Chapter 2

SOME ISSUES

In many countries, industrial/economic activity gets started at some point in space owing to some natural, historical or political reasons, and tends to get concentrated in and around that point. Though natural resources do play a crucial role in determining the location of economic activity, the historical forces often assume a more strategic role in the pattern of economic development of the country/region. The problem of inter-regional disparities in the level of industrial development has aroused lot of interest among researchers in India; which has resulted into several studies in the recent past. Despite the data constraints, some studies have made useful contribution in the area. There are three main strands of analysis in which those studies could conveniently be classified.

(a) Studies which compare the industrial growth performance of the regions and analyze the trend in regional industrial inequalities;

(b) Studies which focus on the regional industrial structures and the emerging patterns of industrial base of various region/states; and
Studies which offer some explanations for the behaviour of regional variations in the level of industrial development in India.

We propose to bring out the major contributions of various researchers and trace some missing links in what follows.

1. Trends in Regional Industrial Inequalities

Scholars have taken keen interest in understanding the nature of regional inequalities in industrialisation despite the limitations of data and the problems emerging due to the oft-changes in the state boundaries and the coverage of industries. Most of the studies have analysed the available data for the factory (manufacturing) sector for the post-independence period. Though some paltry spatial dispersal of the industries was noticed in the thirties when some other industrial centres emerged on the industrial map of India (e.g., Ahmedabad, Delhi due to the advent of the sugar and cotton textile industries (Bagchi 1959), the Bombay, Calcutta and Madras presidencies dominated the industrial
The extent of regional industrial disparities was quite glaring at the time of independence. Even as late as 1961, the Census of India noted with concern the unabated tendency of industrial concentration in a few metropolitan centres.

Some of the early attempts to measure the extent of inter-regional industrial inequalities were made by Desai and Sastry (1967), Lahiri (1969), and Saradamoni (1969). These studies observed that the inequalities have declined over time. For example Desai and Sastry, using power consumption as a proxy for manufacturing output across states, observed that the inter-regional inequalities have declined

For, even on the eve of independence in 1948, Bombay state accounted for 34.7 per cent of the total workers engaged in manufacturing and 44.8 per cent of the total value of net industrial output, followed by West Bengal with 31.7 per cent and 23.7 per cent of employment and value of net industrial production respectively. If we include Madras, the three presidencies together accounted for approximately 76.7 per cent of the total industrial workers and 77.0 per cent of the total output. (Chandrasekhar, 1963).

If we look at the sectoral concentration of industries in various states in 1948, approximately 81.9 per cent output of textiles was contributed by Bombay and Madras states. Similarly West Bengal and Bombay states accounted for 75.1 per cent of engineering and electric goods and 80.6 per cent of the chemical industry. The sugar industry was mostly confined to Uttar Pradesh (95.8%), Bombay (18.6%) and Bihar (14.3%). These four states taken together accounted for as much as 91.5 per cent of the total sugar production. (Chandrasekhar, 1963).
between 1951 and 1961 on the basis of the fall observed in
the value of the coefficient of variation over time.
However, the conclusions reached by these studies are sub-
ject to limitations at least on two counts: (i) the con-
clusions drawn are based only on two points in time; and
(ii) the measurement is based on some proxies and inadequate
data base.

In the recent past, some attempts were made to overcome
these limitations by Gupta (1973) Seth and Gulati (1974),
that organised industry has contributed towards narrowing the
inter-state imbalances. It seems fairly clear that, but for
the counterweight of industry, the imbalances would have
probably widened (Sandesara, 1974: 558).

Contrary to these findings, Badkar (1969) found that
the regional disparities in manufacturing have increased
between 1960-65, using the coefficient of variation in per capita
value added. Similarly, Jhaunacy (1976) found that the

1/ Udai Sukhar (1983) found that the inter-regional inequali-
ties have converged continuously. With the help of
Thiel's Inequality Index and the Hirschman-Herfindahl
Index, constructed for all the years between 1960 and 1975
using value added and employment data (for the organised
sector), he observed that the former index exhibits a
decline of 40 per cent in terms of value added and 30 per
cent in employment. The decline observed in the case of
the latter index was to the extent of 18 and 15 per cent
respectively between 1960 and 1975.
inequalities in the regional distribution of employment in the manufacturing sector has further aggravated between 1961 and 1974. Examining the dispersion of the companies at work and their paid-up capital during 1975-76 and 1978-79, Barathawal (1980) observed that the private sector is almost linearly related with the level of regional industrialization and the new firms are attracted in proportion to the already existing firms in a particular city or region as well as in a particular industry group. Thus one can plausibly infer that regional disparities must have increased over time owing to the cumulative-causation process. However, these studies too suffer from the limitations posed by inadequate and partial coverage of time and the data base. Absolute dependence of the coefficient of variation as a measure of inequality further limits the reliability of the conclusion.

Therefore, the debate whether the regional disparities have converged or not remains somewhat inconclusive. We do not yet have standard estimates of growth rates and index of the levels of industrial development for alternative indicators such as output, employment, capital stock etc., for each of

1/ Barathawal's total dependence on the data pertaining only to the corporate sector or employment only in the large scale public and private sector tends to limit the general applicability of his conclusions.
the major states for a sufficiently long period, which may enable us to reach to a more concrete conclusion. Thus, the need of an indepth analysis to ascertain the regional inequalities is obvious.

2. Regional Industrial Structure

Another stream of research efforts has gone into analysing the industrial structure of various regional economies at inter as well as intra-state levels. Daga et al. (1971a) portrayed the industrial base of 16 major states of India, using employment data. The study observed that the industrial scene of most of the states is still dominated by resource based industries. They also noticed a remarkable stability in the level of regional industrial specialisation between 1956 and 1965, implying that hardly any structural shift took place across states during this period.

In another study, using the input-output technique, Lakhwala et al. (1974) attempted to identify 'technological clusters' and 'empirical spatial clusters' of industries to examine the degree of technological independence of industries with each another across space. While comparing

1/ Technological clusters indicate the technological inter-dependence between industries/industry groups; whereas the empirical spatial clusters of industries are those clusters of group of industries which tend to grow together in different regions (Lakhwala, et al., 1974: 9).
these two clusters, the study observed that, in general, 'empirical clusters' were smaller than the 'technological clusters'. It implies that in the regional context of India, full-scale development of technologically inter-related industries has yet not taken place, apart from a few highly developed regions. This is perhaps to be expected in the initial phase of industrialisation. This finding further corroborates earlier findings of Agha et al. (1971b) and Agha (1972) at the inter-state level. The finding, that the developed regions by and large have more diversified industrial structure compared to the less developed ones, was vindicated even at the intra-state level.

Though providing a valuable insight into the nature of spatial industrial distribution across states in India, these studies do not provide any reason for the emerging patterns and their dynamics over time. They also do not throw any light on the role industrial composition plays in the growth performance of a region.

3. Determinants of the Regional Industrial Variation in India

Three broad research groups can be noticed in looking into the causes of industrial variations across regions.

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1/ For example, see Godebolo (1978), Papola (1979), Awasthi and Shah (1981); Ramakrishna Sarma (1982); Kaur (1983), among others, who studied inter district variations with reference to Maharashtra, Uttar Pradesh, Gujarat, Andhra Pradesh and Haryana respectively.
Researchers explaining the variations in terms of historical forces belong to the first group. The second group of researchers has tried to analyse role of public policies in achieving balanced regional development of the industrial economy of India. The third group explains the variations in the level of industrial development in terms of some market forces, indirectly affecting factor prices and cost of production.

3.1 Historical Forces and Regional Industrial Variations

Studies belonging to this group contend that the answers to the existing regional industrial inequalities ought to be sought in the process of the economic history of the regions. India remained under British rule for a

1/ However, at the outset it may be noted that it is not possible to clarify these studies into three watertight compartments. For, they overlap in context in most of the cases. We have adopted this three-fold classifications purely for the sake of convenience.

2/ The theoretical base of such studies can be traced back into a mix of the propositions better known as 'Cumulative-Causation Theory' a la Myrdal (1958), Hirschman (1958) and Rosenstein Rodan (1963); 'Growth Rate Theory' of Perroux (1971); Boudeville (1966), Friedmann (1966); and 'Center-Periphery' concept of Prebisch (1962); later developed as 'Dependency Theory', having base in Marxism, by Griffin (1966); Frank (1969); Luxemburg (1951); Baron (1957); Amin (1976), Bértado (1976), Sunkel (1969) and Casanova (1969), among others. Main stress of these scholars has been that the underdevelopment of the underdeveloped regions has its roots in the development process of the developed regions; where the later developed at the cost of the former regions.
considerable period. And the interest of the rulers was to use the 'dependent colony' as a supplier of the raw material for the British industries. Incidentally, the vast population of India also ensured a captive market for British manufacturers. Attempts of the British to keep India as a captive market for their manufacturers are described elsewhere (Dutta, 1962; Hurd, 1973). While the industrial revolution was sweeping throughout England, India was undergoing a systematic process of de-industrialisation (Bagchi, 1972). In the process, only those regions of the colony could develop which served the economic interest of the colonial masters most. The development of port towns like Bombay, Calcutta and Madras was incidental to these historical and political forces. This in turn had wider ramifications on the regional development in India for a long time. After independence these port towns became the hub of industrial activities, though initially these urban centres acted merely as outposts of the metropolitan economy in the colony (Chattopadhyaya and Raza, 1972).

The development of the three Presidencies, viz. Calcutta, Bombay and Madras, having three major port towns with the same name, gave birth to a severe rural-urban dichotomy. It is also argued that the development of the Presidencies took place at the cost of hinterlands (Thavaraj, 1972), consisting of Assam (Mora, 1980), Bihar and Orissa (Bagchi, 1972; Gupta, 1981), and Maharashtra
(excluding Bombay) (Savur, 1980). Thus, the metropolitan satellite relationship changed from an inter-national to intra-national scale, culminating in a centre-periphery syndrome.

A question emerges as to the process due to which industrial concentration took place in a few port towns. It is often argued that the regional distribution of industries was rather a consequence of the railway freight policy (Hashim, 1969), and the uneven public sector investment in basic overheads made by the government keeping their own economic interest and strategic needs (Thavaraj, 1972). Researchers feel that the

1/ For example the British industrialists found that the export of raw cotton to Britain fell steeply due to the lack of good internal transport. Hence, to ensure regular supply of raw cotton, they thought of covering at least the strategic cotton growing areas with railways. It was also expected that, in addition, it would further their interest of selling the finished products in the hinterland. That is why the first section of the Bombay-Baroda and Central India's Railways (BBCIR) was laid by 1860 and the Ahmedabad section by 1863 (Edward, 1964). Importance of Bombay was further enhanced with opening of the Suez Canal in 1869, which instantly brought Bombay a thousand miles closer to England, compared to Calcutta or Madras (Thomson). Thus industrial development was rather incidental to the development of railways (Hashim, 1969) which helped Britain to retain India more securely as one of her principal markets (Bamdadher, 1946; Habib, 1975).

Similarly the regional pattern of British public investment in railway, power, irrigation and roads adversely affected the future of balanced regional development. Between 1860 and 1947, Punjab received the largest share in public expenditure accounting for 32 per cent of the total share. Madras state was static, whereas the share of Bombay and Sind put together claimed progressively increasing share of investment. The share of United Provinces was quite impressive looking to its size. The share of all other regions taken together was surprisingly less than even the total public investment in Punjab alone (Thavaraj, 1972). Thus balanced or judicious regional development became the first casualty.
Regional spread of industries during pre-independence days did not always reflect the locational advantage or disadvantage (Savur, 1980). Not only this, the dominant emergence of port towns might have been different if based on locational logic.

... the choice of Calcutta was largely fortuitous, likewise Madras, and had there been planning in existence two or three hundred years ago, the main ports of the east-coast might easily have been elsewhere... It is from the accident of first 'contacts' that we have it where we have it (Census of India, 1941: 27).

Some of the region specific institutional factors also had played an important role. For example, in the case of Punjab and Haryana, Pandit (1973) observed that factors like historically available local skills owing to agricultural prosperity (probably an outcome of the heavy public investment made in Punjab in irrigation by the British) and induced early development of agricultural implements, machines and certain other tools manufacturing were instrumental in the industrial development of these regions. On the other hand Gupta (1981) found in the case of Bihar that lack of 'sub-nationalism' had acted
as a stumbling block in the industrial development of the region. He observes

... the Indian sub-continental syndrome is testimony for the fact that the states that have progressed had sufficiently sub-national consciousness; (and) by keeping sub-nationalism at a low key, the capitalists of Western India (Marwaris and Gujaratis) spread to the eastern region under the banner of nationalism. Close liaison between the Eastern Indian capitalists and Bihar political leaders came in way of development of an indigenous industrial class. The situation has not substantially changed even after independence (Gupta, 1981: 150).

These studies offer some explanations for the industrial development and underdevelopment of the various regions in India. A more important question which, by and large, remains unanswered is: whether such mechanism still operates in the country, despite government efforts?

Some of the researchers have tried to answer this question.

In a somewhat similar fashion Bagchi trying to explain the industrial development of Western India and backwardness of the Eastern Indian states observed "that some, at least of the difference between the burdens of exploitation as between Eastern and Western India can be attributed to the fact that dominant capitalist class in Western India had a very large Indian component, whereas the capitalist strata dominating manufacturing, plantation and the mining and large scale banking and external trade in Eastern India was almost entirely European, particularly before World War I" (As quoted by Shakibul Gupta, 1981: 150). The study holds good even in the case of Assam (Misra, 1980; Goswami, 1981).
while analysing the impact and efficacy of the public policies towards balanced regional industrial development. We review this stream in the subsequent section.

3.2 Public Policy and Balanced Regional Development

It is often argued that government's policies, in the post-independence period, have resulted in greater regional imbalances (Pathak, 1980). Most of the large industrial units have taken advantage of the colonial setting in which the axis of the development converged on metropolitan cities, oriented to the ports (Kanda and Rana, 1981). This calls for a closer scrutiny of the planning process in the post-independence period.  

It is alleged that Indian planning, by and large, has been limited to allocation of investment over time, sectors and sub-sectors, whereas there is no explicit spatial dimension in the formal planning models (Chakravarty, 1977; Aliaga, 1962; Kashyap, 1979). The government, however, was...

1/ As noted earlier, government intervention was seen as a crucial in thwarting the free interaction of market forces. Left to the free play of market forces, economic activities show a tendency to concentrate at a few geographically advantageous points, and only strong political will and government intervention can curb this tendency. Plausibly that is why government of India has been serious about the lopsided regional development, and has been promulgating various policies, from time to time, directed towards achieving a more balanced regional development.
well aware of the regional disparities and its consequences right from the inception of the planning era in 1951. For example, the First Five Year Plan (1951-56) noted with concern that

... greater attention will have to be paid to the development of the states and regions which have remained backward. Since, industrial development in India has so far been on an unbalanced basis and it has been concentrated in a few selected areas (First Five Year Plan, 1951: 442).

The emphasis was more sharp in the Industrial Policy Resolution of 1956 which observed

In order that industrialisation may benefit the economy of the country as a whole, it is important that disparities in the levels of development between different regions should be progressively reduced ... Only by securing a balanced and co-ordinated development of the industrial agricultural economy in each region, can the entire economy attain higher standards of living (emphasis ours).

The Third Five Year Plan document, which contained one full chapter on Balanced Regional Development, noted that: "A balanced development of different parts of the country, the extension of benefits of economic progress to less developed regions and widespread diffusion of industry are among the major aims of planned development (Third Five Year Plan, 1961: 44). This spirit was carried
forward in all the subsequent plans and policy documents with increasing stress. The government used following policy instruments in order to achieve balanced regional industrial development

(i) Industrial licensing;
(ii) Location of public sector undertakings;
(iii) Extension of infrastructural facilities through industrial estates;
(iv) Distribution and pricing policy; and
(v) Incentives to industrially backward areas.

Industrial Licensing: As noted earlier, the balanced regional development was an implicit aim of the various plans. The government envisaged licensing as an instrument to achieve the objective; though the Industries (Development and Regulation) Act, 1951. In other words, the underlying message was to grant more licenses for big industrial units in the backward regions, and at the same time control the industrial expansion of already highly developed areas/towns (Krishnaiah, 1976).

However, contrary to the expectations, Mitra (1965) found that between 1953 and 1961, 35.77 per cent (1978) out of the total licenses issued went to the three top industrial centres, viz. Bombay, Calcutta and Madras. A more recent study also shows that though there is a slight
shift in licensees issued, the 'top' still remains the 'top'. For, out of 750 licenses issued in 1982, 102 were cornered by Maharashtra, followed by Gujarat getting 93 licenses (Aguiar and Ravindranath, 1983).

Therefore, one can broadly infer that the regional pattern of industrial licensing continues to be weighted in favour of the high and middle income states (Kollanjiyil, 1978). Licensing as a policy instrument for reducing regional disparities has not been successful.

**Location of Public Sector Projects**: It was postulated that the location of public sector undertakings in backward areas will benefit the regions in a variety of ways. Consequently most of the public sector projects were initially located in backward states like Bihar, Orissa and Madhya Pradesh. However, most of these location decisions were an outcome of economic compulsions like resource endowment of the regions.

1/ Even within the states the picture is not very different; for example, 54.29 per cent of the licenses issued to Maharashtra between 1952 and 1975 went to Greater Bombay alone. If we include Thane (20.19%) and Pune, (10.0%); 3661 of the total 4332 licenses went only to these three districts in Maharashtra (Godbole, 1978:1516).

2/ For example, it was envisaged that such locations will create much needed infrastructure, enhance trade and commerce activities and in turn will create employment opportunities for the local population. It was also envisaged that due to the initial impact of public sector undertakings, the dormant entrepreneurial potential will find a meaningful outlet for its development and growth through the prospective ancillary industries. See Nath (1971); Ghosh and Chosh (1980); Sarma (1982); Bhingra and Jhuraney (1975-75), among others.
Some researchers argue that investment in public sector undertakings in backward areas has reduced regional disparities (Painik, 1971; Gupta, 1973). On the other hand, some other researchers feel that this policy has not been an unqualified success. For, the projects which have come up in backward states are not necessarily integrated with the local economy and instead have linkages outside the regions (Painik, 1973; Prasad, 1976; Coel, 1975; Nair, 1980; Sarma, 1982; Ramachandran, 1983). It is also argued that the public sector investment has been regionally regressive, particularly after the sixties, due to the changes in the sectoral priorities (Alagh et al., 1982; Uday Sekhar, 1983).

Thus, it appears that location of some public sector undertakings in the backward regions has had only a marginal impact. It is doubtful if investment of this nature will have any serious impact on the backward regional economies unless priority is given to those industries which have high regional rather than sectoral linkages.

Industrial Estates: The crucial role of infrastructure in the economic development was recognised by the government.

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1/ For example, the lead industry in Ballia was closely linked with the distant economy of Bombay; small scale and ancillary industries based on the lead industry developed in far-off regions completely by-passing the next village economy (Coel, 1975).
and it was accepted that "Growth and diversity of economic activity can take place only if infrastructure required for this is provided in an adequate manner" (Third Five Year Plan, 1961: 149). The government of India launched an industrial estates programme in 1955 to spread infrastructure more widely (Bredo, 1960) creating, thereby, more external economies for the entrepreneurs willing to locate their units in a relatively backward area (Alexander, 1963). One of the objectives of the scheme was to disperse industries away from the metropolitan regions (Kathur, 1971; Chorati, 1973).

Studies conducted during the mid-sixties and early seventies to assess the effectiveness of the programme have raised serious doubts about the success of the programme (Alexander, 1963; Kagia, 1971; Banjopadhyaya, 1969; Udaisekhar, 1983). It is alleged that wrong locational choice and inadequate infrastructural facilities have further aggravated the problem (Sanghvi, 1976). Moreover, instead of integrating with local regional economies, most of the relatively successful industrial estates have links with the national economy (Kastyp et al., 1975). Even these so-called successful estates are, by and large, concentrated in and around the urban industrial areas, thereby robbing at the goal of regional decentralisation of industries. Therefore, it is often argued that the policy of induced industrialisation through industrial estates has proved to fail (Adharya, 1983).
Certain inputs like cement, coal and steel are crucial for the operation of industrial units. Therefore, with an eye on the objective of regional equality in India, the government has pursued a policy of equalising the price and controlling the distribution of these inputs throughout the country through railway freight charges and retention prices.

It is often argued that this type of control results into various kinds of market distortion and leads to certain irrationalities in industrial locations. For example, 'postal stamp rates' for certain critical industrial raw materials like cement, steel and coal, have tended to negate the location advantages of any particular place (Rao and Sundaran, 1973). Since regional production of these inputs is determined by the locational advantage in terms of raw material and transport cost, the policy of freight equalisation acts as a subsidy to the 'non-producing' (of key inputs) regions. It is observed that had the Indian Railways charged market rates for coal transportation, there would have been greater motivation for industrialists to locate their units near the coal fields (Lefebor and Chauduri, 1964); the existing rate structure of the railways induced producers to seek location near market centres rather than near the source of raw material (Raina, 1969; Singh, 1983). Therefore, Mitra (1983) contends that the pricing and transport subsidy has adversely affected the industrial development of West Bengal, Bihar and Orissa. Similarly, in case of cement, southern and western India, with concentration of the cement industry has lost its locational advantage vis-a-vis northern and eastern regions (NSAER, 1979).
fore, by and large, this policy of freight equalization has not only helped developed states to develop faster, leading to further imbalances in the regional development; where the interest of the backward but resource rich regions like Bihar, Orissa or Madhya Pradesh are neglected. Thus the freight policy of the government has been counter-productive as far as balanced regional industrial development is concerned.

Financial Incentives: The failure of the policies of industrial dispersal led the government to appointing two committees in 1963. The first (the Bende Committee) was to recommend objective criteria for identifying industrially backward regions. The other (the Vanchoo Committee) was to recommend fiscal and financial incentives for setting up industries in backward regions.

Based on the reports of these two committees, the government declared 296 (about 60%) districts as industrially backward, and introduced a Central Capital Investment Subsidy Scheme in 101 of the totally backward districts. These backward areas were given further incentives in terms of income tax concession, sales tax subsidy, special facilities to import raw materials and hire-purchase of machinery for small scale units.

The distribution of this subsidy till 1978-79 among the various regions shows that more than 55 per cent of the
capital subsidy went to only 25 eligible districts of industrially advanced states (Dua, 1980). It is also argued that even if subsidy can be successfully utilised for achieving balanced regional industrial development, its ability to generate employment is suspected on a priori grounds. Therefore, researchers have strongly advocated labour or infrastructure subsidy instead of capital subsidy (Mash and Pathak, 1973; Nagia, 1980; Asthana, 1980).

Commercial Banks: Before their nationalisation, commercial banks had no role to play in the direction of balanced regional development. After the nationalisation they also came in the ambit of the government directions. Earlier, a commercial bank always waited for a region to develop to a certain level before it started business there. After nationalisation, the government expected that finances will start flowing to the backward regions. However, evidence shows that funds have tended to flow from backward regions to the developed ones. Thus, the former have continued to contribute to the growth of the latter and banking...

1/ Capital subsidy, by its very nature, will lead to high capital as well as technological intensity leading to low employment generation. Low income generation for the masses is the logical outcome, which has serious repercussions on income distribution.
operations, on the whole, seem to have been regressive in this respect.

**Non-Banking Financial Institutions:** The Government of India, through development banks, has evolved many incentive schemes to attract industries to backward districts. The Industrial Development Bank of India (IDBI) acts as an apex industrial financial institution co-ordinating the operation of other institutions like Industrial Finance Corporation of India (IFCI), Industrial Rehabilitation Bank of India, Unit Trust of India, Life Insurance Corporation of India and State Financial Corporations. The operational statistics of the IDBI show that, between 1961 and 1981, the backward areas of four developed states (Maharashtra, Gujarat, Karnataka and Tamil Nadu) together received 42.6 per cent of total backward area finance. If we include Andhra Pradesh and West Bengal, the percentage increases to 56 per cent; whereas the total share of backward states (Assam, Bihar, Himachal Pradesh, Jammu and Kashmir, Kerala, Madhya Pradesh and Orissa) taken together was barely 15.9 per

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1/ For example in 1956 the share of four industrially developed states, viz. Gujarat, Maharashtra, Tamil Nadu and West Bengal, in credit was 72 per cent against the deposit of 61 per cent (Lal, 1974). Even in 1966, this picture did not alter much. For, these very states accounted for 45.70 per cent of the credit against 46.04 per cent share of the deposits during 1960-81 (Economic Survey, 1980-81: 106).
cent, marginally above (15.2%) that of Gujarat alone.
Similarly, not financial assistance sanctioned by the 
IFCI, between 1943 and 1984, to those backward states 
totalled only 14.7 per cent against 58.6 per cent for the six 
developed states. The picture does not change in the case 
of the operations of other non-banking financial institu-
tions. Therefore, it appears that though the not share 
of backward regions is increasing in the degree of assistance 
provided by those institutions, the beneficiaries are the 
backward areas of the developed states only. Flausibly it 
might have helped in reducing intra-state industrial regional 
inequalities, but their role in the context of inter-state 
industrial imbalances is at best suspect.

The state governments also play a crucial role in 
shaping regional industrialisation. Most of the governments 
have established some or the other agency to promote indus-
trial development such as Industrial Development Corporations, 
Industrial Investment Corporations, Small Industries Develop-
ment Corporations, etc. apart from financial corporations 
at states' level.

However, there seems to be a cut-throat competition 
among the states in attracting enterprises. Any new incentive 
declared by any one state government is usually instantly 
ninitiated by other states. Consequently promotional

1/ I am grateful to Prof. Ashok Mitra, ex-Finance Minister 
of West Bengal, for drawing my attention to this point.
measures and concessions available to the entrepreneur, across states, are not very dissimilar (Godbole 1978 : 79 : 86). However, states do differ in the degree of success which possibly could be attributed to the efficiency of the implementing machinery and the outlook of the state government. Developed states like Gujarat, Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh are able to attract more entrepreneurs than states like Assam, Bihar, Orissa and Kerala.

From the above discussion it clearly emerges that the planning policies adopted by the government has, by and large, failed to deliver goods. And market forces are strong enough to hold the industrial concentration in a few developed regions despite government will. What, then, are those uncontrolled market forces?

3.3 Determinants of Inter-regional Industrial Variation

Apart from the colonial legacy or historical and political process as an explanation for the inter-regional variation

1/ For a comparison of incentives offered by various state governments, see Scope for Industries in Different States - Incentives and Facilities for Industrial Location, India Investment Centre, 1976, New Delhi.

2/ "Gujarat and Maharashtra are much more dynamic in selling themselves to firms and much faster at processing applications and sanctions than any other states in India. Tamil Nadu comes third. From what I have heard, Kerala is not particularly good in this respect, which may have to do why firms are not moving to the State" (Kackie, quoted in Common, 1981 : 86).
industrial imbalances in India, it is argued that factors like availability of infrastructure in terms of transport, power and means of communications, agglomeration economies, size of the market, linkages - inter-industry (technological) and marketing; availability of cheap and submissive labour, urbanisation, entrepreneurship, level of agricultural development, and the like ones strongly affect the industrial development of any region. Thus it can be postulated that the regional variations in the level of industrial development will prevail to the extent the aforesaid factors vary across states. We try to assess the impact of one or a group of these above factors.

**Level of Agricultural Development:** Interdependence between agriculture and industry is too well known (Rudra, 1964; Hayami, 1969; Raj, 1984). It is a widely accepted proposition that as per capita income increases there will be a distinct shift, in the sectoral allocation, towards industries (Kuznets, 1957; Hoffman, 1956; Clark, 1960). Initially any increase in per capita income can be realised only from agriculture. This increase in income is likely to lead to (i) higher demand for manufactured goods (initially consumer goods) owing to higher income elasticity; and (ii) investible surplus for investment in industries, because of the increasing rate of savings. Of course, in later stages even industries are found to provide a push to the agricultural growth (Hayami, 1969).
It is argued that regional variations in the level of industrial development are some sort of reflection of the regional variations in the level of agricultural development. This proposition was empirically vindicated by Papola (1979), Pandit (1976), Singh (1981) and Kaur (1983) at intra-state level. In the inter-state context Alagh et al (1982) also observed a positive association between the two. However, Raj (1976) believes that development of small scale industries depends on agriculture to a large extent, but it may not hold good in the case of large scale industries. Nair (1982) also found, it to be true more in the case of small scale than large scale industries. However, this type of proposition treats agriculture as only a supply side variable.

As a matter of fact, agricultural development assumes greater importance when treated as a demand side variable. For, it is likely to encourage industrialisation in the region via demand for agricultural inputs like fertilizer, tools and implements, etc. At the same time, enhanced incomes of the farmers also result in a higher demand for consumer goods. Moreover, it is also noticed that there is a tendency for economic activities to concentrate in areas of greatest population density and that the most densely populated agricultural areas in the pre-industrial age often turned out to be areas of greater industrial
growth (Clark, 1967). This leads to another factor, vis. market, which probably could explain the regional variations.

**Market Size**: Agricultural development may give an initial boost, but the level and scale of operation of industries is likely to be limited by market size. This is normally determined by the size of population and the purchasing power of the buyer, apart from inter-industry demand. Purchasing power, again, depends on the per capita income as well as income distribution. The bigger size of the market also may give rise to economies of scale.

Chenery (1960), using international cross section data for the 1950s, observed that size of the country (i.e., market) in terms of population was of crucial importance in the intercountry variation in the level of industrial development. Using a somewhat similar methodology, Gupta (1971) observed that larger states (in terms of population) had better growth performance compared to the smaller ones between 1951 and 1961. Similarly, Sastry (1970) observed that per capita income, population and urbanisation explained inter-regional variations in the net industrial output in India during the same period.

It can also be argued that the federal structure of Indian polity, with almost unrestricted inter-regional trade, is likely to limit the effectiveness of the size
of the market. After all, unlike national economies, regional economies within a country are open economies. Therefore, local demand can be met through imports. 1/

However, the market in India is highly segmented and regional in character, owing to the relative immobility of factors (Gandhi, 1979; Sridharan and Chakraborty, 1979), and small magnitude of inter-regional trade (Kshita, 1955; Yame, 1967). In fact, the emergence of trade-blocks, each consisting of a group of states, was observed empirically by Hashim (1970), who noted very high concentration of inter-regional trade of each region with a very few other regions. This further hints possibility of concentration of industries in a few regions within each trade block and in a few urban metropolitan centres within these regions, leading to regional variations.

Urbanization and Agglomeration Economies: Co-existence of industrialization and urbanisation in the process of

1/ For example Pandit (1975) observes that local market has not been of much consequence in the industrial development of Punjab and Haryana, since these states sold most of their industrial products in markets outside the regions and purchased inputs from as distant places as Bihar.

2/ For example, Hashim (1970) noticed that about five developed regions accounted for 60 to 99 per cent of the trade in any region. If trade balance constraints are imposed, the regional pattern of the industrial-mix is significantly altered, except in the case resource base industries (Nathur and Hashim, 1972: 969). Similarly, Thakkar (1971) found that about half of the Gujarat's trades with the adjoining regions of Rajasthan, Madhya Pradesh and Maharashtra.
economic growth is a widely observed phenomenon (Lampard, 1955; Richardson, 1973). The relationship between urbanisation and industrialisation is indirect and circuitous (Breese, 1969). Though it is argued that urbanisation is a byproduct of industrial development in India (Asharya, 1956; Suri, 1968), it is also argued that the latter is not a precondition for the former (Banerjee, 1969). For example, a slower tempo of urbanisation was observed in a decade of rapid industrialisation between 1951 and 1961 (Bose, 1961; 1970). However, today industry goes to the urban centres rather than urbanisation growing in and around new industrial locations (Bose, 1969; Pathak, 1975; Rakesh Mohan, 1983).

Whatever be the circuit or direction of causation the case for a strong relationship between urbanisation and industrialisation does exist. It can be argued that variations in the level of industrial development are related to variations in the level of urbanisation across states in India. It has been further corroborated in a recent empirical study by Uday Sekhar (1983) that employment in household industry tends to concentrate more in smaller size towns, which primarily caters to the local demand;

1/ Urbanisation has been found as an important determinant of the regional variations in the level of industrial development in India. See Dhar and Nastrty (1969), Wadhwa and Kashyap (1983).
whereas location of the non-household industry in larger towns and cities is dictated by factors like economies of scale, technology and availability of infrastructural facilities.

The most significant feature of urbanisation is the concentration of population which in turn exercises a localized effect on several new commercial and trade units. Moreover, an increase in city-size leads to an increase in industrial activity (Rao, 1975; Kachyap et al., 1980). For, an increase in city size generally leads to improved capital as well as labour productivity due to the agglomeration economies like scale economies, access to larger pool of skilled labour, availability of specialized auxiliary industrial and repair facilities (Bara, 1973; Segal, 1975; Richardson, 1977). Improvement in transport and communication further facilitates the growth in these centres. These focal points attract skilled and unskilled workers and encourage entrepreneurship, leading to further industrial growth (Lampard, 1955; Richardson, 1973).

Lakdarala et al. (1974), for the first time, attempted to isolate the effect of agglomeration economies and concluded that the clustering of industrial activities across various regions confer productivity advantages. On

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1/ Desai (1974) empirically evaluated the advantages of clustered industrial activities in the case of the cotton textile industry in Gujarat, Maharashtra, Rajasthan and Delhi, and concluded that owing to the emergence of the cotton textile complex Gujarat has an edge over other regions in productivity and has a comparative advantage in the industry.
the basis of a field survey of 130 units in Maharashtra, Godbole (1978) also found that agglomeration economies are crucial for increasing the attractiveness of an area. However, those studies are not only partial in regional coverages but measure the agglomeration economies only in an indirect and somewhat crude manner. It might, therefore, be rewarding to assess the potential of urbanisation and agglomeration economies more comprehensively.

Technological/Scalar Linkages and Regional Imbalances

Once industry starts at some place, it generates external/agglomeration economies through technological as well as scalar linkages. Aliquah et al. (1971 a), Nair (1982), Papola (1979), Hashim (1978/79) and Thomas (1979), among others, noticed that medium and small size enterprises, left to themselves are attracted towards those regions which are also already industrially developed. Some other studies, using an input-output framework, observe that inter-industry linkages per se have very little bearing on the growth performance of regional industrial economies in India. However, it is difficult to accept this proposition because the input-output tables used for the analysis by Kashyap and Desai (1974) and Venkatarameiah (1983) pertain to the technology existing in 1965, which is likely to have become obsolete. Moreover, these studies ignore the demand side altogether. Awasthi (1983) tried to incorporate the demand side in terms of the sectoral income elasticities, but reached a similar conclusion. But in this case also, the
sectoral income elasticities were that of the nation and do not reflect the region specific demand. Therefore, a fresh testing of the hypothesis is likely to shed more light on the impact of linkages in regional industrial growth performance.

Availability of Infrastructure: Infrastructure has been found to be a very important factor in explaining the regional variations at inter as well as intra-state level. Hashim (1978/79) observed that infrastructure significantly explained the regional variations in addition to per capita fixed capital, and workers per thousand population, in the large scale manufacturing sector between 1961 and 1965. These findings were further confirmed by Papola (1979); Singh (1981); Kaur (1983) and Sarma (1982) who found that availability of transport, power and institutional finance in easy terms play a very crucial role.

However, Papola (1981) argued that any of the factors do not work successfully in isolation; and are

1 For, infrastructure provides industry with basic services necessary for productive process. It includes transportation, power, water supply and communication. These facilities are expected to give rise to external economies. Perhaps that is why investment in transport and power facilities is the heart of the 'big push' argument. See for details, Rosenstein Rodan (1961) along with the comments of Furtado (1961) and Munkse (1961); Singer (1960); among others. For Indian context, see Sinha (1968); Antia (1973); Aiyar (1973),
and are able to attract new industrial activity, only when supported by government efforts. Therefore, any effort to assess contribution of infrastructural facilities has to be made in totality and not in isolation as has usually been done so far.

Human Capital: It is argued in the literature that owing to the relative unavailability of human factors, industries are adapting themselves to the market (Seth, 1975). Following Schumpeter, it was also suggested that shortage of entrepreneurs with a capacity to recognise and exploit opportunities and introduce innovations, may also lead to stagnation and backwardness of the regions (Myrdal, 1958; Hirshman, 1958; Pathak, 1973).

Pandit (1978), in his study of 'footloose industries' in Punjab and Haryana, found that the displaced population, which came to Punjab (after the partition in 1947) was well endowed with entrepreneurial qualities, which transformed the industrial map of Punjab and Haryana. The

1/ Similarly it is also said that Gujarat's industrial development owes much to its historical tradition of entrepreneurship. So are Marwaris, but Rajasthan still remains an industrially backward region. Similarly in Maharashtra, most of the industrial activity is controlled by Gujaratis and Parsees. Probably, entrepreneurs move to the opportunities. However, local availability of entrepreneurs may be of some consequence as far as small-scale industries are concerned. But growth of large scale industries is a function of the economically attractive location rather than local availability of entrepreneurs.
study also revealed how a regular supply of submissive and cheap labour force can be favourable for the emergence of the industrial sector in a region; and concluded that this "provides some of the major cause of the location of footloose industries in this region" (Pandit, 1978: 262).

However, these observations are based on the case studies of small-scale units in different regions and reflect only entrepreneurs' views. It appears from the studies as if organised labour force is detrimental to the growth of industries; and strong trade union movement necessarily leads to conflict. It is also often argued that strong trade unions and their activities play a positive role in the process of industrialisation (Ross and Hartman, 1960; Kannapann, 1970; Brown and Nidoff, 1978; Godbole, 1978).

1/ In a study of the mobility of small scale entrepreneurs out of Kerala, based on the field investigation of 124 entrepreneurs of Kerala origin and having their units in Tamil Nadu or Karnataka, Conen noticed that "the most important single reason reported about the choice of location was the availability of cheap labour" (1981: 78). He further observed that "Workers of Kerala are much more conscious of their rights; the social and political atmosphere of Kerala also is more conducive to asserting them. This is why small scale entrepreneurs are not able to reconcile with" (p.82). Studies by Papola (1979), Kaur (1983) and Godbole (1978) also have reached somewhat similar conclusions.

2/ Circumvention of labour laws and regulations by industrialists in general and the exploitative nature of small scale units are too well known.
Clark, 1980). Our only argument is that this proposition needs a more careful observation, before generalising in inter-regional context.

**Concluding Observations**

While reviewing the literature, we noticed that most of the aspects of inter-regional industrial variations in India have been treated inadequately. Analysis of the role and relation of the factors like urbanisation/agglo- meration, entrepreneurship and labour problems, government policies and the like in the process of industrialisation, by and large, remains inconclusive. However, the factors chosen randomly and treated in isolation hardly throw any light on the process of regional industrial growth. Moreover, quantification of the relationships has been mostly carried out in the framework of descriptive statistics like correlations or standard deviations.

It is of course not our purpose to undermine the importance of such studies. They do provide a framework and direction for further expeditions. The findings also provide some important directions for policy and planning. However, the need for a study which attempts at the problem more comprehensively, can hardly be denied. This study, therefore, is an effort in investigating the pattern, nature and causes of regional disparities in industrial development of India between 1961 and 1978 in a more comprehensive manner.