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THE POLITICAL ECONOMY OF IMBALANCES ACROSS INDIAN STATES: SOME OBSERVATIONS ON 50 YEARS OF INDEPENDENCE

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Abstract

Indian planning though sought to effect parity between regions inequality has widened during the last 50 years. Agricultural growth, its linkages with industry, the saving-ratio, factors of endogenous growth, differential labour productivity, and the locational advantages of manufacturing, seem to have limited explanatory roles. The distortions cannot be ascribed also to State intervention as against the `rule' of the `market'. In fact, the labour process control by regional literacy and similar custom, and the proximity to state politics induce indigenous large industrial houses to concentrate their investments in the `home' states, while not all of the states are equally endowed with big entrepreneurs. The restricted labour migration from, thus could hardly reverse the capital flow to, high-unemployment and low-income regions.

The Political Economy of Imbalances across Indian States: Some Observations on 50 Years of Independence

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I: Introduction

As part of its commitment to equity and social justice, planning in India has sought to effect parity between regions. The First Plan stated:

> The excessive concentration of industries brings in its train certain economic and social disadvantages and a wider diffusion of industry is desirable from this larger point of view. Further, if industrial

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development in the country is to proceed rapidly and in a balanced manner, increasingly greater attention will have to be paid to the development of those States and regions which have so far remained backward (Planning Commission, 1952: Vol. II, para 49).

There is the debate as to how far `imbalance' is inimical to growth. In fact, imbalance is intrinsic to capitalist economic development. Imbalance across countries, between agriculture and industry, and in income and wealth distribution have been presumed to be the major sources of economic development ever since capitalism evolved as a system of production. The capitalist market system is assumed to have the capacity to remove imbalances while, in fact, it has reinforced the latter. It is only when the post-colonial nation-states attempted to resist the global market forces with the nationalist agenda we witness the poles of development outside `West'. The post-1949 Chinese model of balanced development-- balance between agriculture and industry, rural and urban, heavy and light industries, and so on -- was a marked departure from even the socialist plan model of USSR.

In India, the Industrial Policy Resolution of 1956 laid down the State policy of reducing disparities in levels of

development. Further, the post-colonial State in its endeavour to reduce regional inequality `promised' a `fair' distribution of public sector investments. Public enterprises (central), irrigation, power, transport network, the budgetary transfers, all taken together, furnished enough potential to offset the market forces leading to `cumulative and circular causation' a la Myrdal (1957).[1] This paper attempts to delineate factors that explain the gap between potential and actual. It is our contention that the revenue management crisis had actually weakened the strategic capacity of the State to govern the market. The regional concentration of `indigenous' industrial houses, their differential growth rates, and ultimately their respective strength of articulating regional interests to the Union Government determined the regional pattern of industrial development, while the relative weight of agriculture in domestic economy was dwindling in most of the states. What emerges is that, given the restricted mobility of labour across states and `state minimalism', the role of the financial institutions becomes crucial in regional integration. Here, `region' is most often used synonymously with `state'. We are aware of the nuances; high per capita income in, say, Maharashtra is largely a contribution of Mumbai and the coastal belt while most of the plateau in the state is relatively underdeveloped.

The structure of the paper is as follows. Section II presents a summary measure of regional divergence. In Section III, agricultural growth as a plausible source of divergence has been tested. The regional variation in 'forward linkages' of agricultural growth as manifested in the growth of unregistered manufacturing has been discussed in Section IV. The explanatory roles of regional saving-ratio, the factors of endogenous growth, the differential labour productivity, and the locational advantages in organized manufacturing have been discussed in Section V. In Section VI, an attempt has been made to delineate the locational pattern of investments by the large industrial houses. The analysis has been put in perspective in the concluding section.

II: Inequality

As the average per capita net state domestic product (NSDP) of 23 states (excluding Meghalaya, Nagaland and Sikkim) tended to rise over the years, the disparity across states, measured in terms of the 'coefficient of variation', increased almost at the same rate (Chart 1.1).[2] The rate of increase in regional inequality declined during 1980-81 - 1993-94, as the Central Statistical Organisation (CSO)-New

Series of NSDP at 1980-81 prices (Chart 1.2) as well as the regression analysis would show.[3] There is actually a downward shift of the `old series'- curve with the change to the `New' 1980-81 series. It has been pointed out that the estimates of domestic product for some of the unorganized sectors have been revised upwards to an extent which is very difficult to accept, because of the sudden sharp changes introduced. This is also important because many of these revisions are based on `surmises' rather than the use of more recent data of sufficient reliability (Datta Roy Choudhury, 1988). However, there is no denial of the fact that wide disparity persists across Indian states. Per capita NSDP (the 1980-81 Sseries) of the richest state Delhi was about 4.14 times more than that of the poorest Bihar in 1980-81; thereafter, that shot up to 4.5 in 1991-92. Further, despite her considerable agricultural growth West Bengal slid down, in the state-rankings of per capita income to 14th in 1990-91 from 13th in 1987-88 and, from 11th in 1980-81 (Table 1). In short, regional disparity is made clear in (a) the widening gap between the per capita incomes of the richer and poorer states, (b) faster economic growth in some of the states, and (c) retardation in other states.

III: Agriculture

The general notion is that the inter-state disparity largely follows from the differential performance of the agricultural sector. Perhaps, agricultural growth across states in the 80s has been instrumental, to some extent, in reducing the 'gap' between per capita incomes. The green revolution technology that was concentrated in Punjab, Haryana and west Uttar Pradesh in the 60s, diffused in a limited manner in the 70s, and became almost an all-India phenomenon in the 80s, although the *rate* varied across states.

It is more pertinent to examine the regional disparity with respect to per capita productivity than the per hectare productivity. The land-person ratio is a crucial determinant of the former. It is only in states like Punjab, Haryana, west Uttar Pradesh and, Jammu and Kashmir that impressive increases in per capita production took place during the 60s and 70s. In Andhra Pradesh and Gujarat the increase had been marginal. Maharashtra, Karnataka and Rajasthan presented a somewhat stagnant picture. The rest of the country, covering the eastern region, Tamil Nadu and Kerala in the south, and Madhya Pradesh had experienced a fall in per capita production (Krishnaji, 1992).

Looking at the aggregate performance of agriculture at the state level during the immediate post-green revolution period i.e., 1968-69 to 1981-82, and during 1981-82 to

1990-91 certain broad conclusions may be drawn. The tentativeness of the observations arises because of the fact that in the absence of the required state-level time series of index numbers of area, production and yield per hectare of all crops combined, for all the states, the statistical exercise is based on SDP originating in agriculture in 15 major states (see Sawant and Achuthan, 1995). Nevertheless, as the compound annual growth rates (CAGRs) for the two periods show, for all the states excepting Andhra Pradesh, Gujarat and Maharashtra the rate was higher in the 80s than in the earlier period. This had counter-balanced the rising income disparity. On the other hand, the rate of agricultural growth in the 80s in some of the states like Assam, Bihar and Madhya Pradesh was lower than that of population growth. Thus, the net impact of agricultural growth on income inequality among the states was rather moderate.

The green revolution that was originally concentrated in a few areas having better irrigation infrastructure (developed mostly by the colonial government) drew bulk of the central government expenditure on agriculture in the forms of grants, irrigation projects, and subsidies on inputs. These facilitated consolidation of a class of rich peasants, and accumulation in the agricultural sector in regions like

Punjab, Haryana and west Uttar Pradesh. The factors on the `supply side' obviously complemented an appropriate `receiving system' characterized by the rural class structure in these states. To elaborate, for optimum utilization of the irrigation potential, particularly of dam irrigation, adherence to a suitable cropping pattern -- a mix of paddy, wheat and crops in rabi -- is necessary. Many crops could be grown with relatively less water and thus total irrigated area could be increased. However, so long as the cultivators are prevented from exercising their `free choice' by the property, market and credit relations, the divergence between the actual and appropriate crop-mix would be likely to continue. Looking at the total expenditure incurred on some of the central irrigation projects, their command area development (under centrally sponsored schemes), and the percentage of utilization of the potential, in different states as quoted in the CAG Report (GoI, 1975-76), it appears quite certain that pre-capitalist land relations in, say, Bihar inhibited the expected outcomes of the huge expenditure on, say, the Koshi project; utilization ratio was 18 per cent only. By comparison, the utilization ratio for Bhakra Nangal project in Punjab was about 66 and in Haryana 121 per cent.

Above all, the relative importance of agriculture itself had been declining in most of the states, as is evident from

the declining ratio of NSDP originating in agriculture to that of manufacture (Chart 2). Only in Assam, Bihar, Rajasthan there was no pronounced trend of declining share of agriculture, while in Punjab and Orissa the ratio increased since 1979-80 after initial declines.

On the whole, the observed trend of disparity across states does not have any direct correspondence with that of agricultural growth. As demand for consumption as well as capital goods increase due to commercialization of local agriculture there would be inducement to set up manufacturing units in the vicinity. However, the large scale manufacturing units set up in a few places in the country are capable of catering to most of the micro-regional demands, hence they would not necessarily lead to local manufacturing. In general, with increased commercialization, the outflow of agricultural savings augments the supply of venture capital to manufacture. But, this process has negative impacts as well. The outflow by discouraging investment and technological innovation in agriculture may, in the long run, have the retardation effect on value added. However, this is also true that investment opportunity per holdings is limited by the size of land-holdings. Punjab having higher proportion of large farms than in other parts of the country provides far greater opportunities to plough

back agricultural surplus than others. This perhaps explains why steady agricultural growth in Punjab is accompanied by a rising trend of the agriculture-manufacture ratio.

Secondly, not all of the value added in agriculture accrues to the cultivating households. Depending on the prevailing land ownership pattern, absentee landlordism, and the credit institution, substantial parts of agricultural surplus may have been consumed as rent and interest without any discernible increase in capital accumulation in agriculture. The private moneylenders in the informal rural credit market charging 4-12 per cent per month as interest rate pump out substantial volume of incomes, which may or may not have constituted savings, of the small and marginal peasant households. On the whole, whether surplus outflow from agriculture is tenable or not for aggregate development depends on a host of factors. However, the fact remains that a substantial part of the agricultural surplus is being transferred to non-agriculture via the financial institutions.

The data on state-wise scheduled commercial banks' (the giants among them are of course nationalized) yearly advances to agriculture show that certain states benefit more than the others. So far as the direct finance to farmers is concerned, states such as Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh, Punjab and

Haryana have been the principal beneficiaries (RBI, Banking Statistics). Throughout the 1980s, the direct finance (short-term and term loans) to agriculture by the scheduled commercial banks as a proportion of the aggregate value of agricultural outputs, in any particular year, in West Bengal -- when her agricultural growth, especially of rice appeared to be substantial, about six per cent CAGR as compared to the all-India average of 3.34 per cent -- was far less than in those states (Table 2). The `logic' of efficient allocation of scarce resources in a few selected agricultural (wheat) zones perhaps could be tenable in the 60s but not in the 80s when the technology' had spread widely across states, and as the question of wheat-rice balance transpired.

The preponderance of small and marginal cultivators in, say, West Bengal agriculture and their perennial requirements of credits for production purposes prompt increased demand for institutional loans. And, unless that is being met by the financial institutions, large part of the economic surplus in agriculture would eventually accrue to the private moneylenders via usurious interest rate. To make the forward linkages of increased commercialization of agriculture effective, it is necessary to transfer this part of potential economic surplus to the `town' economy via the `interest payment to loans' to especially the semi-urban

branches of the scheduled commercial banks. However, the data available on deposit and advances made by the public and private sector scheduled commercial banks in semi-urban centres (RBI, Report) tell us: Despite considerable growth in West Bengal agriculture during the 80s the credit-deposit ratio of the rural branches remained much lower than the national stipulated (by RBI) average of 60.1 per cent. And, that of the semi-urban branches in the state hovered around half of the all-India ratio, in any particular year. It may be noted further, the credit-deposit ratio of the semi-urban branches in West Bengal was lowest among the 14 relatively developed states, in most of the years in the 80s.

The poor resource mobilization from agriculture by the financial institutions, in a situation of credit rationing, had implications for the working of small scale industrial (SSI) units, bulk of which belong to unregistered manufacturing[4] and, about 45 per cent of which in West Bengal are located outside the urban and metropolitan centres (GoI, 1992: Table 6.2). Per unit fixed investment in working SSI units in West Bengal is found to be the second lowest (next to Madhya Pradesh) among the 31 states and union territories (GoI, 1992: Table 39). Although institutional credit availability does not fully explain the latter, a comparison of credit flow to the SSI sector and their

relative performance in terms of fixed capital and output in various states obviously points to an 'association' (Tables 3 and 4).

About five per cent of the SSI units in India are located in Maharashtra and they engage 14 per cent of all-India fixed assets in the SSI sector. By contrast, in poorer Madhya Pradesh, 13 per cent of the total SSI units employ only three per cent of fixed assets. On the whole, the per unit fixed assets is found to be much higher in richer states like Gujarat, Karnataka, Maharashtra and Tamil Nadu as compared to that in the poorer states. It certainly shows very little technological integration of the industrial centres with their hinterlands. West Bengal is exceptional in the sense that though she is considered to be industrially advanced, her agricultural growth rate is considerably higher than national average, and there is a steady flow of human capital resources from some of the country's best technical institutes in the state, yet her SSI units are significantly backward, technologically. One of the major reasons is the scarcity of institutional finance while a considerable part of enhanced agricultural surplus goes to capital expenditure on improved dwelling units by the dominant marginal and small peasants, and to the private moneylenders at usurious interest rates.

IV: Unregistered manufacturing

Chart 3 shows the trend of the SDP-ratio of registered to unregistered manufacturing, during 1969-70 - 1986-87. In states such as West Bengal, Orissa, Assam, Madhya Pradesh, and Uttar Pradesh, the relative weight of unregistered manufacturing, on an average, had been increasing. There was no significant rising trend in Punjab. By contrast, the ratio had a pronounced rising trend in states like Maharashtra, Haryana, Tamil Nadu, Karnataka, Kerala, Andhra Pradesh and Rajasthan. The implications of the rising share of unregistered manufacturing in some of the industrially backward states such as Orissa and Assam are different from that, say, in West Bengal having an earlier developed industrial base. In the former, it indicates transition from agrarian to non-agrarian economic system while in the latter case, it is the growing informalisation within a relatively developed economic system.

Faster growth of the unregistered than the registered sector perhaps suggests that (a) the industrial sector has been unable to generate employment growth at a rate which can make any appreciable impact on the high levels of unemployment, and (b) the labor-absorptive capacity of agriculture has declined. The unregistered production organizations provide opportunities for employment as

workers or owner-managers. These organizations also directly absorb local especially rural investible surplus. Some of these organizations use hired labour and attempt technical upgradation while others are run with unpaid family labour with the sole aim of subsistence.

The relative weights of the different types of unregistered manufacturing units in West Bengal need to be determined. This is all the more important since income (or, imputed wage) in the family units is quite often lower than the prevailing agricultural wages (Banerjee, 1995). More is the weight of the family units in the unregistered sector lower would be the wage level in the unorganized labour market. As a result, less is the inducement to adopt capital-intensive improved technology in these units. Thus, whatever forward linkages that the commercialization in West Bengal agriculture had in the development of small and tiny manufacturing units, turns out to be a short-run phenomenon. The unregistered as well as the labor-intensive SSI units in the registered sector are generally in the low-equilibrium trap': low wage does not induce modernization which, in turn, shortens the life-span of mostly those units which have links with urban industry that demands frequent changes in designs and products. As is evident (GoI, 1992: Table 5.1), the closed to working SSI units was 80 per cent

in West Bengal as against the all-India average of 51 per cent.[5] This is particularly significant as large numbers of the working SSI units in the state located outside the urban and metropolitan centres are direct outcome of the agricultural performance. And, as it has been observed (in South Korea, Taiwan and Japan) that the units that have strong links with urban industry yield higher rate of profit than units which have stronger linkages with agriculture (Mukhopadhyay and Lim, 1985).

The latter perhaps explains the development of relatively high capital-intensive SSI units in those states viz., Andhra Pradesh, Gujarat and Maharashtra which had been experiencing much lower agricultural growth than the national average in the 80s. Punjab, on the other hand, the foremost green revolution state, witnessed a rise of SSI units which constitute about eight per cent of the all-India aggregate. But their weaker links with urban industry results in a lower concentration ratio of fixed capital, i.e., six per cent (Table 3).

V: Location of organized manufacturing

Since its inception planning has been caught in the horns of a dilemma. It recognized the difficulties involved

in bringing about a relocation of industries. Thus, the compulsions of growth conflicted with equity. As the First Plan mentioned and subsequent Plan documents endorsed in a more or less similar manner:

> The tendency for industries to concentrate around certain areas where industrial development has already taken place is explained by the availability in those areas of a large number of `external' economies on account of the prior development of ancillary services and facilities like banking, transport and communications. It is difficult therefore in the initial stages to induce private industry to choose a new location where such facilities are inadequate (Planning Commission, 1952: Vol. II, para 49).

Despite a number of external economies in the regions where industrial development had already taken place `big' capital, in fact, tended to decentralize ever since the early days when the Planning Commission perceived it to be difficult. In 1950, Bombay and West Bengal together used to employ about 59 per cent of the productive capital in organized manufacturing in India. Thereafter, the share of

these two early developed states declined. And, industrial development has become noticeable in states like Tamil Nadu, Gujarat, Madhya Pradesh, Uttar Pradesh and Karnataka (Table 5).[6] The decentralization process across states somehow halted in the 70s; the aggregate share of the 12 states in the all-India ASI-Census sector productive capital took a reverse trend.

The volume of capital invested in manufacturing certainly cannot be contemplated as evidence of development. Assam for a long time allured foreign as well as domestic capital in her tea gardens but ultimately remained one of the underdeveloped states in India. Bihar is another case in point. For instance, in 1982-83, Bihar engaged about 11 per cent of the aggregate productive capital in the all-India ASI-Census Sector. Yet, by the index of per capita NSDP at 1980-81 prices, she was lowest among the 27 states and union territories (Table 1). Similarly, while Uttar Pradesh accounted for about 10-11 per cent of the aggregate productive capital her rank in the per capita NSDP did not improve beyond 25th in the order. Thus, the `local linkages' of industrial capital through `upstream' and `downstream' enterprises seem to be crucial.

Regional variation in organized manufacturing is often attempted to be explained in terms of resource

endowments of the regions. It is very difficult to have precise state-wise estimate of savings of the federal state. A tentative measure with CSO-estimates of NSDP and the consumption expenditure data of the National Sample Survey Organisation (NSSO) is attempted here. The principal drawback of comparing these two sets of data is that they are of different nature. The estimates of SDP are prepared on the basis of income originating approach where the measurement corresponds to income originating due to factors of production physically located within the geographical boundaries of a state and represents the value of goods and services produced within the state. As a result, this does not tell us about the income accruing to the normal residents of the state. The huge foreign remittances, from migrant workers in Gulf countries, received by, say, Kerala is not accounted for in SDP estimates, thereby understating her actual incomes. Similarly, net budgetary transfers from Centre to states, and inter-state remittances by migrant workers would tend to revise the SDP estimates of income and thereby savings. On the other hand, the data on consumption expenditure (including durable goods, rents and taxes) are based on sample survey of household units. It is observed that the NSS consumption estimates for all durable goods (particularly, expenditure on TV sets, radios, transport

equipment and household electrical appliances) were substantially lower than the corresponding CSO estimates (Minhas and Kansal, 1989). In that case, the high per capita NSDP-states are likely to have even higher per capita consumption expenditure than that recorded in NSS Reports, and thereby lower saving-ratio. Given these limitations, our estimates in Table 6 indicate that had there been no inter-state transfers the per capita saving-ratio (at 1980-81 prices) would have been tentatively so. In other words, the estimated savings may be considered as the potential rather than actual source of investments, in respective states.

The industrially advanced states viz., Gujarat, Karnataka, Maharashtra, Punjab and Tamil Nadu experienced higher level of savings to income ratio (Table 6). Poorer Bihar and Rajasthan often had negative saving ratio. Yet, Rajasthan has improved her relative position, in terms of per capita income, among all the states while Bihar could not. Orissa had a relatively high saving ratio yet she is not only industrially backward; her rank among the states dwindled. It is mostly the public sector enterprises that constitute the base of industries in Orissa. Again, West Bengal with moderately high saving ratio and wider industrial base still has been losing to other states. Thus, in some of the states, industrial growth is found to have

positive correlation with saving-ratio while for many others this was not so.

Technical progress as an inevitable byproduct of the processes of capital accumulation, however, has been contested by the New Growth Theory (NGT). One of the crucial hypotheses of the latter is that the size of human capital (especially, scientists, engineers and technicians) in the society explains the difference between the rich and poor nations. So long as industrial labour is not mobile across states, as it is often the case in India, certain conclusions of NGT appear relevant in explaining regional divergence.

The precise estimate of total stock and the economically active stock of scientific and technical (S&T) personnel, in India, are not available. Another problem was that S&T personnel were not only engaged in S&T activities but were engaged in multifarious activities like production, teaching, extension, management, administration, quality control, banking etc. Thus a head count of total stock of S&T personnel is not very much meaningful. Moreover, as opposed to Lucas (1988), Romer (1990) argues that growth is not an outcome of human capital accumulation as such, but of the invention of increasingly productive techniques. Research and Experimental Development (R&D) is a systematic and creative work undertaken in order to increase

the stock of knowledge and use of this knowledge to devise new applications for increasing productivity, decreasing production costs, develop new products and processes etc. Given the limitations of state-wise data, we may use such parameter as patents and knowhow developed, in each state, as measure of the output of R&D out of the stock of human capital (Table 7). Reading Table 7 along with Table 5 one may have explanation of -- ignoring the causality -- the high concentration of organized manufacturing in states like Maharashtra and Tamil Nadu. However, it becomes difficult to explain the steady decline of West Bengal's share, the industrial backwardness of Kerala, or the differential rate of industrial growth in Karnataka and Gujarat. It may be further noted that the lower incidence of industrial development in Delhi despite the largest number of patent applications from there is attributable largely to the location of most of the head offices of public sector units with significant R&D activities, there.

Differential labour productivity across states also appears to have limited explanatory capacity. It is argued that the labour productivity is higher in the developed locations. However, it is meaningless to express `labor productivity at the state-level' by any single figure; as if there is a single `decision unit' at the meso-level

manufacture. Productivity varies across firms. Productivity of labour cannot be measured in isolation from that of the capital. Also, labour productivity is positively associated with the level of output (frequently referred to as Verdoorn's Law). The total factor productivity (TFP) may be a good measure to see whether the regions differ significantly. However, so long as TFP approach assumes full employment of resources, perfect competition, and ignores altogether the role of demand factors it has serious limitations. The growth process throughout the modern history of capitalism has been one of unbalanced growth in which some sectors decline in importance while others grow. It has been the rapid growth industries that have experienced relatively high rates of growth of TFP and technical progress, which makes it difficult to define the 'cause-effect' relation. By this count, West Bengal having high concentration of jute textiles, or Maharashtra that of cotton textiles is almost certain to have performed badly until recently.

Roy (1997), using ASI-data and input-output framework, however, has shown that there was negative productivity growth of the input-bundle to the extent of 2.5 per cent in 20 out 23 states, during 1969-70 - 1985-86. The exceptions were: Gujarat, Chandigarh and Assam.

The modern theory of location, starting with Alfred Weber, places emphasis mainly on costs of transport. This together with differences in labour cost giving rise to 'agglomeration factors' gave a basis for determining locations that would yield a greater profit (Friedrich, 1929; Hirschman, 1958; Hoover, 1975). The establishment of the Indian Iron and Steel Co (IISCO) and the Tata Iron and Steel Co (TISCO) in the vicinity of raw materials in Bengal and Bihar is understood, and, for that matter the concentration of engineering industry in Bengal during the colonial period. But that does not explain the growth of cotton textiles in Bengal when it had no definite raw material advantage. Or, why were Bombay and Calcutta, and not sites in the vicinity of the repository of coal, iron ore, bauxite, etc., the earliest locations of factory-based industries?

The Weberian framework basically intends to explain the 'pure market' phenomenon and does not considers the political and institutional constraints. For example, the plant-location of the Maruti Udyog Ltd (a public sector joint venture) at Gurgaon (adjacent to Delhi) was seriously questioned by its collaborator (Suzuki Motor Corporation) on the ground that bulk of the market then was in western and southern India, and the transport costs of cars from plant

to those states would be substantial. However, the techno-economics was superseded by other considerations. It is also futile to search the economic rationale of the location choice in the central public service sector: Why the head quarters of the University Grants Commission (UGC), Indian Council of Social Science Research (ICSSR), National Concil of Education Research and Training (NCERT) and various other central bodies of education are in Delhi instead of being located in a more central place like, say, Bhopal in Madhya Pradesh? Or, why the head quarter of the Council of Scientific and Industrial Research (CSIR) is not located near the prime industrial zones in India such as Maharashtra-Gujarat, Tamil Nadu-Karnataka, or West Bengal?

According to the `circular and cumulative causation' model of Myrdal (1957) and Kaldor (1970), free working of the market forces lead to the clustering of increasing returns activities in certain areas of the economy. The influence of growth in the developed regions upon the rate of growth of lagging regions operates through spread and backwash effects. The scale of the `backwash' will depend inter alia on (i) the initial national and regional location patterns in early industrialization, (ii) the force of other factors contributing to interregional divergence such as centripetal flow of

capital and labour (particularly, skilled), and (iii) the time-period in which such divergence is not checked or offset by government policies (Holland, 1976). The limitation of the Myrdal-Kaldor type analysis is that factors such as the extraneous discrepancies in capital productivity can also generate regional inequality. Disparities in productivity (and growth rate) of capital may arise because various regions specialize in different `basic' products, or because demands for these products grow at differential rates. New centres of agglomeration may develop on the basis of newer products whose demand is growing faster, while the composition of products in the older centre of agglomeration may become archaic. The concentration of traditional jute textiles (a sinking industry) in West Bengal, of chemical-based industries (moderate growth) in Maharashtra and Gujarat since the late 60s, or computer software production (faster growth) in Karnataka since the mid-1980s, and their disparate growth rates largely explain the regional divergence.

Under free market conditions, one may thus find explanations of regional divergence, though the timing of development of a particular location remains undefined. The Government of India and the Planning Commission, however, from the very beginning were committed to

reducing regional disparity. The licensing system was one of the crucial instruments in the hands of the central government towards that end, until the 1991-liberalisation. The credit flow by such large all-India financial institutions as Industrial Development Bank of India (IDBI) and Industrial Finance Corporation of India (IFCI) was equally important, which only followed the pattern of distribution of industrial licenses.

VI: Corporate investment behaviour

The industrial investments by big business houses in India are found to be regionally concentrated. Most of the Gujrati (e.g., Kasturbhai, Kilachand, Mafatlal, Sarabhai, Walchand) investments are concentrated in the Maharashtra-Gujarat region, most of the Punjabi investments (excepting those by Thapar and Mahindra) in the Punjab-Delhi region, Parsi (e.g., Tata) and Maharashtrian (e.g., Kirloskar) investments mainly in Maharashtra,[7] while the Southern houses (e.g., Chidambaram, Chettiar, Iyengar, Ramakrishna) are confined primarily to the southern region. The Marwari[8] investments (e.g., Birla, JK, Bangur, Modi, Bajaj, Goenka, Sahu Jain) were, however, diversified in states covering West Bengal, Uttar Pradesh, Maharashtra, Madhya Pradesh and Bihar. Nevertheless, the largest part of the Marwari

investments was initially lodged in West Bengal (Banerjee, 1988).

Of the Marwari business houses, the major part of investments of the Birlas, Sahu Jains, Dalmias, Bangur Somanis, Goenkas, Bajoria Jalans, Jaipurias and Soorajmull-Nagarmulls were located in eastern India in general and West Bengal in particular, at least up to the mid-1960s.[9] Major part of the aggregate turnover of the Marwari business houses in this region were from the traditional industries, such as jute and cotton textiles, paper, cement and tea manufacturing. And most of the firms of the `houses' having substantial assets were located in West Bengal.

In eastern India, especially West Bengal, as long as the import substitution phase was not complete and foreign capital remained dominant, the region remained industrially attractive. But with the displacement and decline of European capital and the obsolescence of the product mix that the region used to produce, the industrial sector of the region plunged into a crisis. The Marwari industrial houses who replaced the British had neither the legitimacy nor the hegemonic position to be the representative of the region. They could neither identify with, nor project the aspirations of the region. This may explain the `fluidity' of their capital as compared with other houses.

On the one hand, `big' capital tended to decentralize, particularly in the 60s. On the other hand, the rate of diffusion was not the same in all the directions (state-wise). Given the regional distribution of capital of the large industrial houses, this is tantamount to saying that the differential industrial growth rate of the states followed the differential rate of accumulation of the industrial houses.

The Industrial Planning and Licensing Policy (IPLP) Report (1967, Vol. II: Part V, Statement XV) compiled the data on state-wise and product-wise `applied for and approved licensed investments' for the business houses, for the period 1959-66.[10] Accepting the limitations of the data, we may make certain observations. First, the business houses that had major investments in eastern India were trying to diversify investments to other regions. Second, Maharashtra, Gujarat, Tamil Nadu and even underdeveloped Uttar Pradesh attracted industrial investments more, as it is found that almost all of the business houses applied for substantial licenses in those states. Third, in allocating licenses, the licensing authority followed a discriminatory policy with respect to different industrial houses. This is evident from the ratio of approved investment to total investments applied for by various business houses in various states. While Tata and Sarabhai, for example, were

approved 66.5 and 91.3 per cent, respectively, of the total investments applied for projects to be located in Maharashtra, the Birlas, the Sahu Jains or the Goenkas were approved about 36, 35 and five per cent respectively in that state, during 1959-66.

Since the Third Plan an industrial restructuring was taking place in India. The types of industries which were set up in different locations at that time enjoyed the advantages of technology-leadership with a pretty long time-lag before others could emulate. Thus it was the allocation of licenses for newer branches of production viz., chemicals (especially, petro-based), various machinery including electrical along with the complementary credit allocation by the all-India financial institutions largely determined the future course of regional development in the corporate sector. For example, there were six applications for investments in petrochemicals in Assam (having substantial oil reserves) during 1959-66 involving about Rs 240 million, instead only two projects were approved the costs of which were about Rs 80 million. There was only one application for petrochemical project in West Bengal the cost of which was estimated at Rs 115 million, but that was not approved.[11] Though there were applications for such type of projects from Bihar, none was approved. However, 16 projects for Maharashtra and two for

Gujarat got the approval of the authorities.

Among other big business houses in West Bengal the Birlas had the lion's share of investments. Thus industrial growth in the state was to a large extent related to the investment pattern of this particular house. During 1959-66, the Birlas applied for 683 licenses whereas only 364 projects got approval. The applied-to-approved ratio was also low for some other houses whose businesses were concentrated in the Eastern region. It is true that multiple applications for the same product and for a wide variety of products were meant to foreclose licensable capacity. It is also true that the Birla enterprise does tend to preempt licensable capacity in many industries. But, the licensing authority did not have enough information at that time about which industrial house actually would utilize the licenses properly. Thus discrimination without any generally accepted ground in the approval of licenses cannot be brushed aside as unimportant.

It may be seen from the available data on investments associated with particular applications for different states (IPLP Report, 1967) that the Birlas applied for investments in Assam, Bihar, Orissa and West Bengal to the tune of Rs 2414 million while they sought licenses for Rs 3315 million of investments in other states. The

approvals, however, were for Rs 1237 million in the eastern regional states and Rs 1484 million in other states. If the Union Government had perceived that to remove regional disparity it was necessary to diffuse Birla's investments to other states, then what could explain the high approved-to-applied ratios for the Birlas in such developed states as Maharashtra, Gujarat and Tamil Nadu having wider industrial bases? These states were by then witnessing large investments in the private corporate sector as well as in the public sector. On the other hand, there was no significant diffusion of investments by the non-Eastern regional houses to the underdeveloped states of the Eastern region.

The process led to consolidation of the trend in the following decades. Table 8 records the state-wise location pattern of plants of the large industrial houses, in the 90s.[12] Strikingly, despite considerable progress made by these business houses over the last 30 years the region-bias generally does not show any symptom of dilution. By looking at the regional concentration ratio of individual houses one can easily locate their regional `origin', excepting of course the Marwaris.

Any attempt to relate the regional relocation of investments to the variability of infrastructural facilities would be misleading. By the `Relative infrastructure

development index' West Bengal was among the top seven states in, say, 1980-81 while Karnataka, Andhra Pradesh or Uttar Pradesh was lagging behind (CMIE, March 1997). Further, the industrially backward states like Punjab, Kerala and Haryana were among the top four states by the index of infrastructure. Yet, big capital from the laggard states in respect of infrastructure such as Maharashtra and Gujarat were not directed to the former states.

Since the beginning of the 80s almost all of the state governments had entered into fierce competition for alluring industrial capital to their respective states with grand incentive schemes. But it seems the regional literacy and similar custom, particularly language and work ethic, induced indigenous bourgeoisie to remain confine to their respective states. Both the control over the labour process and proximity to state politics played crucial roles in the technology absorption process, and thereby in locational choice. The `Marwaris' perhaps are the only business community in India who have been engaged in a wide range of business activities including moneylending across regions for quite a long time. And, in the process built up a rapport with respective state politics that has eventually facilitated their `mobility'.

The trend to regional divergence was further

accentuated by the direction of foreign direct investment (FDIs) flows. Since the early 1970s new FDI inflows were directed to technology-intensive sectors such as electrical goods, machinery and machine tools, and chemical and allied products. These three broad sectors accounted for nearly 58 per cent of total FDI in manufacturing in 1980 as against 41 per cent in 1964. In traditional industries like jute and cotton textiles, paper, etc., the foreign shares depleted (Kumar, 1995). Thus, the industrial centres having high concentration of the latter industries suffered more. Added to this was the direction of FDIs by non-residents of Indian nationality/ origin (NRI) (on repatriation as well as non-repatriation basis) which became quite substantial towards the later half of the 1980s (RBI, 1994-95: Vol. II; and, EPW, 1997). And, given the regional bias of the indigenous business houses it is not very unlikely that the investments by the NRI Gujratis, Tamils or Punjabis would be made in Gujarat, Tamil Nadu or Punjab, respectively, while most of the states cannot boast of such non-resident entrepreneurs.

VII: Conclusion

The post-colonial Indian planning exercise epitomize the strategic capacity of Indian State to direct the process of industrialization. The State did resort to strategic

intervention undermining the private corporate sector and regional forces without taking to, unlike in the East Asian NICs, `political closure'. However, as the growth slowed down, the gap between plan targets and achievement widened, by the mid-1960s she had lost that capacity. On the other hand, there emerged the corporate sector as more powerful along with the powerful regional class forces particularly in the green revolution areas. A more centralized political power had attempted to combat the growing socio-political tensions in different regions in India. Following which, there had been increasing dilution of federalism, until the late 1980s, in the State management. The provincial government's role in industrial development became more and more uncertain. This was particularly so as the licensing system began to be used more toward political objectives. The emergence of an integrated and indigenous bourgeoisie in different regions and their relative strength of articulating regional aspirations before the Union Government resulted in a new set of relationships among the agencies of economic development.

The Centre-state budgetary transfers is a partial measure of the phenomenon -- dilution of federalism. In the schemes of things laid down in the Indian Constitution, it was the Finance Commission, to be appointed by the

President every five years or earlier, which it was expected, would recommend whatever adjustments in intra-federal transfer (actually, from the Centre to the states) of budgetary funds were considered necessary to meet the changing requirements of the system. However, until the mid-1980s, the larger part of the budgetary funds that have gone from the Centre to the states were in the form of Plan and discretionary (i.e., non-plan, non-statutory) assistance and less were transferred in pursuance of the recommendations of the Finance Commissions, appointed from time to time (Gulati, 1987). In fact, the discretionary transfers amounted to nearly one-third of the aggregate budgetary transfers during the first three and half decades of planning. In absolute terms these transfers amounted to Rs 339,140 million during 1951-84 (George, 1987). Only since the Eighth Finance Commission (1984-89) things began to change. Looking at the state-wise per capita discretionary transfers over the plan periods (ibid), and relating it to the per capita state income, the conclusion becomes quite obvious that these transfers were made arbitrarily and did widen inter-state disparities. The middle income states received less than the high income states and, the low income states received less than the middle income states. That the latter began to increase dramatically since the

Annual Plans (1966-69) is evident from the coefficient of variation of per capita `discretionary transfers' to different states in each of the plan periods.[13]

Additionally, investments in public sector enterprises (PSUs) also showed an increasing tendency to concentrate in the developed states barring those for extraction activities in states like Bihar, Orissa and Madhya Pradesh (see Public Enterprise Survey Report, various issues). While Maharashtra drawing of the largest share of investments in PSUs (about 19 per cent in 1992-93) is partly explained by off-shore oil exploration, the minimal participation of the public sector in the low-developed states draws attention. All these amount to indicate that the hypothesis: State intervention in the market forces resulted in the regional imbalance, is rather weak. The central government resource flows in fact followed the direction of private big capital, since the mid-1960s. On the other hand, migration of labour from high-unemployment and low-income regions remain restricted not only by the distances to be travelled but also by the `sons of the soil' strategy in vogue in many of the states. Under these circumstances, the post-1991 `State minimalism' is bound to reproduce regional imbalances.

Notes

[1] Myrdal (1957) indicates the mechanism of inequality in a dynamic framework. It is designed in a skeletal structure to which Kaldor (1970) adds further substance.

[2] The state coverage of CSO-data is limited before 1969-70.

[3] 1969-70 to 1986-87 ('Old' series at 1970-71 prices): g_t (annual) = 1.76%, R-bar^2 = 0.87927, t = 11.172
1980-81 to 1993-94 ('New' series at 1980-81 prices): g_t = 0.63%, R-bar^2 = 0.23027, F (1,12) = 4.88904, t=2.211;

[4] Units outside the purview of the Annual Survey of Industries.

[5] The role of the supra-regional factors is not however underrated.

[6] As to the comparability of data, first, the CMI covered only 29 groups while ASI covered all the 63 groups of industries. Second, the CMI covered factories employing 20 or more workers using power whereas ASI (Census) accounts for those factories employing 50 or more workers with power, or 100 or more without power. Third, there were changes in the geographical coverage of the surveys. The main changes are the inclusion of Saurashtra in the CMI after 1950, of Andhra

Pradesh after 1952, of Mysore after 1953, and the division of Bombay into Maharashtra and Gujarat in 1959.

7 The Tata Iron and Steel Co in Bihar is a partial exception.

8 People who began to migrate in search of fortune from the north-western province, Rajasthan to the eastern province, Bengal in the late 19th century.

9 To get a tentative idea about the sources of capital accumulation of these `houses' one could use either the product-wise turnover vis-a-vis the aggregate turnover data, or the data on business-wise assets. The Report of Monopolies Inquiry Commission (1965) gives detailed data.

10 The data are (a) partial because `items on the free list' are excluded altogether, and (b) not fully reliable because the information, particularly on the size of investments usually mentioned in licence applications are preliminary and tentative.

11 The `logic' might have been that West Bengal had locational disadvantage as compared to Maharashtra particularly since the naphtha used to be imported from the West. But the point needs to be emphasized is against the selective application of the locational theory. However, this project, viz., Haldia Petrochemicals has been ultimately launched in February 1997 as a joint venture of the Government of West Bengal with the Soros-

Chatterjee Inc., USA, with large cost escalation to 30 billion rupees.

[12] (1) A few states have been left out for the sake of convenience. (2) To the extent the companies did not report the location of plants, as it happens in a number of cases, the list is tentative. (3) We have not included here the foreign (FERA) companies, excepting Hindustan Lever, and the 'dominant undertakings' having assets of Rs 10 million or more. (4) Many of the companies have changed their names and, due to mergers, the 'house' composition has also undergone changes, during 1990 - 1996. We have enlisted the plant locations of those companies (with changed names) only which still belong to the same 'house' as in 1990.

[13] Coefficient of variation: Second Plan - 0.5474, Third Plan - 0.6026, Annual Plans - 1.3636, Fourth Plan - 0.9506, Fifth Plan - 1.0766, Sixth Plan - 1.2490.

Chart 1.1: State-wise Per Capita NDP
at 1970-71 Prices

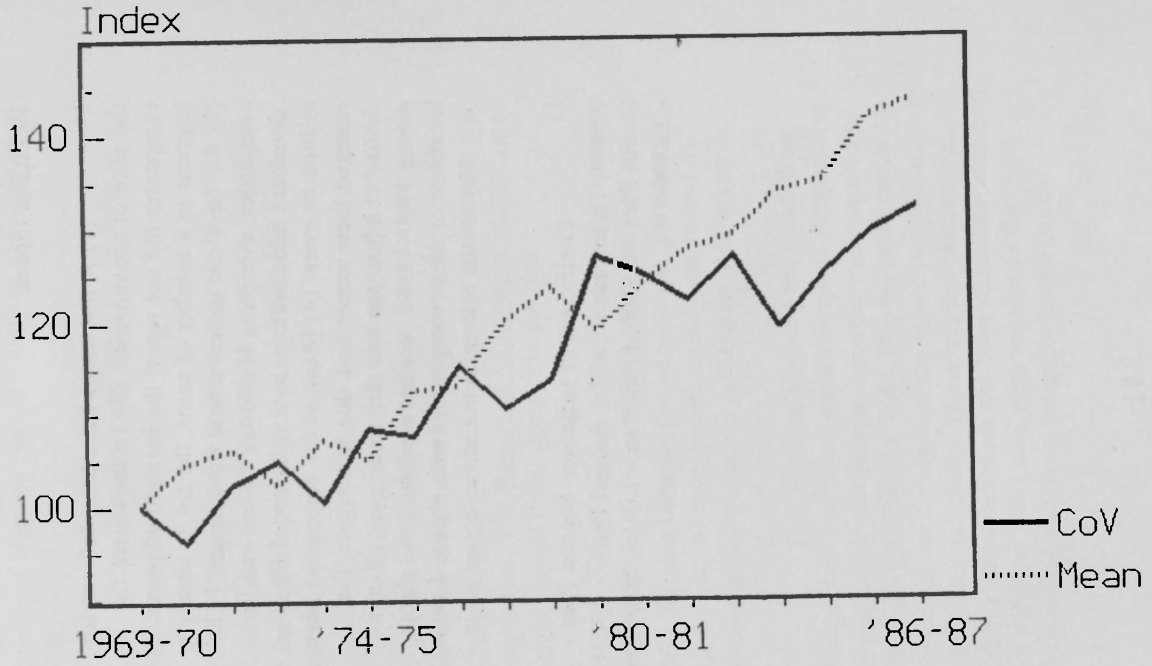


Chart 1.2: Inequality in Per Capita NSDP
(Old Series & New 1980-81 Series)

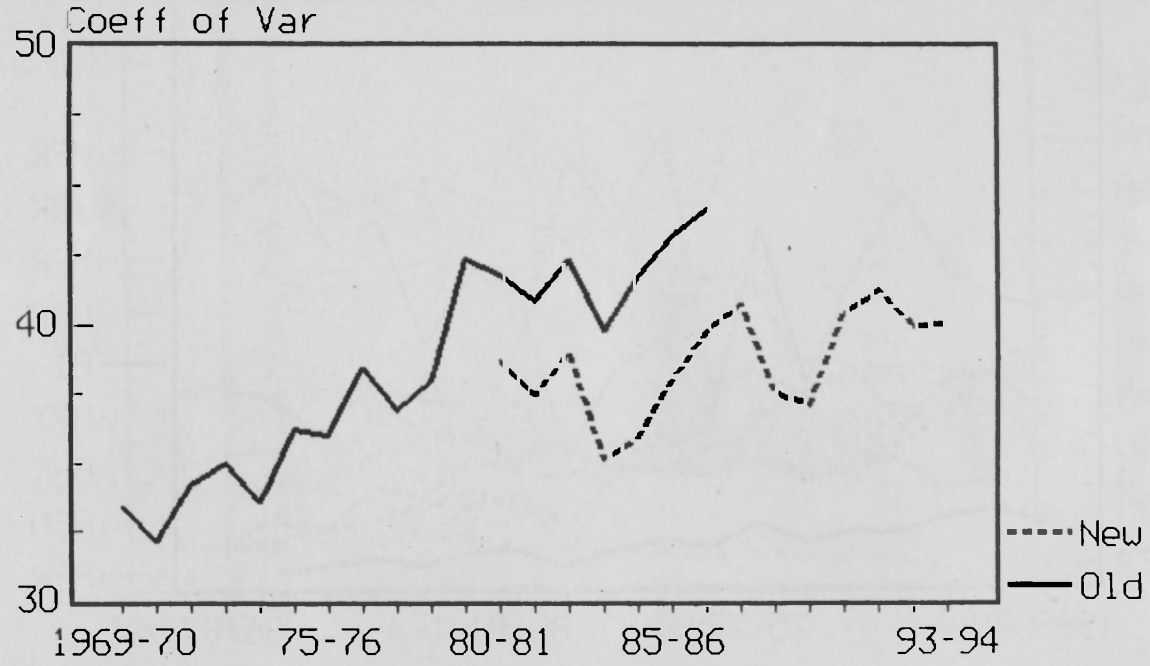
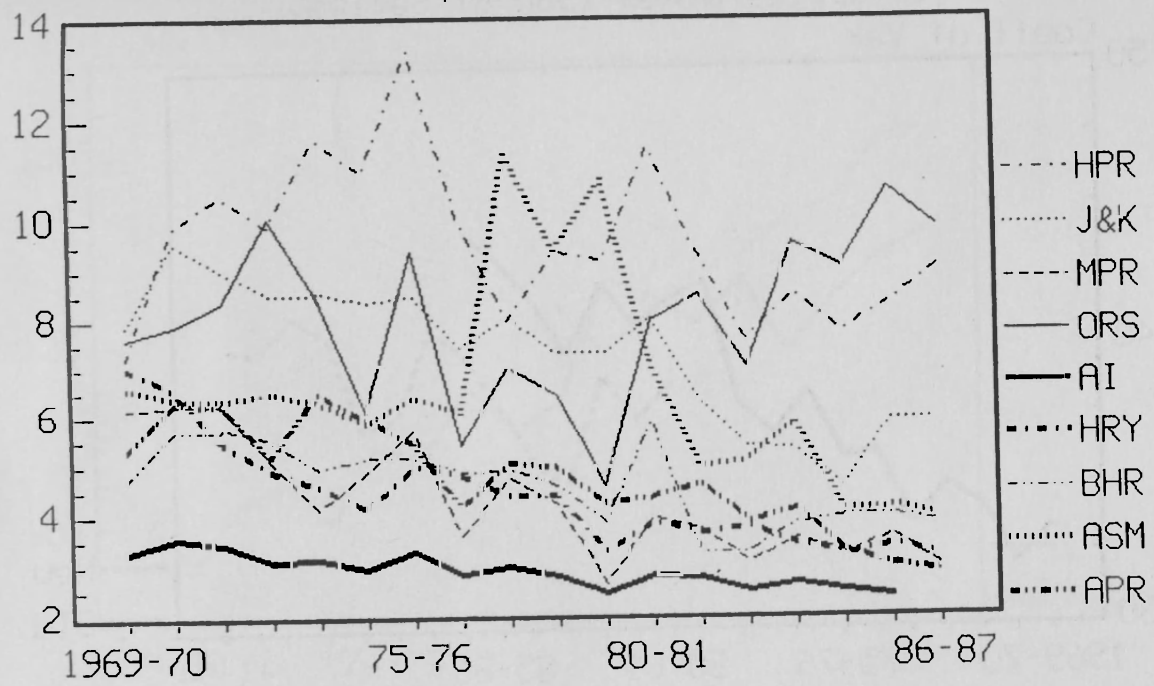


Chart 2.1: Agr/Mfr ratio at 1970-71 prices (State-wise)



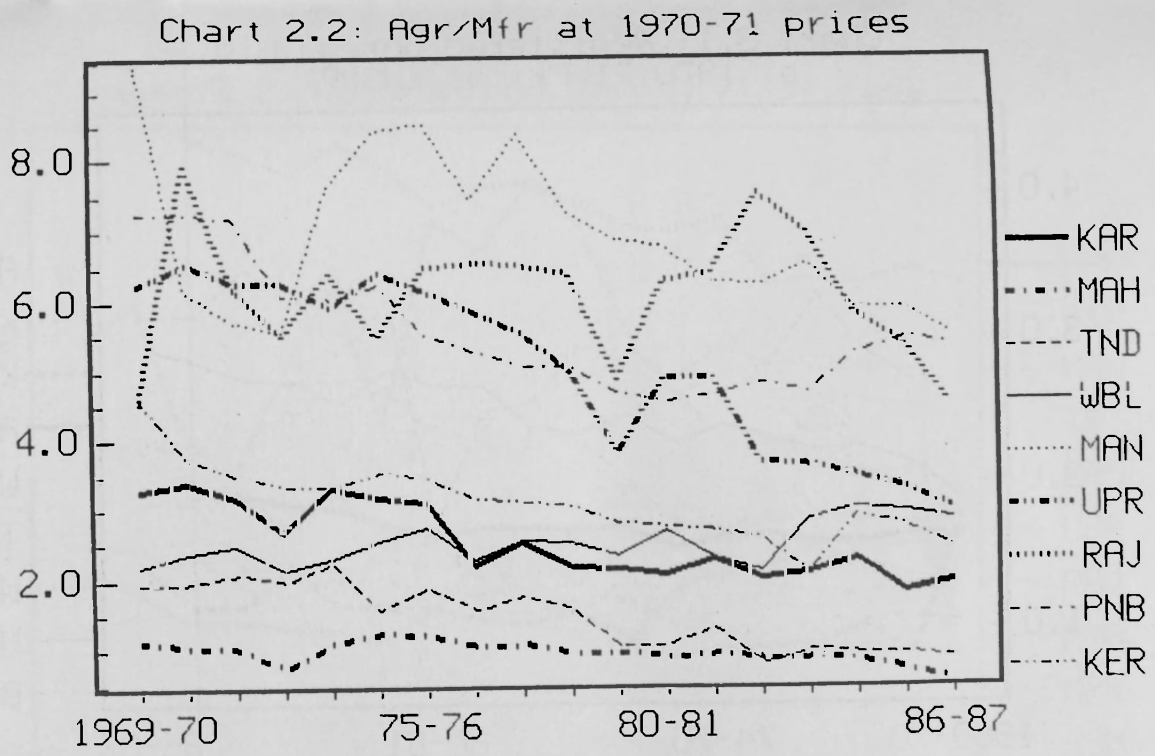
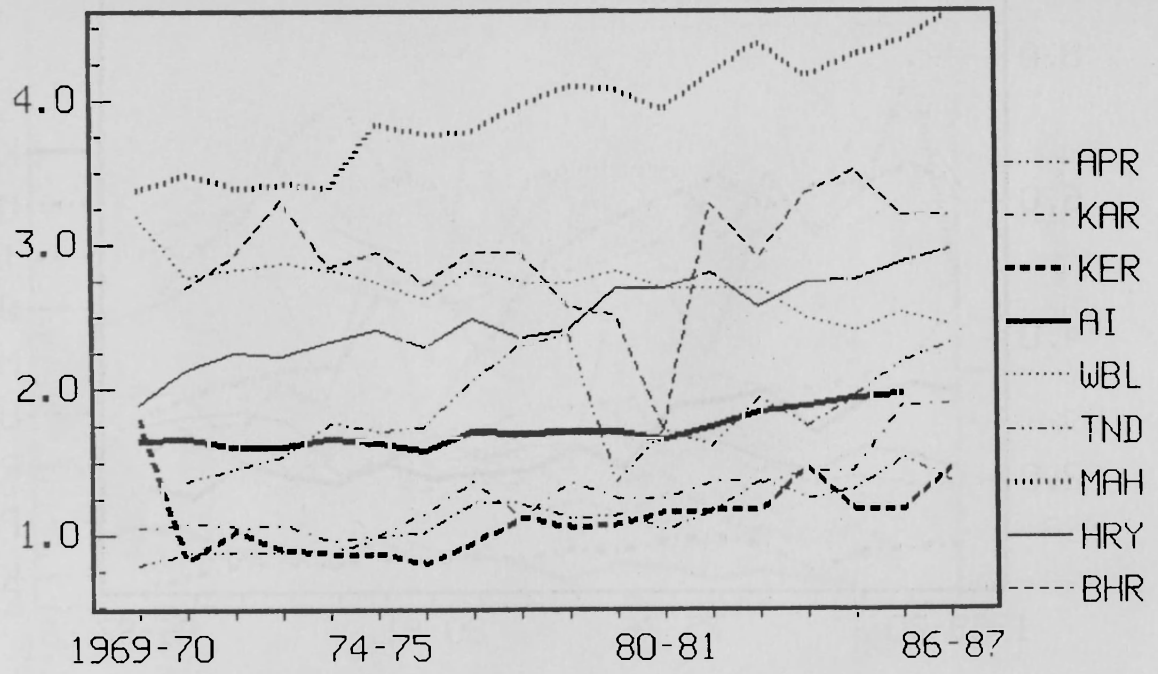


Chart 2.2: Agr/Mfr at 1970-71 prices
8.0
6.0
4.0
2.0
1969-70
75-76
80-81
86-87
KAR
MAH
TND
WBL
MAN
UPR
RAJ
PNB
KER

Chart 3.1: Registered/Unregd Mfg
at 1970-71 Prices (NSDP)



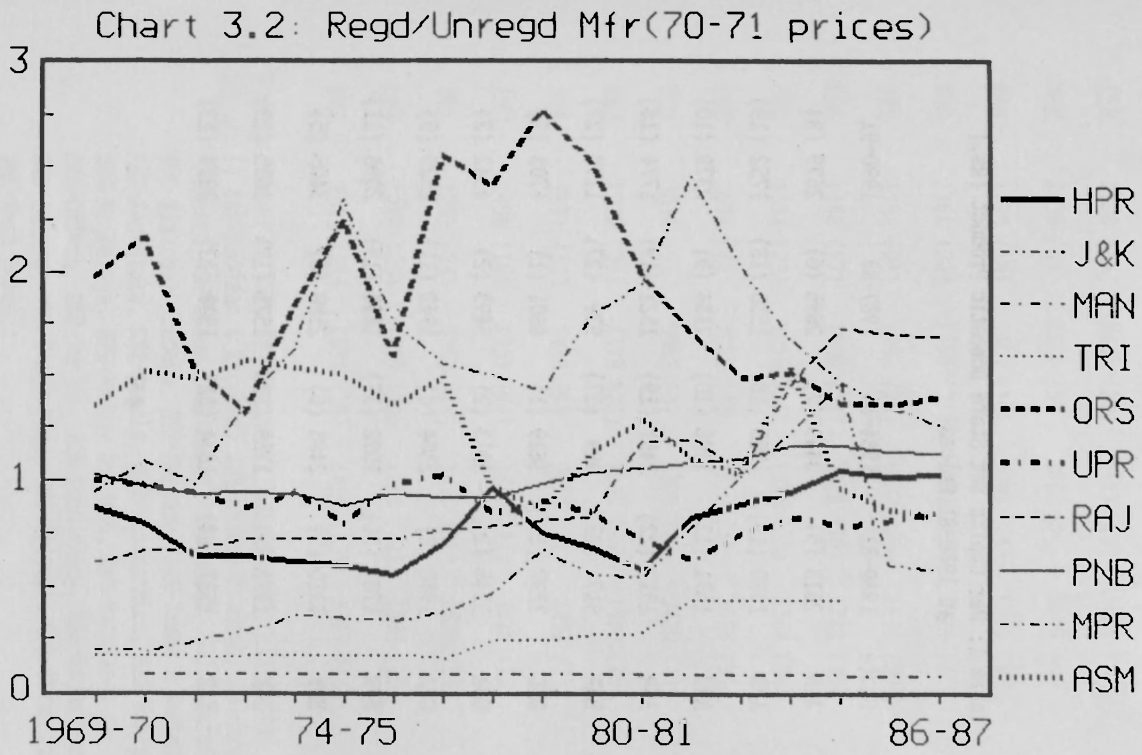


Chart 3.2: Regd/Unregd Mfr(70-71 prices)
3
2
1
0
1969-70
74-75
80-81
86-87
HPR
J&K
MAN
TRI
ORS
UPR
RAJ
PNB
MPR
ASM

Table 1: Per Capita Net State Domestic Product (Rs.)
at 1980-81 Prices

State	1980-81	1984-85	1987-88	1990-91
A&N	2613 (5)	2445 (7)	2695 (6)	2679 (8)
APR	1380 (19)	1505 (18)	1530 (18)	1752 (19)
ARU	1571 (13)	1908 (10)	2184 (9)	2379 (10)
ASM	1317 (22)	1457 (19)	1521 (19)	1774 (18)
BHR	917 (27)	999 (27)	979 (27)	1177 (27)
DEL	3797 (1)	3619 (1)	4601 (1)	4703 (1)
GOA	3145 (2)	3313 (2)	3493 (2)	4542 (2)
GUJ	1940 (8)	2304 (8)	1942 (11)	2525 (9)
HPR	1704 (10)	1592 (17)	1818 (15)	2098 (11)
HRY	2370 (7)	2483 (6)	2598 (8)	3405 (5)
J&K	1776 (9)	1759 (13)	1575 (17)	1635 (23)
KAR	1527 (14)	1834 (11)	1909 (12)	2024 (13)

State	1980-81	1984-85	1987-88	1990-91
KER	1508 (15)	1435 (20)	1413 (24)	1802 (16)
MAH	2435 (6)	2576 (5)	2813 (5)	3386 (6)
MAN	1419 (18)	1607 (16)	1693 (16)	1784 (17)
MEG	1361 (20)	1385 (21)	1485 (20)	1726 (21)
MPR	1358 (21)	1293 (25)	1423 (23)	1696 (22)
NAG	1448 (17)	1806 (12)	2016 (10)	1738 (20)
ORS	1314 (23)	1210 (26)	1320 (25)	1364 (26)
PNB	2674 (4)	3011 (4)	3310 (3)	3676 (3)
PON	3038 (3)	3062 (3)	3309 (4)	3420 (4)
RAJ	1222 (26)	1379 (23)	1241 (26)	1890 (15)
SIK	1571 (12)	1919 (9)	2678 (7)	3293 (7)
TND	1498 (16)	1758 (14)	1821 (14)	2025 (12)
TRI	1297 (24)	1363 (24)	1470 (21)	1629 (24)
UPR	1278 (25)	1379 (22)	1455 (22)	1588 (25)
WBL	1612 (11)	1631 (15)	1828 (13)	1917 (14)

Source: Based on CSO, Estimates of State Domestic Products.

Notes: 1) A&N-Andaman & Nicobar, APR-Andhra Pradesh, ARU-Arunachal Pradesh, ASM-Assam, BHR-Bihar, DEL-Delhi, GUJ-Gujarat, HPR-Himachal Pradesh, HRY-Haryana, J&K-Jammu & Kashmir, KAR-Karnataka, KER-Kerala, MAH-Maharashtra, MAN-Manipur, MEG-Meghalaya, MPR-Madhya Pradesh, NAG-Nagaland, ORS-Orissa, PNB-Punjab, PON-Pondichery, RAJ-Rajasthan, SIK-Sikkim, TND-Tamil Nadu, TRI-Tripura, UPR-Uttar Pradesh, WBL-West Bengal;

2) Figure within parentheses indicates the rank.

Table 2: Scheduled commercial banks* credit to agricultural sector as percentage of NSDP originating in agriculture (at current prices)

State	1980-81	1984-85	1988-89	1989-90
APR	13.9	21.1	20.7	-
ASM	4.0	4.0	8.1	8.3
BHR	4.6	5.2	7.4	10.1
GUJ	8.3	8.8	13.5	14.6
HRY	10.3	25.0	17.3	16.3
HPR	4.2	9.2	10.6	10.7
J&K	2.6	7.6	3.9	-
KAR	12.3	19.0	25.3	26.3
KER	11.9	15.8	21.8	21.0
MPR	5.7	9.9	11.9	14.7
MAH	8.7	11.3	15.5	14.1
ORS	4.9	9.3	13.4	10.3
PNB	13.3	46.2	16.9	15.6
RAJ	7.4	10.9	12.2	-
TND	19.5	22.4	40.4	47.8
UPR	5.6	7.5	9.3	10.2
WBL	5.3	4.7	15.2	8.9

Sources: For NSDP in agriculture, EPW Research Foundation (1996); and, for the credit-data, CMIE (February 1997: Table I.149).
Note: '*' Includes SBI and its associates, nationalized banks, foreign banks, regional rural banks and, other scheduled banks.

Table 3: Comparative development of SSI in the states

(Per cent)

State	1972				1987-88				1987-88
	Unit	Emp	Fixed assets	Production	Unit	Emp	Fixed assets	Production	Closed ÷ Working units
APR	6	5	4	3	7	8	7	9	38
BHR	4	4	3	3	6	5	4	2	42
GUJ	7	7	9	8	6	8	10	8	55
HRY	3	3	4	4	4	3	4	4	89
KAR	4	4	4	3	7	7	7	6	36
KER	4	8	4	4	4	5	4	3	46
MAH	11	14	21	20	5	10	14	17	36
MPR	5	4	3	3	13	4	3	5	47
PNB	10	8	8	9	8	6	6	6	46
TND	11	13	10	12	10	15	12	11	43
UPR	9	10	9	8	9	10	11	9	70
WBL	10	11	9	10	8	9	5	6	80
Total	84	90	88	87	87	90	87	86	-
All-India	100	100	100	100	100	100	100	100	51

Sources: GoI, DCSSI (1977: Table 4.2); GoI, DCSSI (1992).

Table 4: Scheduled commercial banks credit to SSI during 1980s

State	SSI units as %age of all-India	SSI credit as %age of all-India, annually
Maharashtra	5	16 - 18
West Bengal	8	6 - 8
Gujarat	6	8 - 10
Tamil Nadu	10	10 - 12

Sources: GoI, DCSSI (1992); and, CMIE (February 1997: Table I.213).

Table 5: Industry: State-wise productive capital (%age share of all-India)

State	1950	1955	1960-61	1965-66	1970-71	1975-76	1982-83	1988-89*
APR	-	2.2	4.0	3.6	5.1	4.9	5.2	6.5
BHR	10.5	13.0	12.8	8.5	7.6	11.9	10.6	7.3
DEL	1.5	1.4	1.0	1.2	1.2	1.6	1.6	-
GUJ	-	-	7.4	6.2	6.2	7.7	9.0	9.2
KAR	-	3.5	3.5	3.8	4.9	4.5	4.1	3.9
KER	-	-	2.0	1.5	2.3	2.9	2.5	-
MPR	3.0	2.6	2.9	8.2	6.0	6.8	8.1	5.0
MAH	34.6	27.1	23.7	16.3	17.9	15.5	15.8	16.5
PNB	1.8	2.1	2.0	5.4	2.6	3.6	4.6	4.6
TND	10.0	7.3	5.4	8.0	9.8	8.2	6.8	10.7
UPR	9.6	10.7	6.7	7.6	10.3	10.4	11.4	11.3
WBL	24.6	21.8	21.8	19.4	13.3	9.6	8.0	6.5
Total	95.6	91.7	93.2	89.7	87.2	87.6	87.7	

Sources: GoI, Census of Indian Manufactures (CMI), 1946-1958; CSO, Annual Survey of Industries (ASI), Census Sector, 1959 to] 1982-83; and, CSO, ASI 1988-89: Summary Results for Factory Sector, 1992.

Note: * ASI Census plus Sample sectors (Census Sector data are not available separately).

Table 6

An Estimate of State-wise Saving-NSDP Ratio (at 1980-81 prices)

(Per cent)

State	1967-68	1968-69	1969-70	1970-71	1972-73	1973-74	1977-78	1986-87	1987-88
APR	34.3	27.5	27.6	27.1	20.2	26.8	22.7	13.4	13.3
ASM	-	18.2	2.8	16.3	21.9	14.1	21.4	20.2	19.3
BHR	23.7	9.9	-7.1	8.6	-5.7	-16.0	7.7	1.0	-9.0
GUJ	48.9	38.9	42.5	46.7	23.6	39.4	43.4	40.4	33.8
J&K	6.2	-8.1	-1.4	6.1	5.9	20.6	30.4	27.1	5.6
KAR	24.6	29.8	29.0	31.4	22.7	34.7	39.6	35.4	35.0
KER	43.6	37.2	48.0	42.5	36.7	32.1	26.4	0.5	-0.5
MAH	45.8	43.6	38.7	42.1	38.1	44.5	43.1	50.1	49.6
MPR	35.7	18.4	19.7	20.9	12.1	11.6	20.0	10.8	12.7
ORS	25.4	40.0	37.8	44.2	36.6	34.0	38.6	22.0	20.0
PNB	41.7	33.6	33.7	23.5	15.2	25.5	33.3	42.1	42.6
RAJ	15.3	-15.2	-2.6	27.7	-7.9	2.6	-8.4	-7.7	-17.0
TND	-	34.6	39.3	36.0	29.9	27.0	47.3	29.0	30.0
UPR	25.5	19.4	16.6	16.7	13.9	9.5	8.1	10.6	14.4
WBL	19.2	21.7	10.1	15.8	5.7	-0.7	23.2	26.9	30.3

Sources: For per capita NSDP: CSO, Estimates of State Domestic Product, as reproduced in Chandhok et al, India Database: The Economy, Vol. I (1990); and, for data on per capita annual consumption expenditure at 1980-81 prices, as estimated from various rounds of NSSO, Consumer Expenditure Survey, see Datta Roy Choudhury (1993).

Table 7

Applications for patents filed by different states, 1980-81 - 1991-92

State/Union Territory	No. of applications filed		
	1980-81 to 1985-86	1986-87 to 1991-92	Total
Andhra Pradesh	158	132	290
Bihar	155	136	291
Delhi	1605	1897	3502
Gujarat	343	243	586
Haryana	58	52	110
Karnataka	293	335	628
Kerala	227	250	477
Madhya Pradesh	103	141	244
Maharashtra	1652	1637	3289
Punjab	64	42	106
Rajasthan	62	58	120
Tamil Nadu	664	605	1269
Uttar Pradesh	244	250	494
West Bengal	754	591	1345
Others	127	128	255
Total			13006

Source: Computed from GoI, Ministry of Science and Technology, Research and Development Statistics 1992-93, (1994: Table 45).

Note: The address of the patentee is the basis of classification under different states.

Table 8: Plant locations of the Large Industrial Houses (as in 1996)
(Numbers)

Rank	House	Eastern			N-E	Western		Southern				Central		Northern		
		WBL	BHR	ORS	ASM	MAH	GUJ	TND	KAR	APR	KER	UPR	MPR	HRY	RAJ	OTR
1	Birla	24	8	3	2	8	2	3	6	8	2	16	13	8	8	4
2	Tata	2	10	6	2	27	7	8		2	7	7	3			
3	Reliance					1	3									
4	J.K.Singhania			2		9						5	3		5	
5	Thapar	2		1		15	2	3	1	1	2		4	2		3
6	Mafatlal					13	14		1				1			
7	Bajaj					4						3			1	
8	Modi		1			5						7	1		2	
10	M. A. Chidambaram							9								
11	T.V.S.Iyengar							20	1	1		1		1		
12	Hindustan Lever	7	1		6	10	5	20	4	5		7	2			2
14	Shri Ram	2	2							2		5		1		3
16	United Breweries	3	1			4	1	3	4	3	1	2		1	1	1
18	Bangur	2		1	1	1	2	4	2	5		1			3	
19	Kirloskar					11		1	8				1	1		
20	Walchand					9	1	1	1							

Rank	House	WBL	BHR	ORS	ASM	MAH	GUJ	TND	KAR	APR	KER	UPR	MPR	HRY	RAJ	OTR
21	Mahindra & M	1				8			1	1						
22	Goenka	17			1	2			2		2					
23	Escorts								1					3	1	2
25	Kasturbhai Lalbhai						7									
26	ESSAR	1				1	1	1					1			
27	Garware					12										
28	Ashok Leyland		1	1				5	2	3		1	1		1	
29	Sarabhai						3									
31	Wovrasjee Wadia					8	3	3	1				1			
32	Macneill & Magor	1	1		8				1							
35	Simpson							14	4							1
36	Chowgule					1	2		1				2			
37	Godrej					1	1					2	1			
38	Khatau					1										
42	Madura Coats	1						3			1					
44	Shaw Wallace	6			4	7		8	2	3	2	1	1	1		
45	Raunaq Singh					1	2	1			1			1		
47	Raasi									4						
48	V.Ramkrishna			1				7		6						

Rank	House	WBL	BHR	ORS	ASM	MAH	GUJ	TND	KAR	APR	KER	UPR	MPR	HRY	RAJ	OTR
49	Murugappa Chettiar					2		7			1					
50	Sahu Jain		1			2	1		1	3		1			1	1
54	G.V. Naidu							14								
64	Jain Shudh								2			7		1	1	
69	Parry							3	1							
71	Dalmia							2	2			1		1		
76	Nava Bharat	1						4		3						

Sources: For the list of MRTP companies, and the ranking of the large industrial houses (as on 31.3.1990), see Company News & Notes, August 1990, 28 (2). The location of plants of the companies have been compiled from CMIE, CIMM (January, 1997).

Note: 'OTR' includes Himachal Pradesh, J&K, Punjab, Chandigarh and Delhi in the Northern Region.

References

Banerjee, D., 1995, "Market and non-market configurations in rural West Bengal: Local organisations and silk weaving," Economic and Political Weekly. Vol.30, No.47, pp. M 135- M142.

Banerjee, D. and A. Ghosh, 1988, "Indian planning and regional disparity in growth," in A.K. Bagchi (Ed.), Economy, Society and Polity: Essays in the Political Economy of Indian Planning in Honour of Professor Bhabotosh Datta (Oxford University Press, Delhi).

CMIE, Centre for Monitoring Indian Economy, 1997, Banking and Finance. February (Mumbai).

CMIE, 1997, Profiles of States. March (Mumbai).

CMIE, Corporate Information on Magnetic Medium (CIMM), Release 3.5, (Mumbai).

Chandhok, H.L. and The Policy Research Group, 1990, India Database: The Economy. Vol. I (Living Media, New Delhi).

CSO, Central Statistical Organisation, Annual Survey of Industries. 1959- (Government of India, GoI).

CSO, 1985, Estimates of State Domestic Product, 1960-61 to 1983-84 (GoI).

CSO, 1989, Estimates of State Domestic Product, 1970-71 to 1987-88 (GoI).

CSO, 1991, Estimates of State Domestic Product and Gross Fixed Capital Formation (GoI).

CSO, 1992, Annual Survey of Industries 1988-89: Summary Results for Factory Sector (GoI).

Datta Roy Choudhury, U., 1988, "New series on national accounts statistics: Some comments," Economic and Political Weekly, Vol. 23, No. 30, pp.1527-40.

Datta Roy Choudhury, U., 1993, "Inter-state and intra-state variations in economic development and standard of living," Journal of Indian School of Political Economy, Vol.5, No.1, pp. 47-116.

EPW Research Foundation, 1997, "Current statistics," Economic and Political Weekly, Vol. 32, No. 4, pp. 135-36.

EPW Research Foundation, 1996, National Accounts Statistics of india, 1950-51 to 1994-95 (Sameeksha Trust, Mumbai).

Friedrich, C.J., 1929, Alfred Weber's Theory of the Location of Industries (Chicago University Press).

George, K.K., 1987, "Discretionary budgetary transfers: A review," in I.S. Gulati (Ed.), Centre-State Budgetary Transfers (Oxford University Press, Delhi).

Gol, Government of India, Ministry of Commerce and Industry, Directorate of Industrial Statistics, Census of Indian Manufactures, 1946 to 1958 (New Delhi).

Gol, 1965, Report of Monopolies Inquiry Commission, Vols. I-II (New Delhi).

Gol, (Civil) 1975-76, Supplementary Report of the Comptroller and Auditor General of India for the year 1975-76 (New Delhi).

Gol, Development Commissioner, Small Scale Industries, DCSSI, 1977, Report on Census of Small Scale Industrial Units (1972-73) (New Delhi).

Gol, Development Commissioner, Small Scale Industries, DCSSI, 1992, Report on the Second All-India Census of Small Scale Industrial Units (Registered up to 31st March, 1988) (New Delhi).

Gol, Ministry of Science and Technology, Department of Science and Technology, 1994, Research and Development Statistics 1992-93 (New Delhi).

Gulati, I.S. (Ed.), 1987, Centre-State Budgetary Transfers (Oxford University Press, Delhi).

Hirschman, A.O., 1958, The Strategy of Economic Development (Yale University Press).

Holland, S., 1976, Capital Versus the Regions (Macmillan, London).

Hoover, E.M., 1975, An Introduction to Regional Economics, 2nd edition (Alfred A. Knoff, New York).

Kaldor, N., 1970, "The case for regional policies," in idem, Further Essays on Economic Theory (Duckworth, London).

Krishnaji, N., 1992, "Land and labour in India: The demographic factor," in idem. Pauperising Agriculture: Studies in Agrarian Change and Demographic Structure (Oxford University Press, Delhi).

Kumar, N., 1995, "Industrialisation, liberalisation and two way flows of foreign direct investments: Case of India," Economic and Political Weekly. Vol.30, No.50, pp. 3228-37.

Lucas, R.E. Jr., 1988, "On the mechanics of economic development," Journal of Monetary Economics. Vol.22, No.1, pp. 3-42.

Minhas, B.S. and S.M. Kansal, 1989, "Comparisons of the NSS and CSO estimates of private consumption: Some observations based on 1983 Data," The Journal of Income and Wealth. Vol.11, No.1, pp. 7-24.

Mukhopadhyay, S. and C.P. Lim, 1985, Development and Diversification of Rural Industries in Asia (Asian and Pacific Development Centre, Kuala Lumpur).

Myrdal, G., 1957, Economic Theory and Underdeveloped Regions (Duckworth, London).

NSSO, National Sample Survey Organisation, "Tables with notes on consumer expenditure," various rounds (GoI).

Planning Commission, 1952, First Five Year Plan (GoI).

Planning Commission, 1967, Industrial Planning and Licensing Policy: Final Report. Vols. I-IV (GoI).

Ray, S.C., 1997, "Productivity growth in India in the regional context," Mimeo (University of Connecticut).

RBI, Reserve Bank of India, Banking Statistics: Basic Statistical Returns, various issues (Mumbai).

RBI, 1994-95, Report on Currency and Finance (Mumbai).

RBI, Report on Trend and Progress of Banking in India, various issues (Mumbai).

Romer, P.M., 1990, "Endogenous technological change," Journal of Political Economy, Vol.98, No.5, pp. S71-S102.

Sawant, S.D. and C.V. Achuthan, 1995, "Agricultural growth across crops and regions: Emerging trends and patterns," Economic and Political Weekly, Vol.30, No.12, pp. A2-A13.

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