously identified as centres of high consumption in the analysis in the previous section. At the same time the stockyards which are in the Iron and steel belt itself, for example Bhuvaneshwar, Rourkela, Durgapur and Bokaro have one of the lowest receipts as well as deliveries of the finished items of Iron and steel. The government has also announced extra allocations to the steel based industries to be set up in the North Eastern Hill region. But the three stokyards of Gauhati, New Bungaigon and Dimapur in this area are non functional. Thus not only are most of the stockyards situated in class I cities, but even among them some are cornering a large share of the total allocation of finished products meant for distribution at uniform prices.

In order to understand better how the government itself is perpetuating regional imbalances, it is very essential to have a look at the way the allocation and distribution system works :

Transaction flow and outline of organisational structure



The allocation of the quota to the various steel based industry is done by the Joint Plant Committee.

The J.P.C. First computers the detailed section wise/qualiitywise demand annually, on the basis of the indents submitted by the consumers to the central Marketing Organisation.[2] Then the supply is identified with the help of detailed proposed annual production plans of the main producers as well as the likely availability from mini steel plants and rerollers. It is at this point that the element of injustice creeps in the J.P.C. fixes

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2 Consumer Guidelines, JPC, 1986.

quarterly allocations of the various industries taking into account the assessed demand as well as past off take. A vicious circle is thus created wherein centres of high demand get more allocation which again helps them in obtaining a higher allocation in the next quarter. There is a provision to take care of the requirements of new units, sick units, units with negligible past offtake or units with additional capacity creation. The entitlements of these units is determined by the technical representatives of the main producers. However this is not only a long drawn out procedure, but the compensations are also quite often inadequate.

The entitlement of a unit is increased also by 10% if the unit is situated in

(a) Centrally declared Backward Area

(b) Districts where main producers' steel plants are located

(c) The North East sector

(d) Jammu & Kashmir

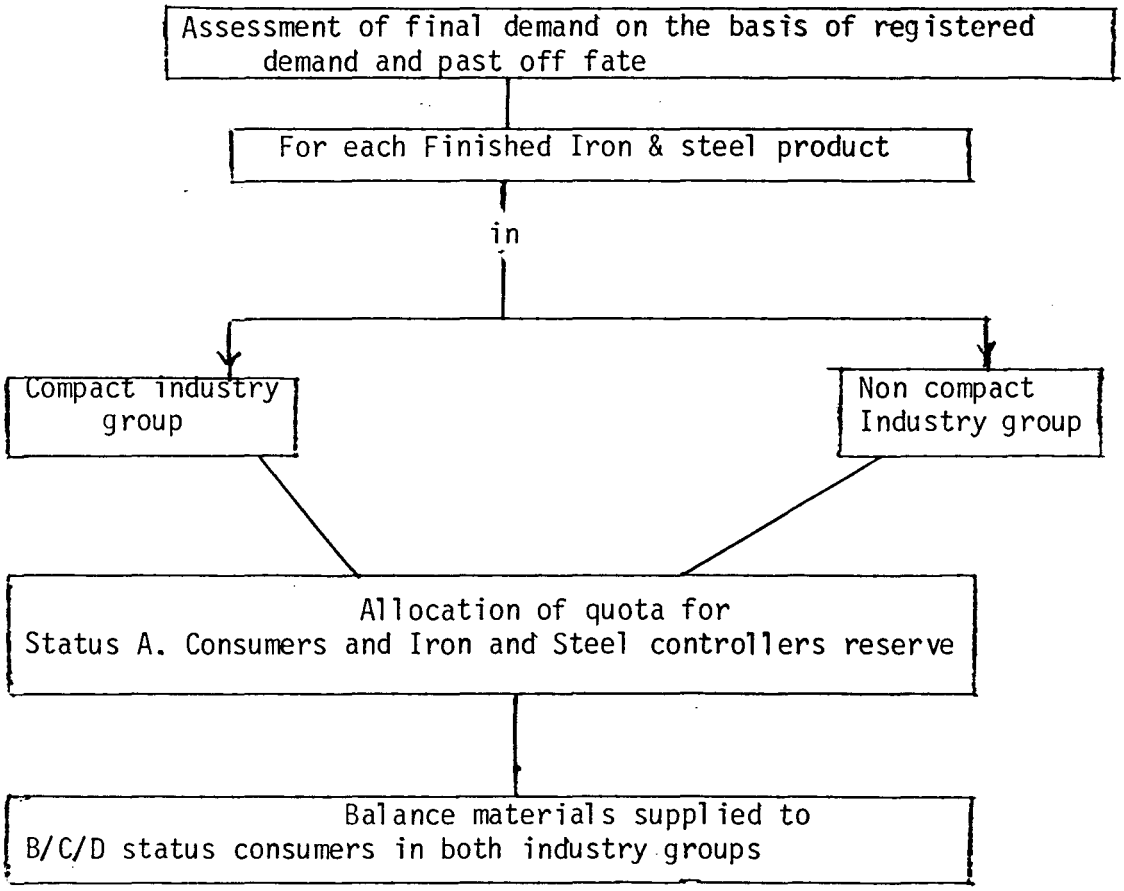
There is a provision for a 15% increase in the entitlement of the unit if

(a) the unit is located in a centrally backward district in which a steel plant is located

(b) the unit is located in a centrally declared backward district of the North East sector or Jammu & Kashmir.

In order to facilitate the quarterly allocations of the quotas the government has involved complex use based and status based classifications of consumers.

The total system of the categorywise allocations within the consumer groups can be summed up as follows:



This policy of demand based allocation allows the medium and heavy industries to complete away quota from the small scale industries which can really useful in the regional industrial dispersal. The small scale industries belonging to the compact group of Industries have to draw their supplies from the main producers (in terms of guidelines laid down for supplies to compact industry groups).

This means that they will have to obtain their supplies from the nearest stock yard which more liekly than not is a class I city. As the cost of transportation incurred by the finm to and fro from the stockyard is not subsidised , the small scale industries will obviously want to minimize it. Thus they are implicitly encouraged to cluser near the urban centres.

However in the case of the small scale units in the non compact industry groups, holders of essentiality certificates, and those units whose quarterly offtake of Iron and steel materials is less than hundred. Tonnes, the state small scale Industries corporations step in to make the distribution more equitable. Is is the corporation which collects the finished items from the nearest Branch sales office or stockyard and distributes to the consumers at various points dotted across the state.

At the inception of the planning era it was expected that the location of the Iron and Steel mills in the backward areas will generate massive income and employment through forward

linkages and will set in motion the forces of development.[4] However unfortunately the pricing and distribution policies have seen to it that the, backward areas have been reduced to raw material appendages subsidising the cost of development of the fast growing industrial regions.

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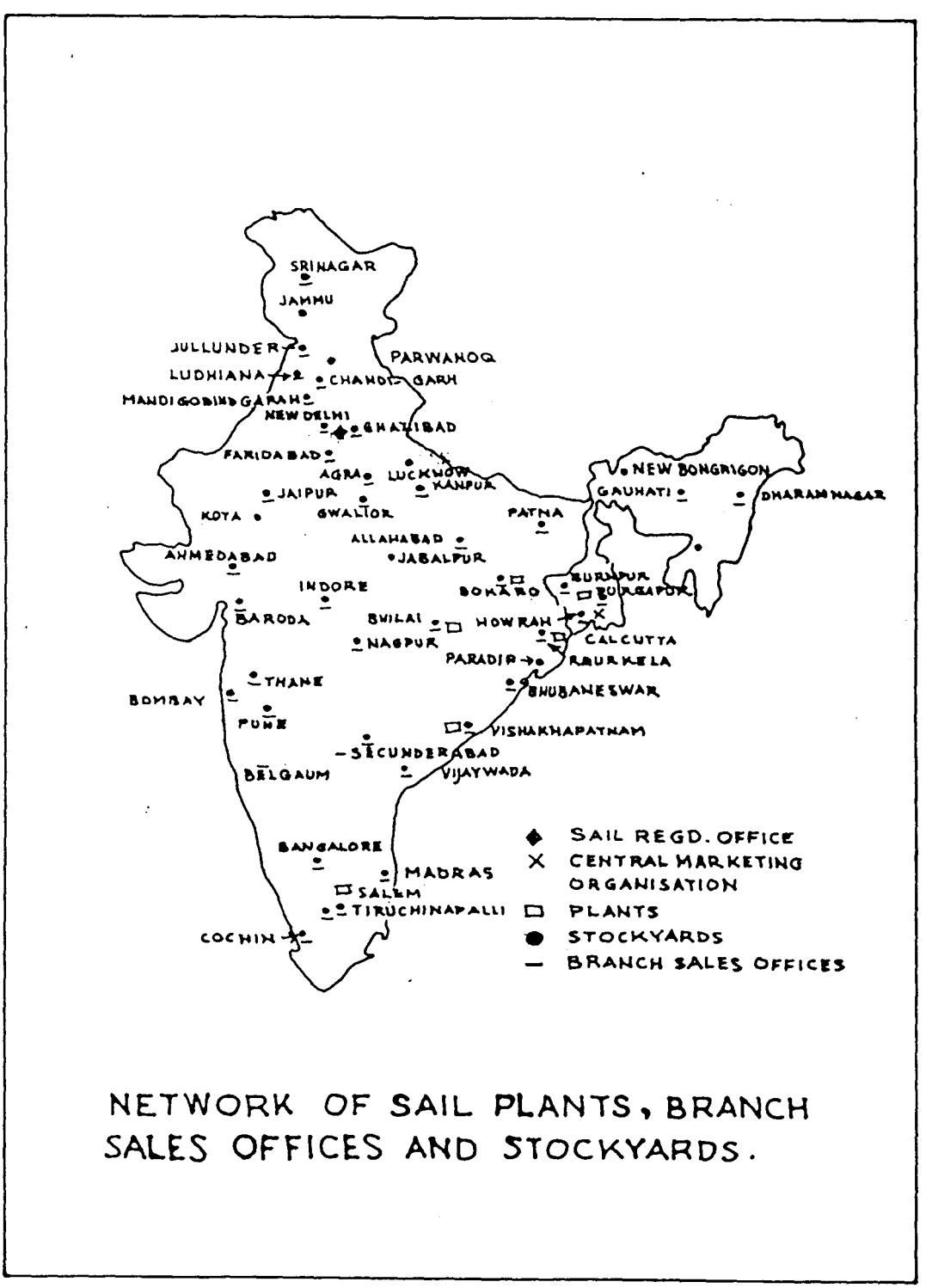
4. Siddhu, 1980



NETWORK OF SAIL PLANTS, BRANCH SALES OFFICES AND STOCKYARDS.

4.3 Cement

The production, distribution and consumption pattern of cement industry illustrates yet once again how the public sector pricing policy has permitted the outflow of resources from the Backward areas and their expropriation by developed regions. The cement industry is concentrated in the Limestone Dolomate rich areas which are one of the most under-developed in the country, while the chief centres of demand are the metropolises and other urban areas with a high concentration of the construction industry. As a result of the government's uniform pricing policy cement is produced at these low cost locations and distributed to consumption centres all over the country thus depriving the backward areas of their low cost advantage and the resultant resource based growth.

The location of a cement plant, depends on certain factors like nearness to limestone deposits, proximity to supply points of coal and gypsum as well as uninterrupted availability of power supply. The freight equalization element on the transported cement as well as fixed retention prices encourage the entrepreneurs to produce cement at locations where the raw material assembly costs are the minimum without bothering themselves about the distance from consuming centres. If we map the various cement production plants we will find that there

is a marked concentration of the industry in the underdeveloped region of Andhra Pradesh, Karnataka, Tamil Nadu and Madhya Pradesh. There is a marked mismatch between the production and consumption patterns of the cement industry. As the following table will show the southern and western region makes up for about 78% of the production and only 55% of the total consumption. At the same time the Northern and Eastern region have a 45% share in the National consumption while contributing only 20% to the National Production.

Cement Industry - Production & Consumption Patterns

(Figures are % to total)

Reg/State/UT	Installed Capacity	Production	Consumption
NORTH REGION	15.7	15.3	33.3
Bihar	7.2	7.5	6.0
Haryana	1.7	2.8	3.3
Himachal Pradesh	0.6	0.8	0.6
Jammu & Kashmir	0.7	0.2	1.1
Punjab	-	-	4.8
Sikkim	-	-	0.1
Uttar Pradesh	5.5	4.0	11.7
Union Territories	-	-	5.7

Reg/State/UT	Installed Capacity	Production	Consumption
EASTERN REGION	5.4	6.1	11.1
Assam	0.6	0.7	1.3
Manipur	-	-	0.3
Meghalaya	0.6	0.3	0.3
Nagpur	-	-	0.3
Orissa	2.4	3.6	2.9
Tripura	-	-	0.1
West Bengal	1.8	1.5	5.7
Union Territories	-	-	0.2
WESTERN REGION	45.5	44.0	30.3
Gujarat	8.7	8.0	7.8
Madhya Pradesh	20.9	21.7	5.2
Maharashtra	3.4	3.3	13.4
Rajasthan	12.5	11.0	3.5
Union Territories	-	-	0.4

Reg/State/UT	Installed Capacity	Production	Consumption
SOUTHERN REGION	33.4	34.6	25.3
Andhra Pradesh	12.1	14.9	8.8
Karnataka	8.3	7.0	5.1
Kerala	-	-	3.2
Tamil Nadu	12.0	12.7	8.0
Union Territories	-	-	0.2

Source : Economic Monitoring Service
(Commerce Res. Bureau)
Industry Profile - 8

At this juncture it is essential to note that even in the high consumption states it are the developed areas which make up for the bulk of cement consumption. The Backward areas in even those states are deprived of the controlled cement because under the scheme of demand based area wise allocations their quotas are miniscule. The area wise allocation scheme was introduced from October 1978. Under this scheme statewise quaterly allocations and factorywise quantities were indicated to each state by the cement controller's office. The respective

state governments in their turn allocated amounts to districts which were further suballocated to specified licensed dealers in cities and Talukas. On paper the system appeared perfect because these were cement dealers in the most backward talukas too, they were given margins for transportation and were housing. However in a practice the system became totally distorted. The licensed dealers resorted to pocketing the extras given to them and started asking the consumers to lift cement directly from railheads. As a result controlled cement was available most of the time to only those consumers who were located in or around urban centres. The system of area wise allocations based on registered demand also meant that most of the state quota was cornered by a few relatively developed districts within the state. For example in Maharashtra in 1973, all the additional quota available to the state was allotted to Bombay on this basis.

The uniform pricing system meant that a consumer near the cement plant had to play the same price as a consumer located a few hundred kilometres away. The various elements of the cement price can be understood with the help of a set of equations:-

1. Retention price = price payable exworks to the manufacturer of the naked cement

2. F.O.R. price = (1) + central excise duty + packing costs + incidentals + freight equalization

[F.O.R. price is uniform for dealers all over the country]

3. Retail price = (2) + Central sales tax + State sales tax + octroi + incidentals

[The Retail price can differ marginally from state to state]

The wide spread corruption and inefficiency rampant in the distribution system emphasized the need for drastic and timely changes. Thus the Lavraj Kumar committee[5] was appointed and the government accepted the following of its recommendations:-

(i) For existing units a three tier retention price formula would replace a single uniform retention price.

(ii) A 12% return was allowed on post tax net work

(iii) Spares and stores would be considered in addition to coal, freight on coal, power and wages for the purpose of neutralizing price increases.

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5. Planning Commission (1978)

However continued deterioration of the situation finally necessitated the introduction of partial decontrol in 1982 which gave a new lease of life to the cement Industry referred to as a creaking point of India's arthiritic economy.[6] It is interesting to observe that, the steps for decentralization of the cement industry started after it was announced that the cement would be gradually decontrolled over a period of time. This meant that after a few years the urban centres would no longer be able to obtain cement at the same low prices and consumers located these will have to pay heavily on transportation of cement from the plant located in the Backward area.

Thus the main motive behind this dispersal policy was to provide the urban centres with their own sources of cement at comparatively low prices. To achieve this end the concept of split locations as well as mini cement plants was introduced. In a split location the clinkers and grinding plants are located at two different points, the clinkers at the raw material sources and the grinding plants near the consumption centres.

It was suggested that the transportation cost of slag from the clinker to the grinding plant should be subsidized because it would be much cheaper than subsidizing the freight cost of naked cement. This proposed plan of split locations had two important implications. One, the backward areas would be deprived of the employment and

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6. Nani Palkhivala (28/2/82) Times of India

income generated by the cement plants too and would be reduced to a captive hinterland supplying processed raw material to the grinding plants located near the industrial centres. Secondly because the transport of naked cement would not be subsidized anymore, the, 'backward areas will have to pay exorbitantly high prices as compared to the urban centres where the cement would be produced. As a step towards split locations two such plants were set up at Ahmedabad (Fed by Sikka) and at Vishakhapatnam. However luckily the implications were realized in time and the whole proposal of having split locations all over the country was shelved.

The concept of mini cement plants was introduced in order to solve the problems of excessive concentration of cement industries and at the same time avoid the obvious disadvantages of split locations. The mini cement plants would not only help in exploiting smaller and lower grade limestone reserves but had smaller capital needs too[8]. The following table, however, shows that the bulk of licenses and letters of indent, were again granted to the Southern and Western region that went against the objectives of the proposal aim.

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8. About Rs. 7 cr. for 60,000 Tonnes Annual capacity and Rs. 1 cr. for 10,000 Tonne Annual Capacity

State wise Mini Cement Plants (1986)

Ref/State	Plants in Production		I.L. Issued		L.O Intent granted	
	No	A.C.	No	AC	No.	AC
NORTH						
Haryana	-	-	-	-	1	66
H.P.	-	-	1	66	3	198
U.P.	1	160	-	-	7	456
EAST						
Orissa	-	-	-	-	2	131
WEST						
Gujarat	-	-	4	264	12	784
M.P.	-	-	1	66	6	396
Maharashtra	-	-	1	66	-	-
Rajasthan	-	-	2	132	6	396
SOUTH						
A.P.	3	198	2	132	-	-
Karnataka	-	-	3	198	-	-

IL Industrial licences L.OI Letter of Intent

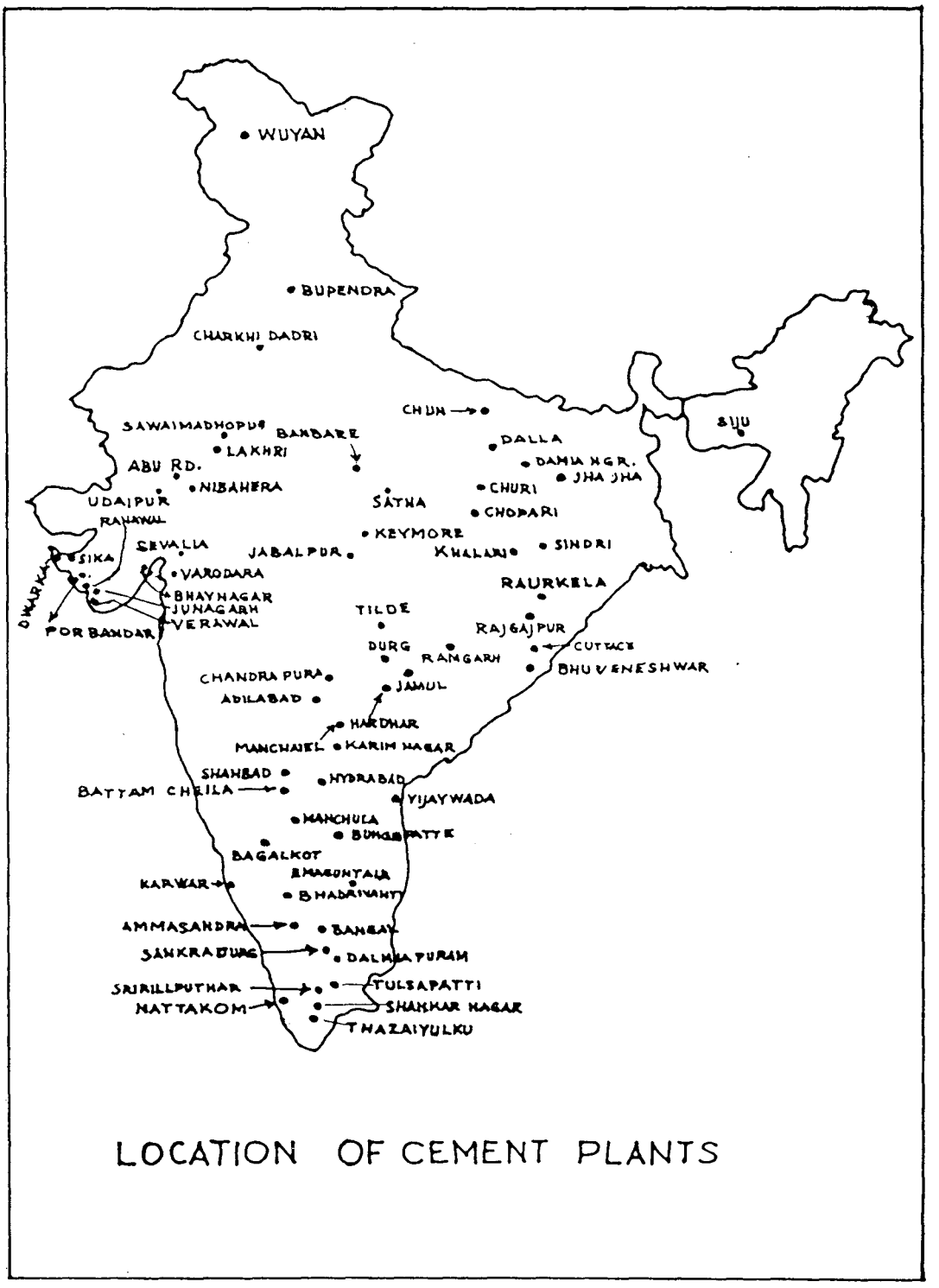
No Number AC Actual capacity ('000T's)

Source: Cement Year Book

The scenario is gradually changing for the better after the introduction of partial decontrol. Now new units contribute only 37.5% of their installed capacity in the first year, gradually working it up to 42.5% in the Second and 50% in the third year. This slab system cuts down the teething problem of new units thus reducing the instances of industrial sickness. At the same time the eligibility criterion for the distribution of levy cement has been tightened up to avoid large scale black marketing.

However whatever might be the policy changes, the urban centres always have a definite edge over the backward areas. All these years the backward areas have been working as raw material appendages to the developed areas. Once the price control is removed the backward areas will at last be able to enjoy the fruits of their least cost advantage. Once the new cement producing industries start clustering around the urban centres the Backward areas will be at a total disadvantage. They will not be able to use the production of local cement plants because over the decades the underdeveloped areas have not developed cement based industries. As a result the backward areas will only slide back further.

Thus the public sector pricing policy in this case has not only been unable to reduce regional inequalities but has actually accentuated it. The Indian, however, does not be in price decented as this would definitely be detrimental to the development of the backward states.



LOCATION OF CEMENT PLANTS

4.4 Power

The power sector presents another glaring example of how massive inputs, towards the establishment of generating stations in the Backward Areas have really resulted in the development of Infrastructural facilities and the industrial base in the select urban centres of the country.

The table below shows the growth of generating capacity in India since the inception of planned economic development in the country. It may be seen that till 1970, the thermal power generation and the Hydro Power generation were both growing at nearly the same pace. Hydro power generation by its very nature is confined to backward in accessible areas. However this power generated was not allowed to be utilized for the development of industries and economic activities in the region where generally stations were located. The power was taken out of the region and supplied to the urban industrial complexes located several hundred kilometres away.

PROFILE OF GENERATING CAPACITY IN INDIA

(in Megawatts)

Year	Thermal generation	Hydro generation	Total
1	2	3	4
1950	1004	559	2300
1960	2047	1530	4632

1	2	3	4
1970	7196	6134	15518
1975	9752	7529	20344
1980	20662	11793	33316
1985	25560	13250	47269

Source: IEEMA Journal: Vol 8; No 2, Feb.1988

NOTE: Upto 1970 the aggregate figures include the generating capacity of mini diesel generating stations of 1-3 M.W. capacity each. After 1970 the figures for the Nuclear Power stations of Tarapur, Ranapratap and Kalpakkam have been included.

After 1980, the aggregates include the captive thermal power stations also.

The Chief consumers of the Power generated were the fast growning industrial centres. The transmusion network too has been developed by keeping the city loads as the primary consideration. This means that there is unnecessary increase in the length of the lines and resulting costs of repair and upkeep.

Till 1970, the medium sized power stations were located in the larger cities where the bulk of the consumers, were located like Trombay Power station near Bombay, Indraprastha Power station in Delhi, New Cossipore Power station near Calcutta and Barin Bridge Power station near Madras. After 1970 there was a marked shift due to environmental considerations. The new superthermal Power stations[9] were all concentrated in the, rural areas to avoid problems of pollution and Industrial waste. This new policy resulted in a exploitation of the underdeveloped areas for the convenience of the developed areas. The superthermal Power stations were started at the Pitheads and the bulk of the power was transmitted to urban complexes several hundred kilometres away via long distance transmission lines. The following table which shows the location of the superthermal stations proves this Hypothesis.

SUPER THERMAL STATIONS

	Total (MW)
Singrauli	4050
Chandrapur	2840
Talcher	2800
Ray	2400
Korba	2130
Anpala	2130
Bandhav	2130
Bhadrachalam	2000

	Total(MW)
Farakka	1630
Ramagundam	1130
Weidhan	1000
	24110

Source: Central Electricity Authority

1. National Power Plan I (PP 151, 156)
2. Power development in India - Future trends and prospects

The proof of the fact that electricity generated is travelling over long distances is the phenomenal increase in the length of the transmission lines over the last three decades and a half. The length of the Transmission lines was only 8000 km in 1950 while in 1985 it had become 285,000 km's.

The electricity tariff policy too reveals a bias in favour of bulk consumer who will almost always be located in the urban area. The domestic or small scale consumer is charged at a flat rate for energy consumed (i.e. as X Paise/per unit of electricity consumed). The larger industrial consumers are however charged on a slab system in which as his electricity consumption increases the per unit charge comes down. In addition attractive tariffs are

offered if energy is consumed at off peak hours, a benefit which can only be enjoyed by the large industries working in 2 or 3 shifts. The flat rate electricity charge is also the same for the consumers irrespective of their location. This means that the overhead cost of the long transmission line which should normally be borne by the consumer situated at considerable distance from the production centre, is being subsidized by the consumers located near the Power stations, the latter mostly being in underdeveloped areas.

Over the past few years the government has been realizing this imbalance and a number of State Governments have started giving concessions to small scale units in Backward areas. The nature of the power subsidy will be brought out by a look at the following table:

State	Amount & Nature of Subsidy
Andhra Pradesh	Subsidy of 12½% of total electricity charges for five years.
Assam	6-12 paise per unit of electricity for first two years
Bihar	18 Paise p.u. charged as Maximum rate

State	Amount & Nature of Subsidy
Dadra & Nagar Haveli	Subsidy upto 9.P/PU for rates exceeding 9p per unit upto a load of 20 H.P.
Goa, Daman and Diu	Subsidy - Actual rate charged by electricity department - first a paise for as connected load upto 20 H-P-
Gujarat	a) Actual rate paid -3 P/PU (Maximum limit of 12 P/PU) In case of SSU's in areas with population of 20,001 - 1 Lakh.
Jammu & Kashmir	Loans for diesel generating sets of which 25% is subsidy & rest is interest free.
Madhya Pradesh	Subsidy of 5p/PU in A district 7 P/PU in B district 9P/PU in C district
Manipur	Subsidy of 31 P/PU

State	Amount & Nature of Subsidy
Meghalaya	9P/PU if the rate is more than 9P/PU
Punjab	35% subsidy for 5 years
Orissa	12½% subsidy for new
Tamil Nadu	Reduction of tariff by 15% in 56 backward Talukas.
Uttar Pradesh	Subsidy of upto a maximum limit of 9P/PU over and above first 9P of the average unit rate.
West Bengal	25% subsidy on the total bill

Source:- N.C.D.B.A. Report on Development of backward areas.

This policy is however a mere eyewash because the small scale industries which have particularly high power consumption are the metallurgical units, cold storages, ice factories etc. Most of them by their very nature are ancilliary units whose existence

will depend on their proximity to medium & heavy scale industries. Thus unless these industries are pulled into the backward areas, it is pointless and or them ancilliary units to be expected to shift to semi rural or rural regions notwithstanding power subsidy.

At the same time the government is allowing certain groups of huge industries which are incidentally located in or near class I cities to start their own captive thermal power stations.[10]

Thus as in the case of Iron & Steel and cement it is a spiral in which the industries are concentrated in class I cities and draws essential [illegible] inputs from the backward areas.

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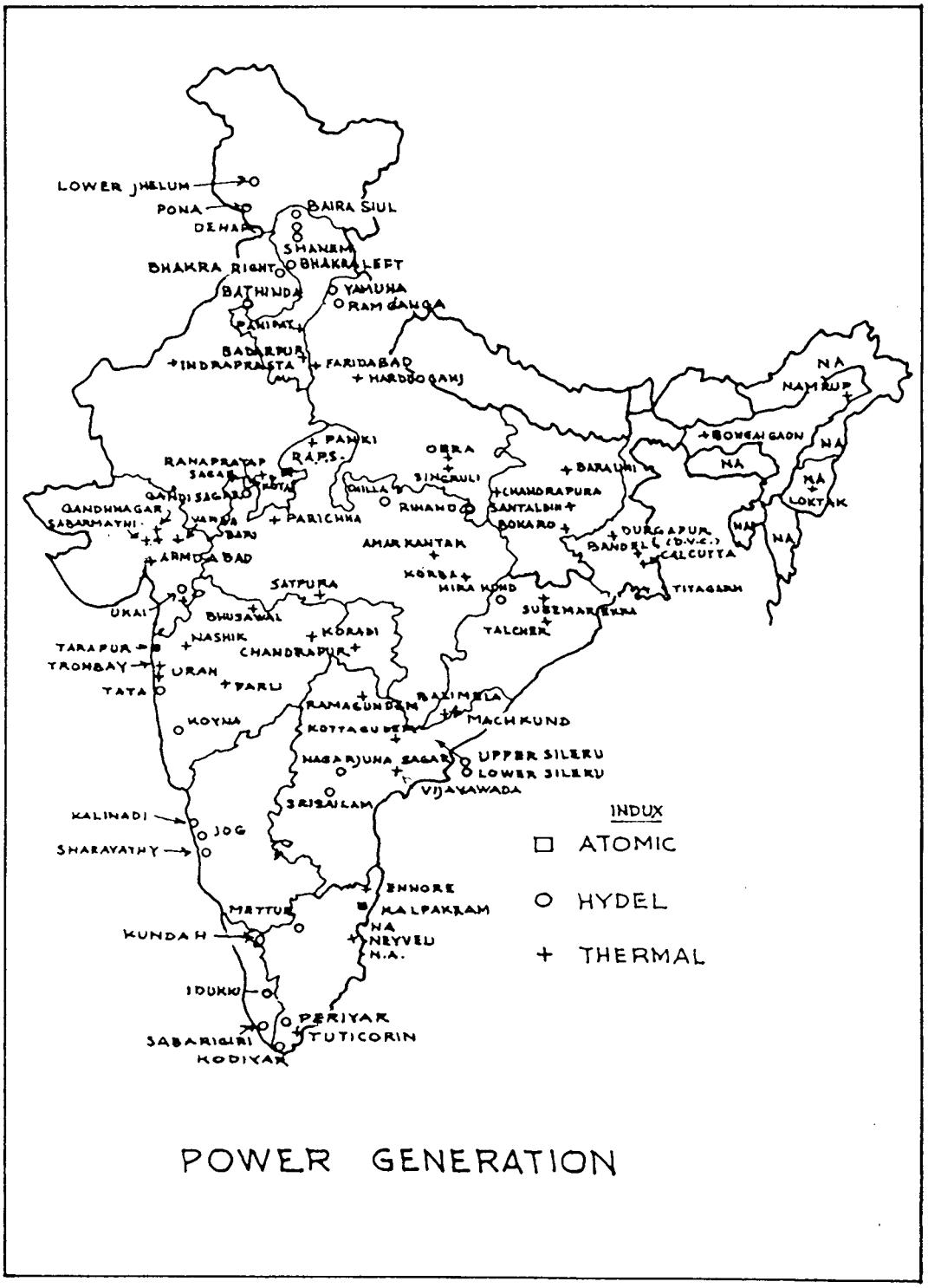
10. In Renusagar for Hindustan Aluminium of Birlas.
At Jamshedpur for TISCO at Kota for JK Fertilizers & Shri Ram Rayon



POWER GENERATION

4.5 On the basis of the analysis of the government policies in the case of Iron and Steel, cement and power we can conclude that from the last three decades the government has turned a blind eye to the problem of outflow of minerals and other basic raw materials from the backward areas for the industrial growth of the relatively developed regions of the country. The huge public sector plants in these three industries were located in the underdeveloped regions in the hope that the resulting generation of employment and income will set them on the path of progress. However, the expected forward linkages have not materialized and to a large extent, the blame can be laid on the pricing policy followed by the government in the case of these commodities. Iron and steel, cement as well as power are supplied to various destinations in the country at uniform prices. This implies that an entrepreneur can obtain these inputs at the same price wherever he locates his plant. Thus the incentive to locate their units near the source of production of the input is non existent and as a result there has been an increased concentration of Industries in the urban growth centres. The Backward areas are deprived of the resources based growth of industries because given the same input costs, a developed centre area with better infrastructural facilities will automatically be a more preferred location.

The distributional policy, followed by the government has an inbuilt bias which functions in favour of class I cities

and other rapidly growing urban centres. The demand based allocation scheme means that industries with higher offtake in the past can corner a larger quota in the future years. Thus these centres of industrial concentration emerge as the main markets for the industrial inputs produced in backward areas.

During the past few years a policy of gradual decontrol has been introduced. As such this would have been very advantageous to the backward areas because they would thereby be able to reap the benefits of their resources. However during the last three decades there have been rapid changes in the Technology as well as construction of these industries. Therefore the mini cement and steel plants are now locating near the centres of consumption. As a result of this the backward areas are losing of whatever Industrial growth they had previously. At the same time in the absence of uniform pricing any industry locating in an underdeveloped area will have to obtain its input requirements from the developed regions paying massive transport costs.

Thus the underdeveloped areas have only a bleak future to look forward to after emerging from a past in which they were shamelessly exploited under the garb of socialist objectives.

CHAPTER V

STRUCTURAL DIVERSIFICATION IN CLASS I CITIES.

5.1 We shall now attempt to analyse the structural changes in the Indian economy with the help of the workforce data from the census of India. In order to facilitate our analysis we have identified three bench mark years namely 1961, 1971 and 1981, thus making it more convenient to identify decadal trends and variations.

However at this point it is pertinent to note that the Industrial classification scheme adopted for the tabulation of workforce date in 1961 and the scheme adopted in 1971 are strictly speaking not comparable. The office of the Registrar General adopted the I.S.I.C. (Indian standard and Industrial classification) for the 1961 census and N.I.C. (National Industrial Classification) for the 1971 census. The correspondence between the workforce categories of 1961 census and the I.S.I.C. divisions as well as between the 1971 & 1981 censuses and N.I.C. divisions are given below.

CORRESPONDENCE BETWEEN 1961 CENSUS CATEGORIES AND ISIC DIVISIONS

WORKFORCE CATEGORIES	COVERAGE AS PER ISIC
I. Cultivators II. Agriculturer Labourer	These two are distinct categories for the tabulation of the work-force data and are not part of the ISIC except that these include minor group (000), (001), (002), (003), (004) and a part of (005).
III. Mining, Quarrying, Livestock, Forestry, Fishing, Hunting and Plantations, Orchards and Allied Activities.	Non-household based activities of Division (0) & Division(1); Subtract (000), (001), (002), (003), (004) and a part of (005).
IV. Household Industry.	Household based activities of the Division (0,1,2 and 3); subtract (000), (001), (002), (003), (004), and a part of (005).

V.	Manufacturing other than household Industry.	Non-household based activities of the Divisions (2 and 3).
VI.	Construction	Division (4).
VII.	Trade and Commerce	Division (6)
VIII.	Transport, Storage and Communication.	Division (7)
IX.	Other Services	Division (5,8 and 9).

CORRESPONDENCE BETWEEN THE WORKFORCE CATEGORIES OF THE 1971 AND 1981 CENSUSES AND THE NIC DIVISIONS.

	WORKFORCE CATEGORIES	COVERAGE AS PER NIC
I.	Cultivators	These two are distinct categories for the tabulation of the work-force data and are not part of the NIC.
II.	Agricultural Labourers	
III.	Livestock, Forestry, Fishing, Hunting and Plantations, Orchards and Allied Activities.	Division 0
IV.	Mining and Quarrying	Division 1
V.	Manufacturing, Processing, Servicing and Repairs.	
	a) Household Industry	Household based activities of Divisions (2 & 3)
	b) Hon-household industry	Non-household based activities of Divisions (2 & 3)
VI.	Construction	Division 5
VII.	Trade and Commerce	Division 6 and 8.
VIII.	Transport Storage and Communication.	Division 7
IX.	Other Services.	Division 9 and X.

In order to get a proper picture of the changing workforce structure in the class I cities, it is imperative that adjustments must be made to make the data from the 1961 census comparible to that of 1971 and 1981. To achieve this comparibility we have used the disaggregated taluk level data. The various adjustments essential for making the workforce structure in 1961 comparible with the census of later years has been summarized in the following table:

CORRESPONDENCE BETWEEN THE WORKFORCE CATEGORIES OF 1961, 1971 AND 1981 CENSUSES

1971 and 1981 Census Category	1961 Census Category
Cultivator) Agriculturer Labourer)	Cultivator (I) and Agriculturer Labourer (II), subtrast (000), (001), (002), (003), (004) and a part of (005).
I. Livestock, Forestry, Fishing, Hunting, Plantation, Orchards and Allied Activities.	Division (0) add agricultural services.
II. Mining and Quarrying III and IV(combined)	Division 1 Mining, Quarrying, Livestock, Forestry etc. (III); add household based activities of division (0) and (1); add uncovered segment of (000), (001), (002), (003), (004) and a part of (005) and add agricultural services.
a) Manufacturing Processing Servicing and Repairs-Household industry.	Household Industry (IV); subtract Division (0 and 1).
b) Manufacturing, Processing Servicing and Repairs - Non-household industry.	Manufacturing other than household industry (V).

	Construction	Construction (VI)
I.	Trade and Commerce	Trade and Commerce (V II); subtract (697) and add (840) and (882).
II.	Transport, Storage and Communication.	Transport, Storage and Communication (VIII).
	Other services.	Other Services (IX) subtract(840), (882) and agricultural services and add (697).

At this point it is pertinent to observe that the adjustments could not be made for cultivators and agricultural labourers due to non-availability of data. As far as 1981 is concerned the adjustments have to be made only for household manufacturing because workforce categories other than cultivators agricultural labourers and household manufacturing is clubbed under the head of others'. The same adjustments have been done with the corresponding categories in the 1961 and 1971 census to construct a comparible category of others'.

5.2 An analysis of the Demographic and workforce trends in class I cities

An over view of the decadal growth rate of population during 1960's and 1970's reveals that the class I cities have been growing at much faster rate as compare to other terms. The disparity in the growth rate of the cities, with that of smaller towns tends to be much higher in the case of relatively developed states. This implies that there has been a concentration of population in the large cities both in the advanced and backward states. This process is stronger in the case of the former. The demographic concentration in class I cities is backed up by economic factors ie why the percentage of male workers in manufacturing activities in the case of class I cities is much higher as compare to other medium or small towns.

The percentage share of male workers in trade and commerce construction as well as transport and storage works out to be higher in the case of class I cities. The smaller and medium towns have a much smaller percentage of their male workers in the above categories. The inter linkage between trade and commerce transport and storage and manufacturing activities in the case of class I cities has been well established at the macro level through input/output analysis and at the micro level through various case studies. The growth of construction industries however can be only partially attributed to the growth of manufacturing activities . We say this because the percentage of male workers in construction as a proportion of the total workers has not increased as much as in the manufacturing sector.

To some extent the increase in trade and commerce and the corresponding decline in the other services is due to definitional anomalies. However even after making the adjustments in the data of the workers engaged in these activities, it is evident that the trade and commerce sector is growing at a very fast rate. In fact this is especially pronounced in the case of the large 15 or 20 class I cities whose industrial base is gradually weakening. The growth of trade and commerce at the cost of manufacturing sector in the largest 20 cities indicates that these cities are becoming more and more residential in character. This is one more case in the point of how the class I cities are eager to obtain the advantages of industrial development but push on the disadvantages like pollution and industrial waste into the surrounding backward areas.

The class I cities show a marked bias against female employment. In fact female employment has risen significantly only in the case of household manufacturing. Thus in a way the employment opportunities of women are confined to the unorganized sector. The sex ratios of the class I cities has improved over time from 1961 to 1981. But this increase is much less in the case of the larger cities. This can be explained in terms of the high percentage of male labour in the migrant flow. In general also the sex ratios in the case of class I cities tends to be much lower than the corresponding sex ratios for the state (urban) or the country as a whole. In 1971-81 the sex ratio in the class I cities improved significantly. This can be explained in terms of a spurt in the activities of the unorganized sector and

the resultant increase in female employment.

The literacy rates in the class I cities are generally speaking higher than those for the state as the whole. This can be explained in terms of the better education facilities offered in the developed urban areas. The literacy rates among males is higher than the rates among females in all the cities at all points of time. Over the course of time the literacy rates have increased in the case of both males and females in all the cities under study. However the gap between male and female literacy has been gradually narrowing down.

In conclusion looking at the uniformity of trends displayed by all the class I cities we can argue that they are not effected by the relative position of the state they are located in. Most of the class I cities have been developing at the expense of the relatively backward areas. There has been a growth of the unorganized sector supported by the organized sector which is linked up directly with a liquidation of household and other related activities in the rural hinter lands and backward regions. This pattern of industrial growth has strengthened the economic concentration in the class I cities and has worked markedly against the forces of industrial dispersal.

Sex Ratios, Population growth rates and Literacy rates.

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
A.P.														
Hyderabad	929	47.76	58.82	36.02	43.83	927	52.21	61.96	41.70	40.74	920	55.66	64.84	45.68
Vijaywada	947	50.45	60.31	40.05	47.04	936	54.61	62.86	45.79	58.14	968	59.24	66.86	51.38
Guntur	979	44.83	55.93	33.49	44.29	973	47.53	57.38	37.42	36.01	966	49.29	57.25	41.05
V.Patnam	920	47.59	58.58	35.65	72.10	921	50.78	61.45	39.19	63.50	925	57.24	66.58	47.14
Warangal	929	38.92	53.66	23.06	32.94	929	45.28	58.80	30.72	61.92	935	51.61	64.47	37.86
Rajamundry	985	44.93	55.94	35.81	45.23	968	52.34	60.23	44.20	41.81	963	54.55	61.90	46.93
Kakinada	971	44.53	53.88	34.92	33.64	988	49.77	57.78	41.66	38.03	988	51.02	58.28	43.66
Elluru	1004	48.12	58.06	38.22	17.27	1011	52.05	60.47	43.72	32.38	1006	56.71	64.39	49.08
Nellore	932	51.49	60.73	41.57	25.11	955	56.09	65.03	46.72	76.83	955	57.20	65.35	48.67
Kurnool	938	41.88	52.91	30.11	35.60	955	47.09	57.22	36.49	51.17	928	48.99	58.10	39.18
ASSAM														
Gauhati	497	63.67	67.61	55.75	22.12	641	35.44	31.31	41.87					

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
BIHAR														
Patna	769	51.81	62.91	57.37	34.73	790	52.47	62.05	40.35	86.50	816	57.50	66.88	46.00
Jampur	784	52.68	62.70	39.95	39.05	801	54.83	64.83	42.35	46.88	846	56.51	64.09	47.04
Dhanbad	635	58.38	64.04	41.87	116.35	664	41.85	49.83	29.84	55.92	737	49.91	59.29	37.17
Gaya	834	44.47	58.16	28.05	19.05	844	47.93	60.44	33.10	37.19	868	56.06	66.59	43.92
Monghyr	875	43.00	56.34	27.87	14.15	844	45.34	56.10	32.60	26.07	863	54.57	64.83	42.67
Bhagalpur	817	44.28	56.16	29.72	19.71	809	47.93	60.44	33.10	28.50	842	54.44	64.13	42.93
Ranchi	792	57.65	67.82	39.28	82.21	804	59.85	68.26	49.39	95.89	821	63.83	72.23	53.00
Muzzafar Nagar	893	51.80	62.45	36.47	15.88	743	51.10	60.05	39.06	50.16	805	60.06	68.02	50.12
Darbhanga	870	40.11	55.07	22.92	28.19	844	43.15	56.07	27.86	33.18	875	51.07	62.94	37.50
GUJARAT														
Ahmedabad	804	52.74	61.86	41.41	44.40	834	58.96	66.63	49.76	43.53	868	1.16	70.41	54.80
Vadodara	857	55.15	64.67	44.05	50.94	852	63.43	70.97	54.57	59.16	890	67.94	75.05	59.94
Surat	916	56.55	66.87	45.27	55.27	889	57.92	66.04	48.80	85.10	843	59.59	67.10	50.68
Rajkot	927	49.19	63.44	42.72	54.84	923	60.02	67.96	51.41	47.75	928	64.17	71.02	56.79
Bhavnagar	916	47.49	60.09	37.30	28.05	915	55.81	63.20	43.91	36.38	925	60.44	69.06	51.12
Jam nagar	914	47.92	59.06	35.73	42.97	916	53.98	65.22	45.54	39.27	915	56.37	64.98	46.95

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
J&K														
Shrinagar	863	24.76	33.46	14.71	41.49	851	32.49	40.88	22.63					
Jammu	784	45.00	51.47	36.74	51.11	837	58.84	66.63	49.53					
KERALA														
Cochin	980	59.02	65.37	52.29	56.19	957	69.30	74.34	64.04	-	982	78.45	82.05	74.80
Trivandrum	968	61.65	68.72	54.29	70.87	989	69.38	74.53	64.17	-	1006	75.58	79.49	71.72
Calicut	965	54.65	63.71	45.22	73.48	987	65.11	71.76	58.38	-	1007	73.16	78.13	68.22
Alleppey	984	57.70	65.96	49.32	15.37	994	70.06	75.44	64.65	8.10	1023	77.32	81.51	73.23
MADHYAPRADESH														
Indore	851	50.67	61.60	37.83	42.03	861	57.11	66.15	46.60	47.44	687	60.62	68.91	51.27
Jabalpur	809	48.74	59.67	35.82	45.73	817	56.20	65.62	44.67	41.67	846	60.72	68.89	51.07
Gwalior	853	42.42	54.53	28.23	35.12	842	48.24	58.99	35.48	37.83	859	52.57	62.62	48.88
Bhopal	771	43.16	52.14	32.02	72.62	825	52.26	60.30	42.52	74.69	866	56.72	64.07	48.24
Ujjain	872	46.93	59.25	32.79	44.67	903	51.86	62.27	40.34	35.15	905	57.08	66.26	46.94
Raipur	890	47.44	61.39	31.76	47.35	891	53.27	64.38	40.79	64.56	909	56.62	66.49	45.75
Durg	594	50.14	61.26	27.25	83.99	828	51.06	61.21	38.80	99.96	873	55.98	66.07	44.62
Sagar	859	44.66	58.41	28.78	47.87	845	53.21	64.12	40.30	33.99	860	60.53	70.47	48.98
TAMIL NADU														
Madras	901	59.77	69.60	48.21	42.86	902	62.05	70.48	52.70	34.91	930	65.78	73.14	57.87

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
Madurai	952	57.68	70.51	44.20	29.07	949	63.05	72.27	53.32	27.11	954	66.69	76.16	56.98
Coimbatore	855	60.18	70.92	48.18	23.46	897	65.42	75.53	56.38	24.58	924	66.22	74.83	56.90
Tiruchirappalli	945	54.22	65.64	42.15	22.57	947	65.27	74.29	55.74	30.82	952	68.66	76.33	60.60
Salem	957	44.45	56.79	31.56	23.47	949	54.59	64.81	43.82	23.67	952	56.38	65.51	46.79
Tuticorin	966	57.37	67.46	46.93	24.61	982	61.56	69.36	53.62	37.80	954	63.74	70.86	56.28
Vellore	978	48.67	59.95	37.16	21.52	957	59.18	66.06	52.00	38.30	980	59.31	68.00	50.44
Thanjavur	954	42.37	52.35	36.14	26.44	973	62.93	72.13	53.47	30.54	943	69.35	76.16	62.13
Nagercoil	990	59.72	68.24	51.12	32.95	994	69.52	75.40	63.61	21.48	999	75.71	80.44	70.97
MAHARASHTRA														
Bombay	663	58.60	65.09	48.81	43.80	717	63.96	71.00	54.13	37.80	773	67.98	73.93	60.28
Poona	870	55.09	64.44	44.52	43.53	879	62.68	70.86	53.38	48.48	881	67.09	74.84	58.30
Nagpur	886	49.99	62.17	36.11	34.79	900	58.06	67.65	47.41	39.50	910	65.89	73.47	57.58
Sholapur	902	40.78	54.71	25.34	17.93	911	48.06	61.55	33.24	N.A	933	52.84	65.54	39.24
Nasik	833	53.38	65.39	40.18	26.03	898	62.07	71.96	51.06	57.82	838	67.16	76.18	56.40
Kolhapur	884	53.51	66.11	39.21	38.47	886	60.35	70.88	48.46	31.24	901	66.83	75.62	57.08
Amravati	852	51.93	63.83	37.97	40.56	881	57.62	66.99	46.99	34.87	915	64.40	71.14	57.04
Sangli	906	51.43	64.43	36.62	58.51	871	55.62	66.78	42.80	33.42	914	60.94	70.96	49.97

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
Malegaon	893	36.93	49.18	23.21	58.02	928	43.19	53.82	31.73	28.11	947	50.34	58.94	41.24
Ahmednagar	886	54.04	66.83	39.60	24.69	903	64.08	74.34	52.73	22.12	848	69.11	78.20	58.28
Akola	854	47.97	51.54	34.42	45.51	877	56.22	65.49	45.65	33.82	911	59.52	66.90	51.42
Thana	774	58.49	65.76	49.03	68.30	779	63.89	70.83	54.97	87.40	806	68.61	75.13	60.52
KARNATAKA														
Bangalore	874	50.08	59.68	39.11	37.82	875	59.53	66.90	51.10	76.17	893	62.93	69.22	55.91
Mysore	904	52.88	61.63	43.19	40.11	904	53.36	63.07	48.94	33.95	938	61.59	67.52	55.27
Hubli	901	49.15	61.45	35.66	22.68	886	54.18	64.37	42.69	38.86	912	57.92	66.93	48.05
Mangalore	982	57.04	64.16	49.68	26.89	996	64.92	72.49	57.32	36.80	1007	70.18	76.52	63.88
Kolar Goldfield	984	35.89	47.84	23.74						21.49	973	65.00	72.50	57.29
Belgaum	879	57.54	67.99	45.76	45.70	885	60.98	70.22	50.55	40.41	894	65.81	74.24	56.39
ORISSA														
Cuttack	722	53.58	64.91	37.89	43.98	776	57.98	66.57	46.90	41.91	791	62.88	70.83	52.82
PUNJAB														
Amritsar	789	52.58	58.77	44.85	15.59	831	57.10	61.75	51.50	35.47	838	58.64	61.10	51.62
Jullundhur	791	53.22	60.61	44.51	33.04	859	57.21	62.56	50.98	37.10	851	59.63	64.00	54.50
Ludhiana	829	55.60	62.54	47.23	64.39	807	56.99	62.10	50.66	51.12	809	65.66	69.50	60.93

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
Patiala	798	53.43	60.18	44.98	20.61	835	57.34	61.87	51.92	36.29	873	64.31	68.78	59.18
RAJASTHAN														
Jaipur	856	42.46	54.26	28.66	55.17	856	46.73	55.73	36.23	57.78	867	53.51	63.59	41.89
Ajmer	887	47.73	59.72	34.20	14.29	888	58.89	69.49	46.95	41.64	900	60.51	70.68	49.20
Jodhpur	847	44.95	57.41	30.23	41.31	852	46.11	55.85	34.69	55.41	875	51.53	61.73	39.87
Bikaner	884	39.70	52.63	25.07	25.26	872	46.50	58.10	33.20	34.21	886	50.39	60.78	38.66
Kota	826	43.07	55.88	27.56	76.98	814	48.83	59.98	35.14	62.88	859	55.03	65.36	43.02
Udaipur	844	50.89	63.65	35.73	45.11	837	52.66	62.74	40.61	42.26	866	61.84	71.35	50.87
UTTAR PRADESH														
Kanpur	739	46.48	54.87	35.21	31.32	762	50.90	58.28	41.21	32.39	810	54.83	61.49	46.61
Lucknow	789	46.62	34.20	36.29	24.14	809	52.66	60.18	43.88	23.66	832	57.28	64.11	49.06
Agra	824	36.43	45.96	25.03	24.76	839	42.13	50.23	32.48	21.39	854	46.06	51.86	39.28
Varanasi	812	40.91	52.35	26.81	23.85	826	43.87	53.74	31.92	30.79	844	46.93	57.13	34.85
Allahabad	778	47.74	57.54	35.35	19.11	785	52.84	61.88	41.31	25.22	814	59.22	68.09	48.32
Meerut	802	43.84	52.32	33.77	29.49	816	47.58	55.70	37.62	46.42	842	50.97	58.27	42.29

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
Bareilly	841	38.96	46.42	30.21	19.53	845	41.39	48.10	33.44	34.25	843	46.86	53.42	39.07
Moradabad	845	34.15	42.39	24.42	42.13	842	40.44	46.20	33.60	27.63	858	41.47	46.97	35.08
Saharanpur	821	41.41	44.15	31.25	21.70	833	44.15	50.80	36.16	30.61	860	49.07	55.32	41.80
Aligarh	825	38.25	47.11	27.52	36.37	830	42.50	50.61	32.71	26.82	867	45.43	53.11	36.57
Gorakhpur	757	49.15	60.86	33.67	27.99	798	53.75	63.59	41.42		831	59.06	67.10	49.37
Jhansi	840	39.42	51.62	25.79	16.75	890	49.52	60.46	37.22	41.99	887	55.04	65.54	43.21
Dehradun	840	58.60	64.67	51.26	30.14	778	63.42	69.99	54.97	44.31	799	67.20	73.84	58.88
Rampur	850	28.80	36.55	18.50	19.21	871	31.26	37.85	23.68	26.07	893	33.24	39.60	26.12
Mathura	814	42.26	53.31	29.40	11.89	833	48.02	57.68	36.44	14.87	846	58.16	69.69	44.59
Shahjahanpur	868	29.75	36.71	21.79	22.40	864	33.94	41.54	25.15	42.52	864	40.93	48.87	31.74
Mirzapur	695	37.37	51.07	22.02	5.84	853	38.09	48.99	25.32	20.99	850	42.06	52.00	30.36
WEST BENGAL														
Calcutta	612	59.28	63.55	52.31	22.57	701	57.56	62.54	50.48	30.35	783	65.54	70.95	58.62
Asansol	660	55.25	62.69	44.03	43.34	747	57.79	64.39	48.95	51.11	787	57.21	63.37	49.39

Class I City	1961				1971					1981				
	Sex ratio (F/ 1000M)	Literacy rate P	M	F	Pop grth rate 61-71	Sex ratio	Literacy rate P	M	F	Pop grth rate 71-81	Sex ratio	Literacy rate P	M	F
W.BENGAL Contd..														
Burdwan	789	51.84	60.12	41.35	32.43	810	52.18	59.10	43.63	16.94	885	63.09	70.29	54.96
Kharagpur	810	48.13	58.59	35.27	9.51	874	57.64	66.00	48.07	45.69	883	59.75	67.60	50.86
DELHI	777				54.57	798	59.10	65.66	50.58	56.66	808	62.45	69.04	54.29
DMC		55.38	62.81	45.96										
NDMC		62.92	68.03	55.90										

MALE PARTICIPATION RATES (1961)

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
ANDHRA PRADESH											
Hyderabad	47.13	0.70	0.63	2.75	95.92	0.91	1.76	3.53	18.39	12.01	43.74
Vijaywada	54.82	1.23	0.84	3.43	94.5	1.42	1.75	4.12	22.65	21.07	27.40
Guntul	51.90	2.54	1.53	3.26	92.67	0.60	23.40	4.11	18.64	13.65	30.93
Visakhapatnam	48.88	0.71	0.40	2.01	96.88	5.36	12.82	3.87	10.53	24.83	38.10
Warangal	49.34	5.26	1.52	9.87	83.35	2.17	21.10	3.86	16.22	11.01	28.87
Rajamundry	52.77	1.11	0.36	9.84	88.69	0.81	19.46	2.54	23.50	17.42	28.01
Kakinoda	50.73	2.10	1.01	4.93	91.96	5.52	15.23	3.63	18.91	14.01	34.42
Elluru	56.31	3.63	2.54	9.62	84.21	1.01	20.37	2.00	19.03	10.07	30.52
Nellore	54.35	3.26	2.36	6.90	87.48	0.86	17.50	2.75	17.01	12.93	36.00
Kurnool	49.74	2.34	3.31	7.94	86.41	0.93	16.82	6.42	16.27	8.92	36.81
ASSAM											
Gauhati	59.76	0.51	000	11.10	88.39	0.70	0.91	2.16	15.24	20.76	47.9
BIHAR											
Patna	50.66	4.09	1.42	5.21	89.28	1.26	14.33	3.33	15.43	10.42	44.40
Jamshedpur	50.37	0.53	0.11	1.27	98.09	0.92	56.21	6.21	10.10	5.83	18.62
Dhanbad	61.03	2.42	0.26	1.73	95.59	35.2	17.42	2.62	10.00	8.81	21.30

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
Gaya	49.20	3.76	1.00	7.61	87.63	1.35	16.32	3.97	17.26	14.62	34.01
Monghyr	45.33	5.64	0.81	5.27	88.28	1.62	35.10	2.75	11.85	8.56	28.36
Bhagalpur	46.52	2.52	0.50	9.43	87.55	1.61	12.87	2.83	16.63	9.54	34.20
Ranchi	47.64	3.20	0.73	3.50	92.57	2.87	17.90	4.01	15.01	10.30	41.51
Muzaffarpur	48.75	1.65	1.63	2.01	94.71	1.10	15.01	4.46	20.54	11.10	41.62
Darbhanga	47.43	41.01	1.24	7.15	50.6	2.87	17.01	3.25	16.53	9.42	38.54
GUJARAT											
Ahmedabad	51.69	0.20	0.11	2.13	97.56	0.20	5.00	2.43	16.26	6.01	20.41
Vadodara	46.72	1.01	0.36	6.12	92.51	0.41	1.62	2.26	16.91	9.53	32.96
Surat	51.61	0.10	00	14.24	85.3	0.42	39.54	1.53	17.74	4.36	21.83
Rajkot	44.57	1.93	0.57	3.17	94.33	0.50	27.13	3.01	19.50	10.32	33.90
Bhav Nagar	44.44	0.30	0.10	2.26	97.34	0.51	32.10	2.36	19.92	12.01	30.11
Jam Nagar	45.77	1.01	0.39	2.41	96.19	1.30	27.36	2.10	22.43	9.87	33.10
JAMMU & KASHMIR											
Shrinagar	49.92	3.46	0.35	10.80	85.39	1.21	20.64	1.65	10.90	6.21	44.52
Jammu	50.33	0.65	00	0.63	98.72	0.67	12.1 3	5.04	16.51	7.63	56.94

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
KERALA											
Cochin	47.19	0.90	0.82	1.16	97.12	1.83	17.73	2.40	16.36	18.42	40.00
Trivandrum	44.87	3.74	2.34	4.13	89.79	3.33	12.14	2.61	13.45	6.10	51.93
Allepey	45.59	0.90	1.52	1.62	95.96	6.65	28.80	2.35	19.10	10.63	28.26
Calicut	47.13	0.71	0.40	2.14	96.75	5.54	23.82	1.52	17.43	13.26	35.23
MADHYA PRADESH											
Indore	47.57	0.61	0.10	2.81	96.48	12.93	37.65	3.76	21.01	6.23	26.32
Jabalpur	52.52	2.43	0.60	7.75	89.22	1.60	25.01	4.72	12.70	1.34	31.87
Gwalior	48.48	2.34	0.81	2.81	94.04	2.20	32.43	6.42	17.08	7.07	28.70
Bhopal	55.11	1.26	0.94	3.27	94.53	2.83	20.10	12.03	15.33	9.87	35.03
Ujjain	49.92	2.15	0.53	3.35	93.97	1.07	34.40	4.01	19.27	8.11	26.40
Raipur	52.66	4.90	0.36	5.13	89.61	2.65	18.01	6.35	14.62	14.62	26.43
Durg	71.67	2.16	0.52	2.12	95.20	2.21	48.23	12.63	9.43	6.72	16.13
Sagar	47.49	5.53	0.70	24.86	68.91	2.23	11.96	37.35	16.08	5.93	28.9
TAMIL NADU											
Madras	52.22	000	000	1.97	98.03	1.46	26.42	4.32	19.90	12.74	33.01
Madurai	50.55	4.75	3.33	9.74	82.18	7.53	30.21	29.75	22.83	8.92	23.65
Coimbatore	54.77	0.30	0.81	6.43	92.46	1.24	32.19	4.49	21.04	6.73	26.54
Tiruchirapalli	52.35	0.91	1.24	5.72	92.13	1.59	27.94	3.87	22.56	13.10	23.62

CITY	Total	I	II	IV	O	III	V	VI	VII	VIII	IX
Salem	54.45	1.24	0.60	28.70	69.46	0.60	21.13	2.12	18.92	6.24	20.10
Tuticorin	54.13	0.56	0.23	0.63	98.58	7.21	29.73	2.84	19.93	19.37	19.43
Vellore	53.15	1.43	0.80	6.15	91.62	0.93	29.54	2.93	22.17	9.30	26.82
Thanjavur	49.12	2.95	3.25	5.92	87.88	1.87	17.12	4.86	19.10	10.35	34.50
Nagercoil	49.77	5.87	2.43	9.87	81.83	1.64	18.90	6.54	18.81	8.42	28.29
MAHARASHTRA											
Greater Bombay	61.72	0.10	000	1.09	98.81	1.43	41.09	2.62	18.64	11.73	23.24
Poona	48.33	1.08	0.60	2.31	96.01	1.11	23.36	4.19	16.03	10.92	38.21
Nagpur	50.52	1.61	0.85	12.74	84.80	2.14	25.34	4.74	16.01	14.41	21.93
Sholapur	23.31	1.23	0.53	17.42	80.82	0.70	40.42	2.01	14.71	7.01	15.76
Nasik	50.97	3.32	1.74	3.09	91.15	1.63	21.32	3.86	14.08	7.10	44.22
Kolhapur	46.56	6.17	2.76	4.42	86.66	1.11	27.86	2.87	17.43	7.65	29.67
Amaravati	48.96	4.13	3.73	3.47	88.67	1.54	16.74	3.42	21.12	11.42	34.30
Sangli	47.61	11.34	3.00	4.73	80.93	0.60	20.23	3.79	18.96	9.26	27.25
Malegaon	52.26	1.97	0.82	8.52	88.69	0.28	55.96	2.00	13.42	3.17	13.68
Ahmednagar	47.31	2.42	0.61	6.36	90.61	0.27	19.62	2.36	17.15	7.25	43.54
Akola	50.71	3.26	2.10	2.09	92.55	0.86	20.39	3.54	21.96	14.06	31.72
Thana	54.09	1.35	0.60	1.00	97.05	1.39	42.50	2.47	13.63	11.11	25.56

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
KARNATAKA											
Bangalore	52.34	4.42	1.00	3.10	91.48	1.10	32.34	5.31	13.43	5.63	33.30
Mysore	46.61	3.96	0.36	3.25	92.43	2.21	22.75	5.00	17.20	10.67	34.41
Hubli	48.20	4.54	2.67	6.40	86.39	0.90	23.23	4.82	16.96	11.73	28.40
Mangalore	49.90	1.87	0.30	3.36	94.47	2.65	29.60	4.11	16.23	12.26	29.41
Kolar gf	45.33	19.12	2.45	1.62	76.81	46.9	3.25	1.16	8.01	1.64	13.62
Belgaum	45.44	4.96	0.31	8.70	86.03	0.40	17.40	2.65	19.05	8.00	38.36
ORISSA											
Cuttack	56.20	0.90	0.21	8.96	89.93	1.35	15.50	3.02	13.87	12.43	43.76
RAJASTHAN											
Jaipur	48.86	0.35	0.16	6.34	93.15	0.90	19.36	6.80	17.64	9.67	38.62
Ajmer	44.91	0.61	0.15	2.32	96.92	0.76	10.62	5.01	17.25	32.74	30.40
Jodhpur	44.84	000	0.10	3.65	96.25	4.27	12.52	7.54	15.43	18.76	37.46
Bikaner	44.07	0.20	000	5.54	94.26	0.30	000	8.36	18.15	18.10	39.63
Kota	52.99	2.71	0.60	1.82	94.87	2.15	12.10	11.10	15.10	17.43	36.97
Udaipur	48.92	2.08	0.35	3.36	93.94	1.36	12.54	10.72	18.32	11.50	39.72
PUNJAB											
Amritsar	53.55	0.41	0.60	1.81	97.18	0.60	32.96	3.26	24.52	10.54	25.26
Jullundhur	51.47	0.80	0.53	2.54	96.12	0.50	22.34	3.07	17.13	8.57	44.40

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
Ludhiana	50.93	0.62	0.21	5.16	94.01	0.86	3.97	3.95	20.72	8.80	22.31
Patiala	48.39	2.03	0.40	3.09	94.48	1.75	7.95	7.60	18.53	7.42	44.40
UTTAR PRADESH											
Kanpur	54.29	2.50	0.60	3.42	93.48	0.60	35.16	2.54	18.32	8.26	28.36
Lucknow	52.22	1.54	0.22	2.76	95.50	0.61	21.42	3.76	17.86	12.54	39.27
Agra	47.70	1.01	0.30	7.39	91.30	6.65	24.26	3.42	20.35	9.87	32.76
Varanasi	51.44	1.43	0.21	27.06	71.30	0.50	12.10	2.61	20.54	9.21	26.05
Allahabad	49.85	1.42	0.76	4.08	93.74	1.26	19.87	3.30	16.97	13.76	40.86
Meerut	51.58	1.37	1.15	4.87	92.80	1.15	22.56	4.47	18.72	8.40	41.02
Bareilly	50.27	2.15	0.20	5.73	91.92	1.11	22.50	4.43	19.01	15.16	29.56
Moradabad	50.18	1.10	0.39	3.42	95.09	1.12	93.87	2.01	21.85	14.63	21.43
Saharanpur	51.51	1.40	0.46	3.41	94.73	1.10	28.09	2.35	22.36	14.54	26.97
Aligarh	47.36	2.09	0.60	5.50	91.81	5.56	26.23	2.92	20.82	6.21	34.63
Gorakhpur	50.53	1.53	0.51	8.97	88.99	1.00	18.60	2.16	15.31	23.10	28.34
Jhansi	44.46	0.80	0.30	5.43	93.47	0.90	14.54	3.86	13.13	22.07	37.9
Dehradun	51.26	0.61	0.60	0.86	97.93	2.54	14.46	1.77	17.34	8.15	53.63
Rampur	51.23	4.01	1.03	3.87	91.09	0.80	27.35	4.24	18.90	7.54	32.01
Mathura	50.61	1.03	0.65	3.04	95.28	1.02	14.28	3.96	20.93	8.53	46.42
Shahjahanpur	52.20	4.65	2.87	5.92	86.56	1.27	10.37	3.20	19.86	8.20	42.85
Mirzapur	54.09	2.76	0.54	13.87	82.83	0.80	18.54	3.75	21.05	8.88	29.63

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
W. BENGAL											
Calcutta	61.41	000	000	0.72	99.28	0.20	26.25	3.36	24.96	12.62	32.10
Asansol	56.00	0.40	0.32	0.40	98.88	0.70	39.54	2.34	17.85	16.48	21.85
Kharagpur	48.87	0.52	0.76	0.41	98.31	0.19	23.87	1.57	13.73	40.54	18.32
Burdwan	48.49	0.60	0.40	0.95	98.05	0.63	16.23	3.86	24.92	16.01	36.10
DELHI											

MALE PARTICIPATION RATES(1971)

	Total	I	II	Va	III	IV	Vb	VI	VII	VIII	IX	O
NDHRA PRADESH												
yderabad	47.85	0.91	1.11	1.79	0.60	0.27	21.50	4.54	22.31	14.40	32.51	96.19
ijaywada	51.26	1.62	1.80	1.11	0.59	0.35	20.82	6.01	26.54	23.72	17.20	95.47
untur	49.57	2.45	4.56	2.56	0.61	0.02	22.40	5.52	25.40	16.51	19.75	90.43
ishakhapatnam	47.96	.80	1.37	1.24	2.58	0.19	17.01	7.03	12.62	28.30	28.72	96.59
arangal	46.22	4.61	2.42	5.40	2.08	0.48	20.59	4.95	21.30	16.49	21.74	87.57
ajamundry	51.11	1.87	2.00	1.97	0.71	1.48	25.34	3.31	27.76	17.82	18.21	94.16
akinada	48.17	2.43	2.01	2.21	8.24	0.48	19.01	3.82	21.62	15.35	24.50	93.35
lluru	51.58	3.64	6.57	7.36	1.04	-	22.46	4.01	23.85	10.90	20.11	82.43
eelore	50.82	3.80	4.10	3.65	0.95	0.16	21.62	4.00	24.92	13.15	23.42	88.45
urnool	48.33	2.51	5.55	8.49	1.80	0.32	15.47	7.19	23.31	10.00	25.45	83.45
SSAM												
uwahati	52.11	0.80	0.48	1.10	0.98	0.03	13.45	3.95	22.80	23.61	32.60	97.62
IHAR												
atna	45.71	6.00	7.01	5.32	1.48	0.02	11.40	3.51	21.44	9.15	33.54	81.67
amshedpur	47.79	1,39	1.79	1.18	0.60	0.11	58.19	3.62	12.90	7.70	12.59	95.64
hanbad	56.25	1,58	1.24	1.69	0.73	51.06	10.15	1.45	12.76	10.31	9·00	95.49
aya	43.04	4.52	5.06	6.70	0.63	0.09	12.63	3.30	26.71	14.80	25.62	83.72

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
hagalpur	43.78	3.71	7.40	15.24		19.99	.05	14.20	1.80	20.43		
onghyr	38.12	6.42	8.64	6.10		1.11	2.21	20.15	9.85	29		
anchi	43.86	2.40	2.75	3.26	91.59	1.10	1.00	31.53	2.31	20.43	10.10	24.31
uzzafarpur	45.26	2.75	8.10	5.22	83.93	0.93	0.01	10.82	4.57	29.01	10.13	28.27
arbhanga	43.39	4.21	9.72	4.84	81.23	2.36	13.72	3.46	3.42	24.65	9.39	27.85
UJARAT												
hmedabad	48.40	0.20	0.02	1.39	98.39	0.63	0.56	46.63	2.90	20.52	7.58	19.01
adodara	47.38	1.55	1.14	1.26	96.05	0.54	1.28	35.97	3.46	18.06	10.32	26.53
urat	53.33	0.60	1.53	6.31	91.56	0.65	0.25	50.21	2.85	17.77	5.00	14.32
ajkot	45.17	1.42	0.40	1.16	97.02	1.56	0.10	31.06	3.00	23.12	9.75	28.20
havnagar	43. 65	0.75	0.72	1.09	97.46	0.92	0.39	30.49	2.26	23.09	15.54	25.06
amnagar	46.09	1.97	0.90	1.34	95.79	0.10	00	30.00	2.20	23.08	8.91	30.49
AMMU & KASHMIR												
rinagar	47.43	3.32	1.59	10.80	84.29	6.05	0.24	71.72	4.09	15.22	14.15	27.63
ammu	45.76	1.06	0.32	1.25	97.37	1.92	0.67	12.73	6.75	24.36	14.40	36.47

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
KERALA												
Cochin	45.01	0.50	1.49	1.39	96.68	2.00	0.01	21.4	5.0	20.40	18.49	27.01
Trivendrum	44.09	2.01	7.54	1.87	88.57	7.75	0.10	13.6	0.70	17.9	8.93	37.95
Calicut	42.35	1.53	3.29	1.41	93.77	57.4	0.10	21.62	2.89	26.63	13.80	23.13
Allepey	42.13	1.82	3.20	1.80	93.18	6.40	-	27.14	2.65	24.10	12.92	20.30
MADHYA PRADESH												
Indore	44.41	0.60	0.04	1.92	97.44	0.90	0.02	36.00	2.82	23.63	8.00	25.42
Jabalpur	46.65	1.80	2.01	6.75	89.44	0.81	0.09	27.18	2.25	13.84	12.15	32.48
Gwalior	44.94	3.09	1.54	1.63	93.77	2.10	0.30	31.15	4.53	14.42	7.13	32.63
Bhopal	47.99	1.11	0.65	2.02	96.22	0.95	0.30	27.43	3.90	15.63	8.92	38.85
Ujjain	42.69	3.64	1.73	2.89	91.35	2.65	0.10	16.60	4.52	24.58	16.93	25.98
Raipur	47.19	4.03	2.10	2.13	94.26	1.64	0.05	49.1	4.46	14.41	8.50	15.82
Durg	50.69	1.51	2.10	2.13	94.26	1.65	0.05	49.1	4.46	14.41	9.50	15.82
Sagar	46.73	4.82	1.29	17.6	76.29	2.13	0.02	13.3	3.82	16.85	7.53	32.53
TAMIL NADU												
Madras	49.17	0.84	1.43	1.75	95.98	1.4	0.39	29.35	4.58	22.75	18.05	19.62
Madurai	48.16	2.22	2.75	5.13	89.93	0.20	00	29.82	2.93	27.36	9.04	19.53
Coimbatore	52.27	2.74	6.13	4.32	86.81	0.45	00	37.95	3.10	19.84	7.71	17.10

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
Tiruchirapalli	48.40	2.23	2.90	4.32	90.55	0.60	00	28.10	3.32	26.4	14.9	16.5
Salem	53.36	3.75	3.35	20.71	72.19	2.30	0.20	24.93	3.35	21.3	10.3	11.7
Tuticorin	49.51	2.49	14.62	1.48	81.41	5.12	00	29.01	3.81	23.3	17.3	15.1
Vellore	49.97	2.22	1.45	3.75	92.58	-	-	27.90	3.04	26.9	12.6	21.6
Thanjoure	45.21	3.20	3.93	4.20	88.67	0.61	-	16.01	3.20	27.42	11.5	29.5
Nagarcoil	46.32	5.01	6.37	4.41	84.21	0.13	-	20.83	5.01	22.91	9.80	24.6
MAHARASHTRA												
Bombay	57.66	0.10	1.02	1.25	97.63	0.90	00	42.61	3.09	23.17	11.32	17.30
Poona	48.74	1.11	0.65	1.36	96.88	1.23	0.30	33.05	4.01	16.14	.15	32.81
Nagpur	55.96	1.53	1.14	9.21	88.12	1.75	1.10	23.64	4.63	20.93	19.06	20.35
Sholapur	45.12	1.50	6.62	6.84	85.04	0.91	0.10	42.52	2.52	20.62	9.12	15.01
Nasik	44.81	3.50	3.95	2.95	89.60	1.57	0.21	26.36	2.90	17.95	10.46	30.27
Kolhapur	45.32	4.70	2.87	4.92	87.51	0.90	0.75	25.51	4.87	22.86	10.21	22.21
Amravati	44.25	3.85	4.21	1.93	90.01	3.01	0.36	15.07	3.85	25.24	12.20	29.47
Sangli	46.70	8.23	6.65	3.10	82.02	0.65	-	24.01	4.07	22.06	11.65	19.42
Malegaon	45.16	1.87	2.43	2.01	93.69	0.81	00	59.52	1.52	17.03	4.21	10.10
Ahmednagar	49.13	1.92	0.89	4.65	92.54	0.92	00	17.61	2.22	19.75	8.23	43.75

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
Akola	45.26	3.27	4.25	1.10	91.38	1.97	00	21.23	4.27	25.20	15.31	23.21
Thana	54.48	0.41	0.30	1.32	97.97	0.90	00	56.61	2.43	13.65	7.25	16.80
KARNATAK												
Bangalore	49.34	0.70	0.60	3.40	95.30	0.61	0.06	32.30	2.30	4.52	19.40	12.82
Mysore	44.56	38.9	1.01	4.75	55.34	0.60	00	21.0	5.81	21.75	16.81	23.97
Hubli	46.30	6.10	6.40	1.02	86.48	0.85	0.01	18.2	4.62	20.93	19.03	20.31
Mangalore	48.37	1.32	0.61	6.93	91.14	3.21	0.30	27.8	5.61	24.20	14.42	16.74
Kolar	37.88	1.11	0.92	1.10	96.87	0.17	51.62	15.5	1.90	13.21	3.85	10.52
Belgaon	47.01	5.56	1.93	6.92	8559	0.92	0.12	25.0	3.15	22.57	10.10	21.13
ORISSA												
Cuttack	50.04	0.70	1.42	4.50	93.38	2.32	000	0.10	2.71	26.32	12.97	33.10
PUNJAB												
Amritsar	51.87	0.81	1.51	1.16	96.52	0.40	-	32.01	2.32	30.31	9.92	21.35
Jalandhar	48.46	1.63	3.16	1.42	93.79	0.35	-	32.72	4.69	24.80	10.13	21.12
Ludhiana	53.10	0.72	1.20	2.49	95.59	0.33	-	44.73	3.05	21.75	7.40	18.01
Patiala	47.72	2.34	1.49	2.56	93.61	0.70	-	16.25	3.63	24.60	7.82	40.60

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
RAJASTHAN												
Jaipur	47.15	3.10	0.81	7.10	88.99	0.40	0.17	20.21	3.82	20.16	8.90	35.16
Ajmer	42.12	0.75	0.40	3.42	95.43	0.51	0.26	12.27	3.17	20.43	28.12	30.63
Jodhpur	42.89	1.92	1.01	4.53	92.54	0.50	82.81	15.64	5.01	18.42	16.53	33.54
Bikaner	41.87	2.26	2.95	5.15	89.64	0.50	0.10	10.61	5.27	18.86	15.40	38.72
Kota	50.48	2.84	1.23	2.50	93.43	0.71	0.47	26.10	5.54	16.54	16.53	27.26
Udaipur	45.96	2.82	1.76	3.16	92.26	0.22	8.81	16.95	3.26	21.42	10.92	38.81
WEST BENGAL												
Calcutta	52.36	0.25	0.71	1.82	97.22	0.52	000	38.46	2.26	23.27	11.90	20.73
Asansol	45.20	0.89	2.23	3.64	93.23	0.90	1.53	37.82	1.75	18.42	17.75	14.35
Burdwan	44.42	3.42	5.61	5.37	85.60	1.57	00	1.10	3.24	21.83	16.93	30.40
Kharagpur	43.49	1.47	4.49	1.01	93.03	0.22	00	14.27	0.80	9.75	52.30	15.62
DELHI	51.22	0.41	0.30	2.21	97.08	0.80	-	22.80	5.31	22.50	10.01	35.27
UTTAR PRADESH												
Kanpur	50.29	2.01	1.27	4.10	92.62	0.41	00	31.09	1.20	21.36	8.83	29.40
Lakhnau	47.93	1.75	1.11	4.41	92.73	0.60	00	16.95	1.63	19.52	14.53	39.42
Agra	45.49	0.90	1.01	7.72	90.37	0.73	0.10	24.92	2.37	22.46	13.01	25.26

City	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
Varanasi	47.23	2.03	1.43	23.61	72.63	0.52	-	13.75	1.54	22.60	10.57	23.63
Allahbad	46.46	1.62	2.45	5.75	90.18	1.01	-	15.35	1.73	20.47	9.70	41.87
Mairath	49.69	1.21	1.57	5.23	91.93	1.53	0.10	19.72	2.36	18.72	9.83	39.46
Barielley	47.45	2.43	1.36	5.20	91.01	0.76	00	21.26	3.74	17.50	1.75	29.73
Moradabad	47.72	3.97	1.62	6.32	88.09	0.52	00	25.93	1.63	18.21	17.63	23.94
Saharanpur	48.26	1.41	1.47	4.50	92.62	0.91	00	27.36	2.64	23.19	17.42	20.92
Aligarh	45.41	2.10	2.63	6.51	88.76	0.67	0.11	27.34	2.86	19.40	11.50	25.53
Gorakhpur	44.95	1.65	2.40	6.20	89.75	0.43	00	11.82	1.32	18.87	27.71	29.21
Jhansi	42.37	2.50	1.09	5.19	91.22	0.42	0.26	10.50	1.27	1.53	33.06	29.90
Dehradoon	49.24	0.87	1.08	2.01	96.04	1.13	0.23	13.46	2.74	17.56	8.43	52.27
Rampur	50.26	4.73	1.90	3.96	89.41	1.42	00	29.12	4.87	16.62	14.82	22.51
Mathura	46.58	1.79	1.25	4.32	92.64	0.63	-	16.60	3.10	22.10	13.19	36.84
Shahjahanpur	47.78	6.33	6.52	4.64	82.50	0.31	00	22.50	2.01	19.17	12.43	28.40
Mirzapur	48.76	3.84	5.30	5.71	85.15	0.60	00	22.53	2.15	21.00	7.50	27.31

WORK FORCE DISTRIBUTION 1981

(MALES) Participation rates

CITY	TOTAL	C	AL	HH	O
Andhra Pradesh					
Hyderabad	46.37	14.02	10.01	4.34	93.12
Vijaywada	51.37	1.21	3.01	3.04	92.05
Guntur	48.74	2.10	5.61	4.02	88.10
Visakhapatnam	45.03	.31	.91	5.50	93.06
Warangal	44.36	3.04	3.05	6.21	86.52
Rayamundry	52.79	2.10	3.01	4.24	91.05
Kakinada	49.78	1.40	2.62	2.54	93.10
Elluru	51.66	3.41	5.21	6.32	88.42
Nellore	50.23	4.10	6.94	4.14	86.21
Kurnool	46.12	.45	9.52	10.83	77.91
ASSAM					
BIHAR					
Patna	43.28	4.54	6.02	7.13	81.31
Jamshedpur	40.07	11.01	1.74	4.21	93.45
Dhanbad	47.11	1.00	.74	3.92	95.16
Gaya	41.78	4.12	3.91	9.80	81.22
Monghyr	36.54	4.70	7.78	3.51	83.92

CITY	TOTAL	C	AL	HH	O
Bhagalpur	41.16	4.35	6.60	18.12	70.80
Ranchi	42.79	3.91	3.18	4.54	88.36
Muzaffarpur	41.54	2.10	2.95	4.50	90.38
Darbhanga	39.90	3.14	3.62	5.40	87.81
GUJARAT					
Ahmedabad	47.91	.58	.56	2.82	96.10
Vadodara	49.39	1.10	1.31	1.53	95.82
Surat	57.25	.64	.90	4.90	93.47
Raykot	48.57	.83	.52	2.21	96.37
Bhav Ngr.	48.14	.63	.34	2.38	96.71
Jam Nar.	50.75	1.72	1.19	1.63	95.40
KERALA					
Cochin	42.14	1.80	1.61	1.82	95.41
Trivandrum	41.05	8.12	6.90	2.74	88.90
Allepey	36.68	.71	2.60	3.32	93.40
Calicut	38.63	.84	4.61	1.45	94.05

CITY	TOTAL	C	AL	HH	O
MADHYA PRADESH					
Indore	48.07	4.11	.72	2.34	85.50
Jabalpur	45.58	1.51	2.60	7.98	85.52
Gurubor	45.36	3.21	2.64	6.30	84.15
Bhopal	47.10	2.10	2.05	5.52	90.21
Ujjain	45.68	2.68	2.01	43.32	91.00
Raipur	47.41	2.36	1.71	2.88	92.90
Durg	48.28	1.15	1.62	3.21	93.74
Sagar	45.72	4.45	1.36	18.52	75.76
TAMIL NADU					
Madras	46.80	1.16	1.64	2.91	94.20
Madurai	49.95	1.75	2.43	5.51	90.10
Coimbatore	54.14	2.28	5.09	4.73	87.83
Tiruchirapalli	48.16	2.89	3.10	4.53	89.51
Salem	56.69	2.46	2.81	18.15	76.54
Tuticorin	51.52	2.31	1.46	9.00	95.21
Vellore	50.62	1.30	1.65	10.32	86.64
Thanjavur	47.08	3.05	6.21	5.74	84.85
Nagercoil	47.76	3.21	2.74	4.42	89.50

CITY	TOTAL	C	AL	HH	O
MAHARASHTRA					
Bombay	55.81	.15	.10	3.21	96.45
Poona	48.76	.95	.61	3.54	94.82
Nagpur	43.11	1.21	.95	7.58	90.20
Ulhas Nagar	66.20	.47	.32	3.61	95.51
Sholapur	46.01	1.21	.65	4.62	93.58
Nasik	50.12	2.54	2.51	2.77	91.70
Thane	52.49	2.10	2.15	4.40	95.15
Kolhapur	47.00	3.71	2.74	4.15	89.42
Sangli	48.23	6.40	5.59	3.84	83.40
Amaravati	43.59	3.09	3.21	2.06	91.54
Malegaon	54.10	1.52	1.70	1.89	95.31
Akola	44.73	2.46	4.59	1.30	91.60
Ahmed Ngr.	49.30	1.60	.59	4.82	92.91
KARNATAKA					
Bangalore	48.89	.95	.82	2.61	95.50
Mysore	42.93	10.91	1.11	4.64	83.27
Hubli	45.84	6.19	5.43	3.30	85.19
Mangalore	49.90	2.18	1.36	4.67	91.82
Kolar gold field	35.84	.80	.75	2.71	95.51
Belgeum	47.64	6.60	1.09	6.42	89.77

CITY	TOTAL	C	AL	HH	O
ORISSA					
Cuttack	50.24	.88	2.04	3.71	93.42
PUNJAB					
Amritsar	51.27	2.14	2.72	3.65	91.49
Jullundhur	52.77	1.96	2.10	3.97	92.20
Ludhiana	79.37	3.15	2.64	9.62	84.28
Patiala	34.17	3.18	1.49	6.70	88.60
Dehradun	50.39	1.20	1.35	3.82	93.56
Jhansi	42.60	2.50	1.00	7.61	88.72
Rampur	50.84	4.54	1.72	8.23	85.40
Mathura	42.35	1.09	0.71	4.28	93.90
Shahjahanpur	47.57	5.18	5.52	6.41	82.80
Mirzapur	47.55	2.00	2.87	18.80	76.24
WEST BENGAL					
Calcutta	46.62	2.01	6.00	29.42	61.53
Asansol	40.27	1.60	1.24	56.51	91.42
Kharagpur	58.58	1.82	3.01	1.85	93.27
Burdwan	27.79	2.93	6.91	7.71	82.31

CITY	TOTAL	C	AL	HH	O
RAJASTHAN					
Jaipur	46.96	1.93	0.50	6.73	90.82
Jodhpur	44.94	1.62	0.81	4.82	92.61
Ajmer	44.26	1.96	1.50	1.53	82.48
Kota	47.19	2.82	1.43	5.42	91.10
Bikaner	42.89	2.40	1.97	7.96	87.26
Udaipur	47.45		0.78	6.10	90.60
UTTAR PRADESH					
Kanpur	45.81	0.70	0.91	10.54	87.81
Lucknow	46.90	1.73	1.64	20.72	83.62
Varanasi	46.80	2.04	1.32	28.63	67.81
Agra	47.86	2.82	4.10	20.51	72.41
Allahabad	40.32	2.16	3.85	13.86	84.70
Meerut	49.51	1.62	2.30	9.91	86.01
Bareilly	48.49	2.00	1.00	5.73	91.12
Muradabad	50.07	2.51	0.80	8.00	88.80
Aligarh	44.82	2.30	1.85	7.52	88.20
Gorakhpur	59.17	1.32	0.81	5.36	92.43
Saharanpur	48.42				

1961 FEMALE PARTICIPATION RATES

CITY	TOTAL	I	II	IV	0	III	V	VI	VII	VIII	IX
ANDHRA PRADESH											
Hyderabad	11.06	0.87	2.13	11.82	85.18	1.39	7.92	3.33	12.99	0.95	58.62
Vijayawada	10.15	0.89	4.36	12.97	81.78	2.79	11.17	4.53	16.92	2.46	43.87
Guntur	21.91	1.32	1.81	5.35	91.52	0.56	61.06	0.37	5.43	0.32	23.74
Visakhapatnam	8.80	1.31	0.48	3.25	94.96	3.08	2.29	4.40	25.36	2.64	56.76
Warangal	19.84	7.89	8.75	26.48	56.88	1.20	16.00	2.73	10.18	0.75	25.98
Rajamundry	11.62	0.85	0.62	13.49	85.04	0.42	21.46	2.46	17.72	4.44	38.47
Kakinada	10.53	1.06	3.13	9.07	86.74	1.77	7.72	3.46	16.99	1.31	55.90
Elluru	17.41	2.81	12.58	25.85	58.76	0.29	8.16	1.61	10.10	1.79	36.76
Nellore	12.36	2.62	9.06	19.51	68.78	0.34	4.56	1.34	10.93	0.37	51.21
Kurnool	18.75	2.63	14.01	32.44	50.92	0.60	7.46	4.46	8.30	0.52	29.54
ASSAM											
Gauhati	6.77	0.22	-	30.37	69.41	1.67	3.09	0.04	5.40	7.01	52.22
BIHAR											
Patna	8.28	13.59	8.00	9.42	68.99	0.95	3.01	2.14	8.39	0.92	53.54
Jamshedpur	8.20	1.83	0.22	3.60	94.35	1.20	26.50	13.21	5.01	2.18	46.21
Gaya	10.23	6.37	4.58	29.14	59.91	1.28	7.15	0.69	6.92	0.27	43.57
Bhagalpur	9.74	1.88	0.36	52.61	45.51	0.95	4.20	0.34	6.88	1.26	31.47
Ranchi	9.02	16.62	3.84	6.97	72.57	1.45	5.69	5.34	5.09	1.67	53.69

CITY	TOTAL	I	II	IV	0	III	V	VI	VII	VII	IX
Muzaffarpur	5.96	2.28	0.52	9.73	87.47	1.38	5.32	0.33	11.51	0.33	72.55
Darbhanga	10.38	4.80	0.84	31.53	62.83	0.94	5.04	0.92	16.84	0.20	33.85
Monghyr	6.67	8.69	2.48	18.02	70.81	0.67	6.91	0.92	14.40	0.60	47.26
Dhanbad	13.07	24.95	8.48	32.62	33.95	0.28	6.87	0.28	6.83	0.40	19.25
JAMMU & KASHMIR											
Srinagar	3.04	12.42	1.36	25.57	60.65	1.83	7.65	0.14	3.57	17.37	30.02
Jammu	3.29	-	-	4.97	95.03	1.14	2.35	0.33	1.41	0.06	89.71
GUJARAT											
Ahmedabad	5.40	0.29	0.46	13.57	85.68	0.57	4.14	5.77	8.57	3.65	41.64
Baroda	6.06	0.78	0.87	10.25	88.10	1.40	7.02	3.05	12.23	1.22	63.14
Surat	10.34	0.14	0.14	32.75	66.97	0.95	19.50	2.56	7.25	0.40	22.17
Rajkot	6.70	6.64	1.18	14.60	77.58	0.51	5.78	4.87	3.69	0.79	61.91
Bhavnagar	5.63	0.96	0.27	12.90	85.87	0.50	13.51	2.58	5.29	1.99	57.74
Jamnagar	6.59	5.72	2.47	13.74	78.07	1.52	14.79	2.36	4.25	0.60	54.51
KERALA											
Trivandrum	11.89	1.38	1.07	3.49	94.09	0.10	4.84	4.84	0.41	1.47	76.89
Calicut	8.70	0.88	0.43	12.75	85.94	0.35	17.77	0.37	1.40	1.67	64.33
Alleppey	12.21	0.27	7.80	28.55	63.38	0.95	17.64	0.73	4.99	2.29	36.74
Quillon	11.22	0.66	0.52	7.57	91.25	1.18	34.58	0.16	2.86	0.52	52.01

CITY	Total	I	II	IV	0	III	V	VI	VII	VIII	IX
MADHYA PRADESH											
Indore	6.55	1.82	0.62	14.41	83.51	0.96	16.29	5.36	9.09	0.76	50.65
Gwlalior	5.63	7.75	3.04	14.97	74.54	2.20	10.25	3.04	9.90	0.88	47.92
Jabalpur	11.69	7.59	3.75	27.03	61.63	2.43	8.14	7.04	8.14	0.99	34.87
Bhopal	9.16	1.89	1.43	14.68	78.38	2.71	8.43	21.51	5.33	0.83	43.15
Ujjain	8.07	5.51	3.11	14.19	77.19	1.14	16.98	4.66	7.17	1.78	45.42
Raipur	16.73	13.05	1.74	11.85	73.36	1.94	10.24	4.99	11.86	2.43	41.85
Durg	14.01	8.79	3.04	1.92	86.25	7.24	7.01	42.15	6.91	2.88	20.16
Sagal	23.30	4.01	0.78	13.41	81.80	1.48	1.63	1.23	3.90	0.20	12.32
TAMIL NADU											
Madras	6.33	00	.02	7.74	92.24	0.49	6.65	3.27	10.77	3.21	67.11
Madurai	9.92	0.24	0.71	26.99	72.06	0.41	21.98	3.31	10.98	1.07	34.26
Coimbatore	11.17	0.21	3.10	11.32	85.37	1.01	19.05	9.02	9.94	1.25	45.05
Tiruchirapalli	8.15	0.85	5.65	16.67	76.83	1.79	11.60	5.03	10.23	2.22	45.91
Salem	19.58	0.77	1.10	58.75	39.37	0.57	8.76	1.99	7.89	0.13	20.16
Tuticorin	10.15	0.04	0.01	5.29	94.66	0.91	15.35	3.35	10.61	1.88	37.95
Vellore	9.01	0.19	1.49	32.56	65.76	0.82	5.55	1.63	8.01	2.26	47.45
Thanjavur	10.94	2.57	12.23	22.36	62.84	0.86	5.93	1.76	8.79	1.44	44.02
Nagercoil	14.80	2.42	5.51	52.62	39.45	0.28	7.12	0.14	4.21	0.02	27.65

1971 Female participation Rates

CITY	Total	I	II	Va	0	III	IV	Vb	VI	VII	VIII	IX
ANDHRA PRADESH												
Hyderabad	7.14	1.10	6.99	1.10	90.81	0.05	1.10	9.52	4.70	12.47	6.33	52.44
Visakhapatnam	5.49	0.33	3.08	0.15	96.44	0.55	0.15	3.19	11.14	20.11	4.86	54.74
Vijaywada	6.11	0.61	7.73	0.98	90.68	0.66	0.98	10.64	8.79	18.25	5.92	43.37
Guntur	15.60	0.46	6.39	000	93.15	0.34	000	60.31	2.01	7.44	0.73	20.06
Warangal	8.99	4.04	11.66	0.86	83.44	1.11	0.86	27.44	2.53	7.96	8.78	20.95
Rajamundry	9.47	0.73	6.63	7.48	85.16	0.19	7.48	19.21	4.95	16.98	2.79	36.41
Kakinada	7.27	1.12	4.27	1.01	93.60	0.80	1.01	9.56	6.90	17.29	2.67	53.28
Kurnool	14.39	2.45	19.14	0.81	77.60	0.42	0.81	10.09	3.55	11.39	0.30	23.45
Nellore	7.92	2.84	11.97	00	85.19	0.94	00	8.33	2.82	18.78	0.87	46.66
Elluru	10.42	1.26	23.69	-	75.09	0.52	-	15.74	3.99	11.97	0.93	30.50
ASSAM												
Gauhati	4.42	0.16	0.11	7.19	92.54	0.36	000	5.17	1.62	5.37	13.91	66.54
BIHAR												
Patna	4.04	4.06	23.83	2.98	69.13	0.27	0.04	1.77	0.65	7.40	1.37	57.59
Jamshedpur	5.04	0.90	7.28	1.63	90.19	0.65	0.82	33.28	9.62	5.86	4.52	35.39

CITY	TOTAL	I	II	Va	0
Gaya	-	1.80	8.09	29.04	61.06
Bhagalpur	-	1.08	3.82	7.17	81.90
Muzaffarpur	-	1.17	3.28	9.78	85.74
Darbhanga	-	2.05	12.45	5.02	80.46
Munger	-				
GUJARAT					
Ahmedabad	3.97	2.30	2.80	8.46	86.42
Surat	8.04	1.05	6.86	12.88	79.19
Vadodara	4.17	0.63	4.93	3.64	90.78
Rajkot	3.87	1.69	2.29	9.36	86.63
Jamnagar	5.13	3.38	8.18	5.51	82.91
Bhavnagar	3.73	0.47	1.89	7.86	89.75
KERALA					
Cochin	9.27	0.59	4.94	2.43	92.02
Calicut	6.94	0.22	3.71	3.44	92.62
Trivandrum	11.39	0.26	4.74	3.35	91.63
Alleppey	9.04	0.23	17.37	17.37	72.29
MAHARASHTRA					
Greater Bombay	8.31	0.30	0.27	4.55	94.86
Pune	6.49	1.70	4.22	7.46	86.60

CITY	TOTAL	I	II	Va	O
Nagpur	6.97	1.66	4.59	16.58	72.28
Ulhasnagar	2.79	0.67	0.98	6.29	44.43
Solapur	8.23	0.30	1.70	19.06	79.55
Nasik	8.17	4.38	13.21	7.68	74.74
Thane	7.03	0.47	0.95	6.98	91.44
Kanpur		2.67	12.68	10.45	74.78
Sangli	5.83	7.27	23.27	9.78	59.66
Malegaon	10.37	0.55	10.83	3.73	84.87
Akola	6.44	1.21	19.68	3.14	75.95
Ahmednagar	8.99	1.29	1.93	14.66	82.09
KARNATAKA					
Bangalore	6.53	0.57	1.61	6.10	91.70
Hubli	7.71	5.33	22.84	9.81	62.03
Mysore	6.97	0.98	1.88	12.20	85.07
Mangalore	22.97	2.10	2.49	41.08	55.02
Belgaum	5.92	8.18	7.91	9.47	74.43
Kolargold fields	3.74	1.44	2.57	9.09	86.87
ORISSA					
Cuttack	4.76	0.31	6.85	5.84	86.98
PUNJAB					
Ludhiana	1.87	4.66	2.91	13.76	78.65

CITY	TOTAL	I	II	Va	0
Amritsar	1.82	1.30	6.41	7.72	84.61
Jullundhur	3.02	0.44	1.52	3.15	96.13
Patiala	3.23	6.97	0.79	7.25	84.97
RAJASTHAN					
Jaipur	4.67	3.86	1.31	9.59	85.22
Ajmer	3.24	13.28	5.11	14.31	67.28
Jodhpur	3.34	1.72	1.24	10.87	86.15
Kota	4.89	1.19	3.59	7.10	88.33
Bikaner	3.54	4.83	0.69	9.64	84.82
Udaipur	4.98	3.22	3.39	7.85	85.52
UTTAR PRADESH					
Kanpur	1.82	13.42	1.95	8.35	76.26
Lucknow	2.23	3.32	1.33	12.25	83.10
Varanasi	2.79	1.46	2.47	32.80	63.25
Agra	18.97	26.02	6.85	9.98	57.13
Allahabad	2.97	4.98	6.44	8.89	79.94
Meerut	3.59	0.99	4.33	11.98	82.68
Bareilly	1.46	1.82	1.36	8.31	88.49
Moradabad	1.51	0.50	0.50	7.16	91.82
Aligarh	2.00	1.23	3.13	18.38	77.25

CITY	TOTAL	I	I	Va	0
Gorakhpur	2.07	2.50	3.92	27.42	66.14
Saharanpur	1.48	0.92	0.21	7.42	91.07
Dehradun	3.89	1.24	1.52	5.40	91.82
Jhansi	4.02	3.95	2.27	26.81	66.95
Shanjahanpur	1.69	1.98	2.49	15.28	80.23
Rampur	1.56	0.99	2.03	22.54	74.43
Mathura	2.43	0.81	2.19	8.72	88.25
Mirzapur	4.41	4.23	7.23	12.43	75.03
WEST BENGAL					
Calcutta	3.91	1.01	1.23	4.90	92.79
Asansol	1.02	10.37	3.59	26.77	59.53
Kharagpur	1.92	7.19	8.11	2.78	76.39
Burdwan	3.41	3.00	13.44	12.85	59.60
Delhi	4.76	0.262	0.44	3.64	95.65

PARTICIPATION RATES (1981)

FEMALE

CITY	TOTAL	I	II	Va	0
ANDHRA PRADESH					
Hyderabad		31.39	5.94	0.07	80.84
Visakhapatnam		0.24	4.24	8.68	89.38
Vijayawada		0.99	12.61	6.96	79.42
Guntur		1.19	22.37	6.75	69.67
Warangal		2.66	12.37	22.93	62.36
Rajamundry		0.41	9.99	7.52	65.67
Nellore		1.92	22.10	10.29	65.63
Kakinada		0.52	4.74	4.84	89.87
Kurnool		1.72	19.03	29.97	49.26
Elluru		1.17	13.05	10.62	75.14
Assam					
Gauhati					
BIHAR					
Patna		2.04	21.11	8.46	68.75
Dhanbad		1.73	0.99	2.44	94.81
Jamshedpur		1.08	5.75	8.35	84.82
Ranchi		3.39	7.55	3.87	85.17

CITY	TOTAL	I	II	Va	0
Gaya		1.80	8.09	29.04	61.06
Bhagalpur		1.08	3.82	7.17	81.90
Muzaffarpur		1.17	3.28	9.78	85.74
Darbhanga		2.05	12.45	5.02	80.46
Munger					
GUJARAT					
Ahmedabad		2.30	2.80	8.46	86.42
Surat		1.05	6.86	12.88	79.19
Vadodara		0.63	4.93	3.64	90.78
Rajkot		1.69	2.29	9.36	86.63
Jamnagar		3.38	8.18	5.51	82.91
Bhavnagar		0.47	1.89	7.86	89.75
KERALA					
Cochin		0.59	4.94	2.43	92.02
Calicut		0.22	3.71	3.44	92.62
Trivandrum		0.26	4.74	3.35	91.63
Alleppey		0.23	17.37	17.37	72.29
MAHARASHTRA					
Greater Bombay		0.30	0.27	4.55	94.86
Pune		1.70	4.22	7.46	86.60

CITY	TOTAL	I	II	Va	0
Nagpur		1.66	4.59	16.58	72.28
Ulhasnagar		0.67	0.98	6.29	44.43
Solapur		0.30	1.70	19.06	79.55
Nasik		4.38	13.21	7.68	74.74
Thane		0.47	0.95	6.98	91.44
Kanpur		2.67	12.68	10.45	74.78
Sangli		7.27	23.27	9.78	59.66
Malegaon		0.55	10.83	3.73	84.87
Akola		1.21	19.68	3.14	75.95
Ahmednagar		1.29	1.93	14.66	82.09
KARNATAKA					
Bangalore		0.57	1.61	6.10	91.70
Hubli		5.33	22.84	9.81	62.03
Mysore		0.98	1.88	12.20	85.07
Mangalore		2.10	2.49	41.08	55.02
Belgaum		8.18	7.91	9.47	74.43
Kolargold fields		1.44	2.57	9.09	86.87
ORISSA					
Cuttack		0.31	6.85	5.84	86.98
PUNJAB					
Ludhiana		4.66	2.91	13.76	78.65

CITY	TOTAL	I	II	Va	0
Amritsar		1.30	6.41	7.72	84.61
Jullundhur		0.44	1.52	3.15	96.13
Patiala		6.97	0.79	7.25	84.97
RAJASTHAN					
Jaipur		3.86	1.31	9.59	85.22
Ajmer		13.28	5.11	14.31	67.28
Jodhpur		1.72	1.24	10.87	86.15
Kota		1.19	3.59	7.10	88.33
Bikaner		4.83	0.69	9.64	84.82
Udaipur		3.22	3.39	7.85	85.52
UTTAR PRADESH					
Kanpur		13.42	1.95	8.35	76.26
Lucknow		3.32	1.33	12.25	83.10
Varanasi		1.46	2.47	32.80	63.25
Agra		26.02	6.85	9.98	57.13
Allahabad		4.98	6.44	8.89	79.94
Meerut		0.99	4.33	11.98	82.68
Bareilly		1.82	1.36	8.31	88.49
Moradabad		0.50	0.50	7.16	91.82
Aligarh		1.23	3.13	18.38	77.25

CITY	TOTAL	I	I	Va	O
Gorakhpur		2.50	3.92	27.42	66.14
Saharanpur		0.92	0.21	7.42	91.07
Dehradun		1.24	1.52	5.40	91.82
Jhansi		3.95	2.27	26.81	66.95
Shanjahanpur		1.98	2.49	15.28	80.23
Rampur		0.99	2.03	22.54	74.43
Mathura		0.81	2.19	8.72	88.25
Mirzapur		4.23	7.23	12.43	75.03
WEST BENGAL					
Calcutta		1.01	1.23	4.90	92.79
Asansol		10.37	3.59	26.77	59.53
Kharagpur		7.19	8.11	2.78	76.39
Burdwan		3.00	13.44	12.85	59.60
Delhi		0.262	0.44	3.64	95.65

CHAPTER VI

CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Since the inception of the planned development in the country attention has been paid by the policy makers to the reduction of regional disparities. To some extent these efforts have succeeded because most of the inter state studies report a decrease in inequality over the last three decades. However, the regional imbalances within the states have increased. The relatively underdeveloped states are rapidly catching up with their more developed counterparts, but this growth is taking place alongwith increases in Inter district in equality.

6.2 In almost all the states in spite of several incentives and development packages the developed districts especially the regions around class I cities have grown rapidly, while the rest of the state has remained in a stage of relative stagnation. To some extent this has been brought about the lack of coordination between central and state government policies. While the central government specifically identifies backward areas for the purpose of granting special incentives, most of the state governments hold out special concessions to any new industry especially in the small scale sector irrespective of their location. Developed areas will always be preferred by the entrepreneurs especially when a new unit is being set up. These will not be deprived of many of the concessions just because they are located in an urban area owing to the faulty implementation of the programmes. Perhaps the main drawback in the government policies of development and dispersal has been the total lack of attention to the development of a strong infrastructure capable of supporting a diversified industrial structure, in the backward areas. Instead the government has choosen to subsidise

financially the various units locating there, thus increasing the problems of low capacity utilization, obsolete technology and industrial sickness.

6.3 In order to increase the shares of backward areas in the licensed capacity licenses have been issued indiscriminately in many cases. As a result, after the stipulated period when the government support is with drawn, the whole high cost, inefficient structure created in the backward areas tends to collapse.

6.4 The public sector units have been promoted as the main catalyst of development in the underdeveloped regions. To achieve this aim of dispersed industrial development, resource based public sector units in the core sector were set up in the backward areas. However, the public sector pricing policy effectively ensured that the backward areas do not enjoy their least cost advantage and the resultant resource based industrial growth. This was because the inputs produced in these areas were distributed to developed industrial centres all over the country at uniform prices. Once the units in urban areas could get these essential inputs at no greater cost, there was absolutely no need for them to leave the centres of industrial growth that in most cases happened to be the class I cities. By the time the government realized this and started introducing price decontrol in the case of important public sector commodities it was too late. The cost structures and the technological scenario had changed vastly over the last thirty years. The introduction of a whole new range of mini plants has ensured that urban consumption centres need no longer depend on the backward areas

for obtaining the essential inputs and can design their own units according to their specific demand patterns. Thus the remaining industries in the backward areas will suffer a sudden a heavy slump in demand due to the setting up of mini plans. Thus the poor timing of the government policy changes have done more harm than good to the objective of balanced regional development.

6.5 In the national scene of industrial development the class I cities are emerging as the engines of economic growth. There is a strange similarity in the demographic characteristics and patterns of class I cities all over the country. It is in fact these cities that have benefitted indirectly from the various schemes aimed at developing the backward areas. In many cases regions within commutable distance of the class I cities have been identified as backward districts. Thus we have Gurgaon, Dharuhera belt around Delhi, Hosur town near Bangalore, Uppal-Sannat Nagar belt around Hyderabad to name a few. Thus the large cities have kept on expanding industrially and geographically. After some time the cities and towns in the periphery become parts of the urban agglomeration.

6.6 There is an increased complementarity between organized and unorganized sectors of the economy. Prior to 1961, the household based industrial activities grew at a fast rate at places with low level of non-household industrial base. However this pattern has changed very fast in the last decade. Small scale manufacturing units and the large number of household based activities have been rendered

economically non viable in smaller towns and rural areas. These have emerged in a different form, as, part of the unorganized sector in the large cities.

Therefore we can conclude that the various government policies ostensibly aimed at reducing the regional disparities in the industrial structure has instead in many cases only served to accentuate them. It cannot be denied that the developed areas especially the class I cities are growing so fast at the expense of the less developed areas.

APPENDIX I

CONSUMER STATUS GROUPING

Based on their priority rating, consumers of iron and steel are classified into four status group viz., Status 'A', 'B', 'C' and 'D'.

STATUS 'A'

i) Allottees of Iron & Steel Controller's Reserve.

ii) Exporters of engineering goods holding Release Orders of Iron & Steel Controller/ Empowered Agency.

iii) Defence (including all establishments/undertakings under the Ministry of Defence).

iv) Steel Plants and their fabricators.

v) Railways.

vi) Small Scale Industries Corporation (SSICs).

vii) Coal Sector.

viii) Electricity Boards/Electricity Supply undertakings and power projects/plants sponsored by the Central Electricity Authority (CEA).

ix) National Thermal Power Corporation (NTPC).

x) Irrigation schemes sponsored by Central Water Commission (CWC).

xi) Public sector heavy engineering units under the Department of Public Enterprises.

xii) International Drinking Water Supply and Sanitation Decade Programme.

xiii) Central Public Works Department (CPWD).

xiv) P&T Sector (Department of Posts and Department of Telecommunications).

xv) Oil and Natural Gas Commission (ONGC) and Oil Companies in the public sector.

xvi) Fertilizer Sector.

xvii) Cement Sector.

xviii) Department of Atomic Energy.

xix) Port Sector (including ship builders).

xx) Non-Conventional Engergy projects sponsored by the Department of Non-Conventional Energy Sources.

xxi) House builders and registered cooperative house building societies.

STATUS 'B'

i) Central/State Government Departments/ undertakings/ projects not covered by Status 'A'.

ii) Municipal Corporations, Municipalities, Zila Parishads and Panchayats and Panchayat Samitis.

iii) Joint Sector Plants/Projects.

iv) Newsprint and paper, automobile, drugs and petrochemical industries in the large and medium scale sector.

v) Requirements of steel items for construction of factories by new steel processing units.

vi) Power projects not covered under Status 'A'.

vii) Public utility services like charitable/ non-profit making hospital, schools/ colleges (including their Hostels/quarters), cultural associations, religious institutions, social welfare organisation/centres and demand for rural development schemes and projects.

STATUS 'C'

i) Other large and medium industries and eligible Small Scale Units inlcuding construction requirements.

STATUS 'D'

All other eligible consumers not included in the above status groups.

APPENDIX II

COMPACT INDUSTRY GROUP

The following categories of consumers will be treated as Compact Industry Groups for the raw materials mentioned against each such group .

Sl.No.	Compact Industry Groups	Raw Materials
i)	Foundries	Pig Iron
ii)	Re-rollers	Billets and other re-rollables.
iii)	Forging units including Agricultural implement manufacturers with forging capacity and jute/coir bailing hoops manufacturers.	(Manufacturers of jute/coir bailing hoops will be eligible to get only billets.)
iv)	a) Wire Drawing Units b) Hume Pipe Manufacturers c) Electrode Manufacturers	Wire Rods in coils.
v)	Bright Bar Manufacturers	Wire rods in coils, Rounds in straight length including sizes developed for Bright Bar Industry.
vi)	Industrial Fastener Manufacturers.	Rounds in straight lengths and wire rods in coils.
vii)	a) Tube Makers. b) Precision Tube Makers c) Cold rolled formed section manufacturers. d) Tubular Pole Manufacturers e) Hamilton Pole Manufacturers sponsored by the P&T Deptt. f) Cold Strip Manufacturers g) Wheel Manufacturers	H R Coils, H R Narrow strips and skelp.

BIBLIOGRAPHY

Ahluwalia.I.J. (1985) : Industrial growth in India - Stagnation since mid-sixties, Oxford University Press.

Alagh, Y.K.(1973) : "Regional planning for Industrial Aspects of Indian Economy" , Indian Journal of Regional Science, Vol. 5, No.2.

Alexander P.C. (1976) : Industrial Estates in India, Allied Publishing House.

Bagchi, A.K (1970) : "Long Term Constraints on India's Industrial Growth, 1951-68" , in Robinson, E.A.G., and Kidron M(eds) Economic Development in South Asia, Macmillan, London.

Bhagwati, J.N., and Desai,P (1970) : India : Planning for Industrialisation, Industrialisation and Trade Policies since 1951, Oxford University Press.

Bhoothalingam, S. (1973) ; "Review of Industrial Policy since Independence" in Vakil C.N. (ed) Industrial Development of India - Policy and Problems.

Chaudhuri, A. (1972) : "Industrial Licensing Policy and Prevention of concentration of economic Power in India- A critical review" Arth Vignana, (December '72).

Census of India (1961,1971,1981) : General population tables, and Union Primary Census Abstracts.

Census of India(1981) : Ubanization in India, Monograph.

Census of India(1971) : Town Directory

Central Electircity Authority (Relevant Years) : Power Atlas

Chakravarty, S. (1979) : "On the Question of Home Market and prospects for Indian Growth", Economic and Political Weekly, Special number, August.

Chenery, H.B.(1960) : "Patterns of Industrial Growth", American Economic Review, Vol. 50

Desai, A. (1981) : "Factors underlying the slow growth

Chenery ,H.B.(1960) : "Patterns of Industiral Growth: American Economic Review, Vol. 50

Desai,A. (1981) : "Factors underlying the slow growth of Indian Industry", Econonic and Political Weekly, Annuanl Number, March.

Desai,A.V.(1987) : "Indian Electric Power System", Economic & Political Weekly, October 10, 1987.

Dutta,B(1980) : "Intersectoral Disparities and Income Distribution in India : 1960-61 to 1973-74", Indian Statistical Institute Working Paper, New Delhi

Gadgil,DR.R.(1977) : "Planning without a Policy Frame"in Wadhwa C.D. (ed) Some Problems of India's Economic Policy, Tata McGraw Hill.

Ghosh,A.K., Bagchi, A., Rastogi,L.N., and Chaturvedi,D.N. (1982) : "Trends in Capital Formation, Growth of Domestic Product and Capital-output Ratios (1950-51 to 1978-79)", Economic and Political Weekly.

Ghosh,P.K.(1977) : Government and Industry : Studies in Regulatory Policy, Orion Publishers.

Gopal,M.H.(1957) : "Indian Industrial Policy - It's Evolution", Indian Economic Journal, Vol. IV April '57.

Government of India (1963) : Raj Committee Report.

Government of India (1967) : Report on Industrial Planning and Licencing Policy, headed gy R.K. Hazari, Planning Commission, New Delhi.

Government of India (1978) : Report of the Committee on Imports-Exports Policies and Procedures, headed by P.C. Alexander, Ministry of Commerce, New Delhi.

Government of India (1980) : Committee on Export Strategy -1980's, headed by P. Tandon, Final Report, Ministryoof Commerce, New Delhi.

Government of India(1965) : Estimates' Committee Report on Industrial Licensing, Ninth Report, Fourth Lok Sabha.

Government of India(1979) : Report of Committee on Controls & Subsidies, headed by Vadilal Dagli.

Government of India(1980) : Report of the National Transport Policy Committee, headed by B.D. Pande, Planning Commission, New Delhi.

Government of India : Five Year Plan Draft Documents (I, II, III, IV, V, VI), Planning Commision.

Government of India : Report on Development of Backward Areas, headed by K. Sivaraman, Planning Commission.

Government of India : Report of the Working Group on Identification of Backward Areas, Planning Commision.

Government of India Ministry of Industry : Press note issued on categorisation of Backward Areas on 27th April 1983.

Government of India(1978) Ministry of Industry : Report of the Study Group on Industrial Regulations and Procedures.

Goyal,S.K. et.al(1983) : Functioning of Industrial Licensing System - A Report, Corporate Studies Group.

Hazari,R.K.(1966) : The Corporate Private Sector:Concentration, Ownership & Control, Asia Publishing House.

Government of India : Industrial Policy Statement, April 6, 1948.

Government of India : Industrial Policy Resolution, April 30,1956.

Government of India : Industrial Policy Statement,February 2,1973.

Government of India : Industrial Policy Statement,December 23,1977.

Government of India : Industrial Policy Statement,July23, 1980.

Government of India : Industrial Policy Statement,April 21,1982.

Government of India : Industrial Policy Package,June 5, 1988.

Jha, L.K.(1980) : Economic Strategy for the Eighties, Allied Publishers.

Joint Plant Committee (1984) : Document on the Customers of the Main Producers of Iron & Steel.

Joint Plant Committee (1986) : Brief on Freight equalization.

Joshi,L.A.(1965) : Control of Industry in India, Bombay Publishing House.

Kahlon,A.S. and Tyagi, D.S.(1983) : Agricultural Price Policy in India, Allied Publishers.

Kundu,A. and Raza,M.(1982) : Indian Economy - The Regional Dimension, Spectrum Publishers, New Delhi.

Madan,B.K.(19770 : The Real Wages of Industrial Labour in India, Management Development Institute, New Delhi.

Mitra,A. (1977) : Terms of Trade and Class Relations, Frank Cass, London.

Munshi, K.M.(1973) : "Locational Policy in India"in Vakil,C.N. ed, Industrial Development of India - Policy and Problems.

Nayyar,D.(1978) : "Industrial Development in India:Some Reflections on Growth and Stagnation", Economic And Political Weekly, Special Number, August.

National Council of Applied Economic Research (1976) : Cement Industry in India - Problems & Prospects.

Patnaik,P.(1981) : An Explanatory Hypothesis on the Indian Industrial Stagnation" in Bagchi, A.K., and Bannerjee, N(eds), Change and Choice in Indian Industry, Bagchi and Co., Calcutta, New Delhi.

Patnaik,P. and Rao, S.K. (1977) : "1975-76 : Beginning of the End of Stagnation?", Social Scientist, Jan-Feb.

Raj,K.N.(1976) : "Growth and Stagnation in Indian Industrial Development", Economic and Political Weekly, 26 November.

Rangarajan,C.(1981) : "Strategic Issues in Industrial Development" in Rangarajan, C., Khurana, K., Pathak, H.N. Wadhwa, C.D., and Gupta A.P., Strategy for Industrial Development in the 80's, Oxford & IBH.

Rangarajan,C.(1982) : "Industrial Growth: Another Look", Economic and Political Weekly, Annual Number.

Sengupta,R. (1984) : "Technical Change in Public Sector Steel Industry", Economic and Political Weekly, Vol, VI, No. 25, 19 June.

Shah,D.D.(1975) : A Treatise on Tax Planning,Tripathi Publications.

Shetty, S.L. (1978) : "Structural Retrogression in the Indian Economy Since the Mid-Sixties", Economic and Political Weekly, Annual Number, February.

Shirkov, G.K. (1973) : Industrialisation of India, Progress Publishers, Moscow.

Siddhu, S.K. (1980) : Steel Industry in India, Allied Publishers.

Srinivasan, T.N. and Narayana, N.S.S(1977) : "Economic performance since the Third Plan and its implications for Policy", Economic and Political Weekly, Annual Number, February.

Times Research Foundation (1983) : Price Controls in the Indian Economy.

Tripathi & Pande (1978) : Government Regulations of Private Enterprise.

Upadhyay,J.R. (1980) : Licensing Power in India, S.Chand & Co.

Vaidyanathan, A. (1977) : "Constraints on Growth and Policy Options", Economic and Political Weekly, 17 September and 17 December.

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