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**Disparities in Economic Development:
Learning From The "Growth Centre" Experiences
of India's Five Year Plans,
(1951 -1985).**

By

Shivanagappa F., Kore Shettar.

**A Thesis Submitted to the
Faculty of Graduate Studies and Research
in Partial Fulfillment of the Requirements
For the Degree of Master of Arts.**

**Department of Geography
Carleton University
Ottawa, Canada.**

January, 1988.

****v****

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ABSTRACT

Like several other Third World countries, India, since gaining its independence, has chosen to follow a strategy of accelerated industrialisation as the high road to economic growth and national prosperity. In accord with this strategy, the rapid expansion of a large-scale, corporate manufacturing sector was expected to bring bountiful benefits to the nation: a basis for further growth and rapid capital accumulation; full employment, and a higher level of living for the entire population. It was assumed that rapid growth of GNP, savings, per-capita income, investments, and exports, suffice to bring about higher standards of living. It has been almost forty years since India achieved independence. Yet, despite the government's efforts since the 1950s to launch a vast number of schemes, development efforts have remained largely localized. Rural poverty, unemployment, and inter-regional inequality have increased with the growth of the national economy. In line with the changing perception of development needs in the Third World, this thesis examines the impact of the chosen growth-centred industrial policy on rural and agricultural development in India as it effects the provision of basic needs. The reorientation of planning priorities towards creating a strong agricultural base for the rural majority is called for. In order to increase agricultural production, full development and utilization of the nation's irrigation potential is seen to be necessary. Unless village life in the hinterland can be made tolerable, the problem of India's poverty and unemployment will be insoluble. This requires grass-roots involvement and local control over critical resources.

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Chapter 1

INTRODUCTION

This thesis examines spatial disparities in economic development in India in the context of the policies of six successive Five Year Plans (1951-1985). The major objectives of the study will be to establish the nature of these inequalities, attempt an explanation of their appearance, and suggest measures to achieve orderly development over space in ways that promise to create full employment. In particular, it will examine and identify the weaknesses which have contributed to the limited success of past development strategies, and assess the positive role of the agricultural sector, and the potential of more widespread irrigation, in creating equitable growth and employment, and in reducing rural poverty. An attempt will be made to examine the developmental trends, policy prescriptions, and programme innovations of the official Five Year Plans (FYPs).

In explaining the limited impact of past economic development, it is argued that growth-centre strategies of industrial development are inappropriate to Indian conditions and have led to the relative neglect of the rural and agricultural sector. The spending priorities of the FYPs are examined, and their outcomes are reviewed to substantiate this claim. The continued dependence of the

rural economy of India on climatic events is indicated, and hence the significance of expanded irrigation, under local control, to the wellbeing of the mass of the population is identified. Obstacles to accelerated rural development are acknowledged, and these help to explain why the agricultural sector has contributed less than it could to the process of economic development.

The study depends largely on secondary data, mostly published by the Government of India. The data pertain to the different sectors of the economy. As agriculture is the main sector of the Indian economy, more emphasis is laid on the analysis of this sector. It will be shown that food production has not fallen behind, but the rural majority have not enjoyed the benefits of development. Rural poverty and unemployment have not managed to stay abreast as the Indian economy as a whole has moved forward. Data and analysis concerning the spatial pattern of investment in industry and agriculture, planning priorities, ~~protections~~, and the incentives extended to the urban-industrial and rural-agricultural sectors are presented. Data is collected mainly from Statistical Abstracts of India and Five Year Plan documents. In addition, information was sought from reports published by the Government of India and other development agencies. In some cases, primary data,

collected from village based observation, are used to support the argument.

This thesis studies two aspects of development viz, the spatial and temporal. The trends of industrial and agricultural development in all the Indian major states are examined and the period of study extends over about 35 years (1951-1985). The reasons why this period of study was chosen are:

Firstly, systematic efforts towards the planned development of the country were initiated in 1951, and India has now passed through six Five Year Plans. Secondly, the achievements of the plans in fulfilling the targets of economic growth have become the focus of intensive criticism all over the country. Thirdly, many studies have concluded that there is great incompatibility between developmental policies and the institutions created to translate them into practice during this period (see, for example, Basu & Richard (1986), Jain et al.(1986). Fourthly, available data support the conclusion that the percentage of the population below some poverty line has not changed, as desired, with the growth of the national economy. Therefore, an attempt is made to explain how it has happened - the apparent failure of the most ambitious Community Development Programmes in India.

To set the stage for an examination and assessment of contemporary India, aspects of post-colonial spatial structures will be touched upon. Having done this, an attempt will be made to arrive at a quantitative representation of the pattern and trends of inter-regional and inter-sectoral disparities in development in India. This analysis will lead to conclusions about what is happening in the area of rural and community development planning in India and what the future appears to hold given the present Five Year Plan.

If ever a way is to be found of attaining simultaneously the objectives of national growth along with improvements in the social conditions of the people, it is essential to see what lessons can be learned from the mistakes of the past planning efforts. It is argued that all important insights will be missed if one continues to think of development only in quantitative terms, such as GNP, per capita income, investment, savings, exports and imports. These may have little immediate relevance to the development problems of a country like India, where the labour force is growing rapidly and where the majority live in rural areas and are unskilled. In such a situation, the question one needs to consider is what has been happening to employment, inequality, poverty and the welfare of masses.

The Indian Context

British rule came to an end in India in 1947. The princely states, which had existed for centuries, were merged in the Indian Union. The integration of the Indian states was accomplished within a year and the number of states was reduced from 562 to 27¹. These states were again re-organized in 1956. Today there are 22 states and 9 union territories in the Indian Union (Figure 1). India is the seventh largest country in the world. It has an area of 32,87,782 sq.km.² Lying entirely in the northern hemisphere, extending between latitudes 8° 4' and 37° 6' north and longitudes 68° 7' and 97° 25' east, India embraces a major part of the south Asian realm.³

At the outset, attention should be drawn to the following figures which are of profound significance and which lie at the root of all Indian economic problems. The population of India stood at 683.8 million in the census year 1981 and is estimated to be increasing at a rate of 1.9 per cent per annum. The population is likely to increase to 833 million in 1990 and to 994 million by 2000 A.D. About 516 million people out of the total population of 683 million live in India's 6,000 villages (Table 1). The majority of people live in mud houses with the only source of water supply being the village pond, well or running stream, or a hand

Nichols (1969):

"A growth pole is an urban centre of economic activity which can achieve self-sustaining growth to the point that growth is diffused outward into the pole region and eventually into the less developed regions of the nation."³⁶

The basic assumption of all the above definitions is that either a growing urban centre or a spatial agglomeration of related industries should have catalytic impacts on surrounding regions.

According to Boudeville, propulsive industries are able to induce two types of growth effect in the regional economy: First, Leontieff's "multiplier effects", which occur through the existing pattern of intersectoral relationships within the economy; second, 'polarization effects' which occur through the increase in production of propulsive industries.³⁷ In the first case, it is argued that setting up a new industry in an area will have repercussions on the local economy through the acquisition of inputs and disposal of outputs and the generation of income.

Boudeville introduced the concepts 'Up stream' and 'Down stream' in his planning model. The newly introduced activities are considered to be "upstream" if they supply inputs to the other industries. "Downstream" industries are mainly users of their output. He gives an example of a newly introduced cement factory which may result in the establishment of another unit manufacturing bags for packing purposes (upstream) and starting up of a cement block industry

pump. Droughts recur every few years; unemployment and underemployment are rampant. Though primary education is free, it is not compulsory, and about 69 per cent of the village adults are still illiterate. Agriculture is the most important industry and one of the biggest sources of India's wealth. About three fourths of the labour force is engaged in agriculture, and it accounts for about 50 per cent of the national income, 50 per cent of the industrial raw materials and over 55 per cent of India's foreign exchange earnings⁴.

The net sown area is about 48 per cent (1971) of the total area of the country, 15 per cent of this is double cropped. Cultivable waste covers only 5.7 per cent and is composed mostly of marginal lands⁵. Thus, the scope for the extension of agriculture is highly limited and efforts have

Table. 1

DECENNIAL TREND IN URBANISATION
AND URBAN POPULATION GROWTH IN INDIA
1951-1981

Census Year	Total Population (in millions)	Urban Population (in millions)	% of Urban Population	Number of Urban Places
1951	361.09	62.09	17.59	2,867
1961	439.23	78.16	18.24	2,371
1971	548.16	107.82	20.21	2,574
1981	683.81	157.44	23.77	3,301

Source: Census of India 1981. Series I.

to be directed rather towards its intensification.

With respect to the urban sector, according to the 1981 census, there were 3,301 urban places in India (Table 1).

A settlement is classified as a town if it has:

1. A municipality, corporation, or cantonment board.
2. Other places will also qualify as urban if they satisfy the following three criteria:
 - a) minimum population of 5,000. b) at least 75 per cent of the male working population engaged in non-agricultural pursuits, and c) a density of population of at least 400 persons/sq.km.⁶

Table 2.

URBAN PLACES AND PER CENT OF URBAN POPULATION
BY SIZE-CLASS IN INDIA. 1961-1981.

Size Class	Number of Urban Places.			% of Urban Population.		
	1961	1971	1981	1961	1971	1981
I 100,000 "	104	147	218	50.90	56.30	60.41
a. Above 1 million	7	9	12	22.84	25.43	26.69
b. Below 1 million	97	138	206	28.06	30.87	33.72
II 50,000 -99,999	129	178	270	10.92	11.16	11.56
III 20,000-49,999	450	573	744	17.30	16.26	14.33
IV 10,000-19,999	736	856	1053	12.98	11.16	9.48
V 5,000 - 9,999.	743	656	761	7.01	4.62	3.67
VI 5,000	209	170	255	0.89	0.50	0.55
TOTAL	2,574	3,301		100%	100%	100%

Source: Census of India 1981. Series I.

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This definition was first adopted in 1951. In the 1971 census a concept of urban agglomeration was adopted which includes some parts of villages which were considered as urbanised and contiguous to the town or towns concerned. This means that an urban agglomeration is by definition a continuous urban spread, having a core town and its adjoining urban outgrowths which may be either urban or rural areas. It is obvious that while the proportion of the urban population has increased in recent years, it is not purely urban in nature. Many of the towns in India appear to be overgrown villages. The number of towns, therefore, has fluctuated from decade to decade because of changing definitions and concepts.

Another important point is that about 60 per cent of the total urban population is located in only a few Class I cities, with a population of 100,000 and above (see Table 2). It is these cities that registered very high growth rates during the period 1971-1981. Migration from rural areas is one of the major factors responsible for such a trend. It is evident from the fact that metropolitan cities have continuously grown in size and have given rise to many social, economic and environmental problems that the growth of these cities has not been matched by a corresponding increase in housing, transport, and water supply. Thus, in a country like India, where the majority live in rural

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areas (76.2 per cent) one would expect that any talk of development should be evident in changes in the livelihood of the rural population. Our argument is that the fundamental objective of the Indian economy should be to improve the economic condition of the farmers who form the backbone of the country. The planning strategies should be aimed at developing rural areas, increasing employment and at re-distributing the benefits of growth in favour of marginal and medium farmers and other low income groups.

In fact, the need for broad-based development and spatial planning was realized by the Congress Leaders even before India achieved her independence. Throughout the period of the liberation struggle, they were building a socialist vision. The socialist stance no doubt made the Congress Party popular with the peasants, indeed among most sections of the people. Mohandas Gandhi (popularly called 'Bapuji') was an ardent advocate of self-sufficient, self-governing village republics. The strategies Gandhi put forward for the development of the country's economy were based on a number of fundamental principles: self-reliance, decentralization, full-employment, production by the masses (not mass production), egalitarianism and socialism.

Gandhi said:

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'...My idea of village "Swaraj" is that it is a complete republic independent of its neighbours for its

own vital needs and yet interdependent for many things in which dependence is a necessity. Thus every village's first concern will be to grow its own food crops, and cotton for cloth. Then, if there is more land available it will grow useful money crops, thus excluding Ganja, Tobacco, Opium and the like. The village will maintain a theatre, school, public hall for recreation, and play ground. It will have its own water works ensuring clean water supply. Education will be compulsory up to the final basic course. The government of the village will be conducted by the 'Panchayat' of five persons annually elected by the adult villagers, male and female, possessing minimum prescribed qualifications. I have not examined here the question of relations with neighbouring villages and urban centres. My purpose is to present an outline of village government...¹¹

Thus the Gandhian approach of development is rooted in the village, and seeks to achieve its ideals in the socio-cultural heritage of ancient India. Gandhi wanted every single individual to be well fed, well clothed, and well housed. He was a firm believer in decentralized, consumer goods industries built in and around India's 6,000 villages. For Gandhi the village was the basic unit of development. He wanted each village to be self-sufficient in many of its needs including food and clothing.

Gandhi said:

My views of national planning differ from the prevailing ones. I do not want it along the western industrial lines. I want to prevent our villages from catching the infection of industrialism..... I have a great concern in introducing large scale machine industry. The machine produces much too fast and brings with it a sort of economic system that I cannot grasp. I do not want to accept something when I see that its evil effects outweigh whatever good it brings with it. I want the dumb millions in our land to be healthy and happy..... There are too many idle hands..... But as we grow in understanding, if we feel the need for machines, we certainly will have them, once we have shaped our lives on 'Ahimsa' (Complete non-violence) and 'Satya' (Truth)¹²

Systematic efforts towards the planned development of the country were initiated in 1951, four years after independence.¹³ India has now passed through six Five Year Plans (FYPs) and is presently in the second year of the seventh FYP. The precise shape and magnitude of the seventh plan has yet to be finalised. The achievements of the plans up to the fifth FYP (1975-80), in fulfilling the targets of economic growth in particular, have become the focus of intense criticism all over the country. Jaya Prakash Narayan, (1979) the learned statesman of India, suggested:

"...As a result of faulty planning policies under the Nehrus, the country has remained poor and underdeveloped even after thirty years of 'Swaraj' (independence). Nehru had blundered in that he forsook the Gandhian path and followed the Western model of development without understanding India's particular problems. His daughter (Mrs. Indira Gandhi) made matters worse by her wrong economic policies and authoritarian methods. The result is increased unemployment more poverty, more corruption, more inflation and therefore discontent among the people."

He further adds:

"...as a matter of fact, it was a challenge to rejection of all the wrong policies and unclean methods adopted by the powers-that-be during all these years after independence. This challenge could be met by promising a return to 'Gandhi' which Indira failed to do and was, therefore, overthrown.' 'The radical Gandhian approach alone can solve the stupendous problems of poverty and unemployment and take the country out of the morass of stagnation in which it continues to find itself....'"¹⁴

Furthermore, a number of researchers in their empirical studies have demonstrated that the underdevelopment and the stark poverty which plague much of India today are considered

to be the direct consequences of the wrong policy decisions, misguided planning, and poor implementation of whatever plans the Government formulated during the period after independence (see, for example, L.C.Jain et al. (1986), M.L.Gujral (1979), M.Shrinivasan (in S.C. Jain, 1969)). The experiences of the last three and a half decades have made India realize that western models of growth do not adequately answer her development problems. Despite the huge planning investments during this period, development has tended to occur in isolated pockets, it has strengthened interregional disparities and has kept millions of people out of modern production systems. It has made the rich, richer and the poor, poorer. These characteristics are analysed in later Chapters.

The 1960's and 70's witnessed a great surge of interest in the problems of Third World countries. It has become increasingly clear from recent appraisals of the development performance of many Third World countries that strategies of development adopted in these countries largely failed to satisfy the requirement of improving the livelihood of the majority of their populations. Many of the African and Asian countries in particular, although they attempted strategies aimed at reducing both inter-regional and inter-personal differentials, have tended to end up with increasing disparities. During the last three and half

decades of planned programmes in India, rapid strides have been made. Industrial production has increased by 500 per cent, agricultural production has increased by about 250 per cent. Improvements in the tertiary sector are equally

¹⁵
significant. But all these achievements fade into insignificance when we look at the simultaneous increase in the poverty of the rural masses, unemployment and the widening inequality between the regions. Indian economic planners predicted in the 1950's that the benefits of growth would "trickle down" to the poorer strata of the population in the process of development within a reasonable amount of time. They have not done so.

NOTES & REFERENCES.

1. Although the British dominated the whole of the Indian empire they granted an autonomous status to the 562 princely states. Within the limit of one state of Gujarat there were some 350 independent princely states. There were at least 50 states with an area of less than 5 sq.km. These territories were not based on any rational criteria. It was widely felt that there were too many states, and they were administratively unorganized, economically expensive and geographically unrealistic. There was a clamour among the public that this system of princely states was one of the major causes of the arrested economic development in British India. (See, Sukhwai B.L., 1971, "Political Geography", p. 152.)
2. Government of India, Research and Reference Division, New Delhi, Reference Annual, INDIA 1981, p.1.
3. World Development Report 1982, Published for the World Bank, Oxford University Press, p. 142.
4. Planning Commission, Government of India, New Delhi, Administrative Reform Commission, Report of the Study Team, 1977, Vol. I, pp. 4-5
5. Singh R.L., (1971), India: A Regional Geography, National Geographical Society of India, Varanasi, p.21
6. Census of India 1981, Provisional Population Totals, Series - I, Paper 2, Registrar General Office, New Delhi, p. 23.
7. Mookherjee Debnath (1969), "Urbanization Pattern in India 1951-1961, The Professional Geographer, Vol. XXI, 1969, p. 308.
8. Singh R.P.B., & R.L., Singh, (1986) "Urban Changes in India", (in) Michael P. Conzen, (ed.) World Pattern of Modern Urban Changes, University of Chicago, Department of Geography, Research paper No. 217-218, pp. 175-193.
9. "Village Swaraj": This literally means "self-rule" or independence. In "Upanishads", the basic scripture of the Hindu, and their highest authority in all matters pertaining to religion and philosophy, it connotes the idea of being one's own master. Its meaning in "Sanskrit" literature is living according to one's own inner law of being.

10. "Panchyat" is an elected committee of the village to administer certain affairs of the village.
11. Gandhi M.K.(1930), (in) Kumarappa B. (ed.), Rebuilding Our Villages, Navajivan Publishing House, Ahmadabad, p. 5.
12. Ibid, p. 148.
13. The first three years after independence were mainly occupied with the politics of integration of states, constitution making, refugee relief and resettlement.
14. Gujral M.L., (1979), Economic Failure of Nehru and Indira Gandhi, Vikas Publishing House, Pvt. Ltd., Ghaziabad, (U.P.), India, (in this see Foreword.)
15. Misra R.P., and Nataraj K.V. (1981), "India: Blending Central and Grassroots Planning", (in) Stohr W.B., & Taylor D.R.F., (eds.), Development From Above Or Below?, John Wiley and Sons Ltd., pp. 259-279.

v

Chapter: 2

THEORIES OF REGIONAL GROWTH, and Processes of Regional Change. -----

The purpose of this chapter is to analyse the validity and effectiveness of development strategies suggested within the literature of regional development theory, in order to ascertain to what extent Indian planning policies have been able to remove the major development constraints confronting the country.

Since the 1950s and 1960s most developing countries have adopted some form of regional planning policies. The common objective of regional planning is concerned with the "where¹ of development." The planning strategies have been invoked for different purposes in different countries, i.e., to promote industrial development, to co-ordinate the location of roads, market centres, and credit facilities, in some cases to accelerate development within particular depressed regions, or to set up river basin authorities to manage water resources. In a few cases they have meant the adoption of growth centre strategies in which the development of different urban centres within a country is fully integrated into the national plans. Thus, there was a remarkable surge in this regard in most of the developing countries of Latin America, Africa, and Asia. (See for example, Kuklinski (1972), Kuklinski and Petrella (1972),

Misra, Sundaram and Prakash Roa (1974), Lefebvre and Dutta Chaudhary (1971), El-Shakhs and Obudho (1975).

This chapter examines the theoretical underpinnings of some regional planning strategies which have been suggested within the literature as ways and means of achieving regional development objectives. It also studies some of the changing concepts held by regional development theoreticians. Regional development theories constitute a vast literature which proposes ways for making decisions about the 'where of development'. The elaboration of these theories gathered momentum from around 1958, following the independent publication of Myrdal's study, "Economic Theory and Underdeveloped Regions" and Hirschman's "Strategy of Economic Development."² As Gore (1984) has pointed out, the technical basis for making decisions about the "where of development" lies in a literature which "is both new and now in question."³ Since gaining their independence, most of the developing countries have chosen to follow a strategy of accelerated industrialization as the high road to economic growth and national prosperity. This urban-oriented industrial growth strategy, as a regional policy, aims to promote regional and rural growth through the establishment of large scale, heavy manufacturing operations in a few large urban centres.⁴ The rapid expansion of a large-scale corporate manufacturing sector, as prescribed in regional

growth pole theory, was expected by planners and governments to bring bountiful benefits to their nations: a basis for further growth and rapid capital accumulation, full employment, and higher levels of living for the entire population. Thus, in the early stages of planning policies, governments in both developing and developed countries adopted this strategy which may be termed the urban-industrial variant or growth pole or growth centre strategy. Some examples of developing countries which followed such prescriptions may be mentioned here. The strategy of the military government which took over in Peru in 1968 included the promotion of integrated propulsive industries near the capital city of Lima, with a view to utilizing more fully the country's natural resources and also reducing "the disequilibrium of the distribution of the population⁵ over the national territory." And as late as the mid 1970s the Philippines, Indonesia, Malaysia and Thailand and many countries in Africa were all designing and pursuing a growth pole policy of accelerated industrialization to achieve "a better balance among the regions and utilize the resource potential of peripheral regions where available and through this to expand their⁶ economic base."

In the late 1950's the most frequently encountered description of the strategy of Indian planning was that it

sought to lay particular emphasis on heavy producer goods and machine building industries. The reason most frequently given was that such an emphasis quickens the pace of capital formation. During the second Five Year Plan period (1956-60) large-scale, capital-intensive, high energy-consuming heavy industries were established in the favourable localities in India⁷ with the explicit aim of achieving more balanced regional development and quickening the pace of capital formation, among other objectives.

Broehl (1978), in his study "The Village Entrepreneur", notes that "at this point (Second F.Y.P.) the central government made a far-reaching and much debated decision: to turn the country's development emphasis to industrialization". He further remarks: "...using a mixed economy approach under a socialist rubric, Prime Minister Jawaharlal Nehru, exhorted the country to strive for giant leaps in the key industries that he and his planners saw as a salvation from India's centuries of poverty and despair."⁸ It was believed that growth-centre strategies were the serviceable means of achieving rapid growth and fair income distribution. As such, these ideas preoccupied the minds of regional planners, governments and administrators, throughout the 1950s and 1960s.

The Roots of the Centre-Down

Paradigm.

The idea of development being concentrated in a few spots or areas and later spreading over time to the rest of the spatial system can be traced to the debate over balanced and unbalanced growth. This "centre-down" paradigm has its roots in academic controversies of the 1950's. Balanced growth theory was advanced by authors like Rosenstein-Rodan (1943) and Nurkse (1952). The proponents of this theory argued that given the low level of productivity in underdeveloped countries and the subsequent lack of effective demand, a balanced growth policy was needed for diversified investments over a broad range of industries. These industries would then generate demand for each other through factor payments, so that investment projects that might not be viable individually would, taken together, be profitable. As Hansen (1981) has pointed out, the poverty of the developing countries and of less developed subnational areas is a result of the low productivity of labour, which is in part a function of an inadequate supply of physical capital. Shortage of capital is attributable in large measure to the persistently low levels of savings. This in turn leads to low levels of income, thus completing the vicious circle of poverty, low incomes and consequent

lack of effective demand. It also implies failure to generate capital and employment in heavily concentrated investment in an industrial sector. ¹¹ Therefore, the balanced growth advocates argued, investment should be diversified over a broad range of industries.

The opposing school rejected the predictions laid down in the balanced growth theory, which was challenged on several grounds by people such as Fleming (1955), Enke (1963) and Singer (1949). Fleming (1955) argued that developing countries do not have adequate supplies of all factors of production, especially capital and skilled labour, and therefore diversification may only increase costs of production as various industries compete for the limited ¹² supply of certain factors.

Enke (1963) addressed the question of how such a strategy of balanced growth works against the national economy. He argued that no country will be able to supply all her needs. In this context he had discussed the issues of comparative advantage. ~~the~~ contention was that a country may be very efficient at providing what other countries need. Given such a situation, therefore, ¹³ balanced growth becomes unrealistic and impracticable. Another criticism levelled against "balanced growth theory" centred on the cost such a strategy will involve. Singer (1949) argued that underdeveloped countries are poor

and cannot be expected to be able to foot the bill for such
¹⁴
 'balanced' development programmes.

Hansen (1981) remarked that balanced growth via "a big-push thesis" lacked credibility. This is because, using Singer's own words, "the resources required for carrying out the policy are of such an order of magnitude that a country disposing of them would in fact not be underdeveloped." Further, he noted that whatever their merits, the negative criticism of the balanced growth thesis did not add up to a rival development theory. Such a theory was in the air in the late 1950s as unbalanced growth was given central importance in the highly influential and independently published works of Hirschman, Myrdal and Perroux. The "centre-down" paradigm that has dominated the voluminous growth centre literature of 1960s & 1970s stems
¹⁶
 directly from these seminal contributions.

It may be pertinent to note here that both sides of the debate relied very much on the Rostovian idea of development that development relies on economic growth which takes place in stages along a linear path. In other words, "development" rested on the idea that all countries pass through five broadly similar "stages of growth." Rostow (1960) put forth the idea of a "leading sector" for expected
¹⁷
 economic development to occur. Some argue that this "leading sector" is exactly analogous to Perroux's

"propulsive unit." Indeed, Higgins (1979) suggested that¹⁸ Rostow was influenced by Perrouxian thinking. However, at present the findings or expectations of the "propulsive unit", that it will create positive external effects on other sectors of the economy, has become an important source of controversy among regional development experts.

Unbalanced Growth Strategy And Regional Development.

The transformation of the unbalanced growth strategy of development into a spatial planning concept and the resulting growth pole strategy can be followed in the works of Gunnar Myrdal, Albert Hirschman, and Francois Perroux. An attempt is made here, for the purpose of our study, to analyse their models which have been used as a tool in the spatial development programme of the Indian Five Years Plans.

Gunnar Myrdal's Circular Cumulative Causation.

Myrdal suggested the simple principle of "circular and¹⁹ cumulative causation", which has some validity in the field of social relations of economic development in the Indian context. Winslow (1957) illustrates this simple principle of circular causation as follows:

"Men and women were sick because they were poor, they became poorer because they were sick and sicker because they were poorer and so on, and so on."²⁰

Myrdal's concept of circular cumulative effects can not only lead to a downward spiral of development but also an upward spiral of accelerated growth. In both of these cases, he explains why some regions thrive while others stagnate. A core region is considered to be the seed-bed for new developments, invention and innovation. As the core grows bigger, further industrial developments take place, new jobs are generated, people move in to take jobs, and this again increases the demand for houses, schools, consumer goods and services. This starts another round, creating even more jobs, more industries are attracted, and so on.

Thus, according to Myrdal, the process is self-generating. The cycle of events both in the upward and downward spiral of development has been studied in detail by Myrdal. In developing his analysis he employed the concepts of "Backwash" and "spread" effects which correspond closely to Hirschman's "polarization" and "trickling-down" effects.²¹ In essence, "backwash effects" involve population migration, trade and capital movements towards the core region. Emphasis is placed on the fact that young men are the most prone to move. Similarly, capital tends to flow to the growing centres because of increased demand. Consequently, income will be increased, further increasing demand and finally resulting in yet another round of induced investment. This circular pattern has characterised the process of Indian

economic development so far, as it has in in other developing countries too. A few localities where modern economic activities are induced and expanded, appear to have grown at the expense of other surrounding areas. In contradiction to the concept of "back wash" effects, Myrdal employed the idea of centrifugal "spread" effects of expansionary momentum diffusing from the centre of economic development towards the peripheral region.

Hirschman: Polarization and Trickle-Down Effect.

Hirschman (1958) advocates an "unbalanced growth strategy" as the best way of planning for development. In his analysis, he introduces the terms "trickle-down" and "polarization". There is an obvious formal similarity between Hirschman's "trickle-down" and "polarization" effects and Myrdal's "spread" and "back wash" effects.²² Many regional analysts have tried to explain geographical patterns of development in terms of Hirschman's "trickle-down" effects. Like Perroux, he maintained that development occurs through "growth being communicated from the leading sector of the economy to the followers from one industry to another, from one firm to another."²³ His contention was that investment in one particular industry raises profits and induces investments in other industries which, as in the case of Myrdal's "spread" effects, triggers another round of investment that again raises profits and so on.

Hirschman states that:

"There can be no doubt that an economy, to lift itself to higher income levels, must and will first develop within itself in one or several regional centres of economic strength. This need for the emergence of growing points or growth poles in the course of the development process means that international and inter-regional inequality of growth is an inevitable concomitant and condition of growth itself."24

In Hirschman's view, therefore, in a geographical sense, growth is necessarily unbalanced and regional imbalances do exist in the beginning of the process, and that is "the condition of growth itself." His contention was that "once growth takes a firm hold in one part of the national territory, it obviously sets in motion forces that act on the remaining parts of the economy."²⁵

In examining the interactions between the regions, Hirschman gives an example of two hypothetical regions with differential growth rates, located one in the North and the other in the South. The region which is experiencing growth and prosperity is the "North" and the lagging, traditional region is the "South". It is presumed that growth of the north will have a number of direct economic repercussions on the south, some favourable, others adverse. The favourable effects are labelled "trickle-down" effects while the unfavourable ones are labelled "polarization" effects. During the process of growth of the northern region "polarization effects"

arise because, first, more efficient producers in the north can, through competition, depress economic activities in the south. Second, the north, instead of absorbing only the disguised unemployed, "may attract key technicians, managers, and more enterprising young men." ²⁶ Third, loss to the south due to departure of its potential labour force may outweigh what it gains from the north. Skilled work and better performance in the south will not be well paid, because its value is not recognized here. Therefore, pay differences between the north and the south are likely to occur. All such affairs are presumed to continue in a region's economy in the process of economic development in the early stages.

In spite of all this bleak and cheerless picture, Hirschman is optimistic and shows confidence that in the long run, the geographical "trickling-down" effects, will finally gain the upper hand over the "polarization" effects, if the "North" has to rely on the "Southern" products for its own expansion.

Perroux: Growth Pole Hypothesis.

The growth pole hypothesis was first systematically outlined by the French economist Perroux (1955) in an attempt to understand the mechanism whereby developmental impulses are transmitted throughout a whole economy. In order to analyse how observable growth occurs in an economy

characterized by domination effects, Perroux had introduced the terms "Growth Pole" (Pole de Croissance) and the "propulsive unit" ('Unite' ²⁷ motrice). He insisted that growth does not appear everywhere at the same time: rather it manifests itself in points or poles of growth. And with variable intentions it spreads by different channels with variable terminal effects for the economy as a whole. ²⁸ The basic idea of a growth pole, as it came to be interpreted, is that a new site of expanding industries (usually in a city) will set off chain reactions of industrial and economic development throughout the hinterland. Some development analysts ~~argue that in~~ Perroux's own writing it is never altogether clear that a "Pole" represents a ²⁹ city or a clustering of industry in a geographic space. It is considered that his original concept merely outlines relationships in economic space.

The original concept of abstract economic space came ³⁰ to be transformed for the purpose of regional planning. As Mabogunge (1978) has pointed out, Perroux's conception of the 'Growth Pole' was "extended into geographical space ³¹ notably by Boudeville (1966)." Thus, according to Boudeville and other followers, a growth pole has been described as a geographic agglomeration of activities or cities possessing a "propulsive unit." This propulsive unit is the most fundamental notion of the growth pole theory. It is

supposed that such units or industries transmit innovation throughout the economy. It is interpreted in such a way that propulsive industries are generally those which have the greatest capacity for invention and innovation. Huggett (1981) writes, "This usually means large, capital intensive, flourishing firms, because they alone have the capital to invest in extensive research and development programmes." ³²

Gore (1984) has interpreted the propulsive unit as a type of dominant economic unit which, when it grows or innovates, induces growth in other economic units. ³³ It may be a firm, or a set of firms within the same sector (i.e., industries). It is argued that during any given period, an economy which is growing will have some such propulsive units. Over time, a particular dominant unit may lose its propulsive qualities. Gore (1984) gives an example of the textile industry. If growth is to be sustained, textile production may be replaced by other branches like electronics industries.

Perroux's original concept of abstract economic space is interpreted by the following theoreticians in this way:

Boudeville (1966):

"A regional growth pole is a set of expanding industries located in an urban area and inducing further development of economic activity throughout its zone of influence." ³⁴

McCrone (1969):

"A growth pole is a large group of industries strongly related through their input-output linkages around a leading industry and clustered geographically. The leading industry itself, and the whole group, innovate and grow at a faster pace than industries external to the pole." ³⁵

Nichols (1969):

"A growth pole is an urban centre of economic activity which can achieve self-sustaining growth to the point that growth is diffused outward into the pole region and eventually into the less developed regions of the nation."³⁶

The basic assumption of all the above definitions is that either a growing urban centre or a spatial agglomeration of related industries should have catalytic impacts on surrounding regions.

According to Boudeville, propulsive industries are able to induce two types of growth effect in the regional economy: First, Leontieff's "multiplier effects", which occur through the existing pattern of intersectoral relationships within the economy; second, 'polarization effects' which occur through the increase in production of propulsive industries.³⁷ In the first case, it is argued that setting up a new industry in an area will have repercussions on the local economy through the acquisition of inputs and disposal of outputs and the generation of income.

Boudeville introduced the concepts 'Up stream' and 'Down stream' in his planning model. The newly introduced activities are considered to be "upstream" if they supply inputs to the other industries. "Downstream" industries are mainly users of their output. He gives an example of a newly introduced cement factory which may result in the establishment of another unit manufacturing bags for packing purposes (upstream) and starting up of a cement block industry

(downstream). Thus, such backward and forward linkage effects are considered to induce growth and generate general improvements in the regional economy, making a region more attractive for further investment.

Growth Pole in Regional Development Theory

However, once growth poles are defined in purely spatial terms, as the growing centres and their linked hinterlands, it becomes possible to depict growth areas in the following manner(see Fig.2). Based on arbitrary technical criteria, they are shown in a hypothetical region. The towns A.B.C.D. and E are regarded as "growth-centres. "In case of India, deliberate attempts were made during the Second and Third Five Year Plans (1956-1966) to identify and develop about fourteen growth centres in the North-Eastern peninsular region(see Figure 3). Once such metropolitan areas or cities were identified by the spatial planners, these localities were awarded substantial government aid to help attract industry and thereby stimulate the local economy. Considerable investments were made, amounting to more than Rs.14,250 million, in establishing capital intensive major industries with the explicit aim of modernizing the backward regions.

In this way, the spatial planners and policy makers in Third World countries, tried, in the 1950's, to formulate

GROWTH CENTRES

METHOD OF IDENTIFICATION

- 1 Central Place Function
Size of circle indicates
number of functions.

- 2 Nodal Location
Lines indicate predominant
flows.

- 3 Location On The
Development Surface
Isolines show the level
of development in
different locations.

- 4 Population Growth Rate
Size of circle indicates
population growth rate.

Note: Towns A, B, C, D, or E are 'growth centres'

Source: Charles Gore (1984) 'Regions in Question' p. 19

Figure 2.

Figure 3

Source: Kuklinski A. (1978) Regional Policies in Nigeria, India and Brazil Mouton Publishers, The Hague, New York. p. 138

developmental planning policies based on the notion of "growth pole". The question we need to consider in this study is, whether, in fact, they were justified in coming to think in these terms. More recently, it has been argued by a number of researchers and regional development specialists that policies should be introduced to ensure more even³⁹ development.

Friedmann: Core-Periphery Theory.

The first attempt to formulate a systematic and comprehensive centre-hinterland development model was put forth by American planner John Friedmann (1966). His 'Core-Periphery' analysis was initially proposed in a study of Venezuelan regional development policy.⁴⁰ Gore (1984) notes, soon after publishing his "Regional Development Policy" he revised his views on the regional development process in a paper ambitiously entitled "A General Theory of Polarized⁴¹ Development", first published in 1972. In his new approach he proposed a strategy of accelerated rural development as an appropriate spatial framework for planning and development. According to Friedmann's (1966) original concept, development originates in a relatively small number of centres of change, located at the points of highest potential interaction within a communication field,

1. In stage one small and independent core regions are found, no one core being dominant.
2. This is the stage of early industrialization. One or two core regions come to dominate, possibly because they have more natural resources or lie in densely populated areas and so have a large market. At this stage back wash effects will set - drawing people into the core region.
3. Here, the spread effects will come into play. Some favourable parts of the periphery - endowed with natural resource or large markets etc., may be transformed into new core regions.
4. This stage is considered to be an ideal one. Spread and back-wash effects cancel each other out and integrated and efficient metropolitan system may emerge.

Source: Huggett Richard (1981) Industry: Theory in Practice
p. 83

Figure 4

and then innovations diffuse from these centres to an area of lower potential interaction. He described in broad terms, in his study "Regional Development of Venezuela" how a region grows through different stages. An interpretation of his model of development is shown in Figure 4. Friedmann defined the major centres of innovative change as "core" regions, and areas of lower potential order as the "periphery." The latter is a territorially organized sub-system of a society whose development path is determined chiefly by the institutions of the "core" region".

Such spatial systems may be recognized according to Friedmann at various scales ranging from international cores through national cores to regional and local cores. Friedmann has observed the arguments set by other regional analysts such as Meier and Baldwin (1957), Harvey and Lowdon (1961), and Schultz (1951). According to Friedmann (1966) the crux of the argument is that "core" regions systematically transmit impulses of innovation to the peripheries they dominate. His theory integrates social, cultural and political processes into the process of economic development.

Its principal weakness is that the theory is essentially descriptive in nature. It is a mixture of untested hypothesis, and untestable slogans. In fact, this criticism may be applicable even to the whole of growth-centre literature. Wallerstein (1974) rejects the predictions

laid down in this "centre-periphery" theory. He makes it clear that the corporate sector and urban - based elites exercise dominance over the traditional sectors of the peripheral regions in developing economies. According to him these "core" areas fulfil a double role. On the one hand, they function as nodal points in the peripheries of the world capitalist system. On the other hand, they dominate and exploit their own peripheries in much the same way as they were dominated and exploited by the world "core" regions of Western Europe and the North Eastern United States.⁴⁴ Therefore, he argued that the application of growth-oriented strategies in a developing economy had generated, and was continuing to generate and reinforce, a homologous set of economic, social and spatial structures to those that were prevailing under the colonial regimes

Relevance of Growth Centre Theory in a Regional Context

The Rostovian notion of development and especially its heavy reliance on the growth centre has not stood the test of time. It is clear from the Five Year Plan documents that the "growth-centre" approach was rejected in India in the early 1970's. We could also notice such policy shifts in Latin American countries. Frank (1967) notes that in Latin America, where the growth pole strategy was widely applied, "per-capita incomes kept rising fast, while regional inequalities and

rural poverty increased at the same rate." He further writes
 "...it was here that the term internal neo-colonialism had
 its roots"⁴⁵

But others argue that new policies which are designed to reduce the spatial concentration of investment will lead to a less efficient location pattern of economic activity. (See Alonso 1968, H.W. Richardson and M. Richardson 1974). It is further argued that inter-regional equity can only be achieved at the expense of the national growth rate. Any failures of growth-centre planning are due to "lack of perseverance in pursuing the strategies, and faulty implementation or too hasty abandonment."⁴⁶

Johnson (1970) argued that historical evidence reveals that even after almost two centuries of industrialization, the presumed spatial equalization has neither occurred in Western Europe nor in the United States of America. He gives an example of two marked places: The Borinage region of Belgium and the Appalachia region in the United States. Johnson further notes: "Market forces have not generated a demand for the services of the unemployed and underemployed labour. Capital has not flowed to the low-wage areas, nor have under-paid workers migrated to higher-wage locations, and thereby equalized wage rates in these centres and their peripheries."⁴⁷ Thus the school with which Johnson joins rejects the predictions laid down in the growth centre theory.

In essence, these arguments connote that the establishment of industrial complexes has done little to modify the general situation in their peripheral areas. Therefore, it may be added that since there has been no regional convergence of factor compensation even in the commercialized and industrialized countries, it seems rather illogical to expect neat equilibrium to emerge in underdeveloped countries.

The United Nations General Assembly's International Development Strategy stated that: "The ultimate objectives of development must be to bring about sustained improvement in the well-being of the individual and bestow benefits to all. If undue privileges, extremes of wealth and social injustices persist, then development fails in its essential purpose." ⁴⁸ All such views run counter to what is explained in the "centre-down" paradigm of planning for development, the principal subject matter of which is growth and not social justice.

Now it is widely accepted that such theoretical planning models are inadequate for explaining or redressing real world problems. The United Nations and various other agencies, particularly the ILO, the World Bank and the Club of Rome have all expressed frustration. (See, for example, Mahbub Ul Haq (1981), Chenery (1980), Morris (1981)). We argue in this study that if a poor, developing country like India wants real

development, its energies should be devoted to creating a human and material basis for further industrial growth by carrying out far-reaching reforms in the field of agriculture and rural society. Such reforms include better land and water management, improved and cost-reducing farm technology, the development of agrobased village industries, the extension of irrigation facilities, afforestation, pasture development, improvements in village-to-village and village-to-urban transportation and communication and fundamental improvements in job-oriented education. The theoretical rationale supporting such ideas is discussed below.

Development "From-Below" Paradigm

In the foregoing review we have indicated that the "centre down" paradigm of planning for development has its roots in neoclassical economic theory and its spatial manifestation is the "growth-centre" concept. Development "from-below" is a more recent concept developed since the mid 70s, and is a reflection of changing ideas about the nature and purpose of development itself, as described by Seers (1977) and Goulet (1978, 1979), (in) Stohr and Taylor (1981). Over the past few years, development specialists, spatial planners and policy makers have expressed their increasing concern over the lack of progress in altering the condition of the rural areas. Towards this end they

are shifting from the capital-intensive growth models to more people-centered "basic-needs" approaches. However, although new approaches are increasingly dominating development thinking, there seems to be no well-structured theoretical framework available as yet for a new paradigm of development "from-below".

A search has started for substantially different strategies of national development. It has focussed on the problems of rural people who make up the majority of the population in the developing countries. A review of the recent Five Year Plan documents of India (Fifth 1974-79 and Sixth 1980-85) reveal that the planning process has reached a stage where old premises and models are being challenged and a rethinking has started to change those old approaches of national planning for development.

The commitment to an alternative strategy has confronted the Indian policy makers and planners during the last ten years with practical problems. How do they engage the millions of rural households distributed throughout the country in the development process? In a vacuum of relevant experience or a well-structured theory, some policy measures have been implemented since the mid 70s for rural development in India. They have aimed at increasing employment in developing rural areas, and re-distributing natural endowments and the

benefits of growth in favour of weak and low income groups⁴⁹ and meeting the basic needs of the poor.

Such approaches have received academic support and discussions have centred on development policies that are oriented directly towards the problems of poverty, unemployment and inter-regional inequalities. In this context, some systematic efforts have been made to suggest guiding principles for accelerated rural development. (See Friedmann and Douglass (1975, 1978) Tinbergen et al. (1976), Hopgood (1968), Stohr and Taylor (1981), Seers (1983), Uma Lele (1975)). The principal components of their approach include:

1. A comprehensive strategy designed to achieve greater productivity, income and employment in rural and agricultural sectors as well as steady improvements in the social conditions of the people living in hinterland areas.

2. A planning process that effectively links local projects of rural development to a long-term national strategy for balanced industrial and agricultural development.

As described by Stohr and Taylor (1981), "development 'from-below' considers development to be based primarily on maximum mobilization of each area's natural, human and institutional resources, with the primary objective being the satisfaction of the basic needs of the inhabitants of

that area. In order to serve the bulk of the population broadly categorized as poor or those regions described as disadvantaged, development policies must be oriented directly towards the problems of poverty and must be motivated and initially controlled from the bottom.⁵⁰

Unlike the "centre-down" paradigm, the development "from-below" strategy implies alternative criteria for factor allocation. Instead of the former principle of maximizing returns for selected factors one seeks to maximize integral resource mobilization; in place of the dominating principle of comparative advantage, one seeks to equalize benefits from trade. The development "from-below" concept emphasizes territorial and social development rather than mainly functional organization and economic development (Friedmann and Weaver (1979) in Stohr and Taylor (1981: p.39). This means, firstly, the new approach assigns priority to widespread improvements in agricultural production, which are seen as a necessary precondition for further developments in the urban-industrial sector. Secondly, spatial development is considered as an integral process of widening opportunities for individuals, social groups and communities at small and intermediate scales.

The emerging new model of rural development seems to have a close affinity with the "Antyodaya" (welfare of the mass) philosophy of Mahatma Gandhi. This philosophy of Gandhi virtually enunciates the ideal that in the process

of growth the last man and the disadvantaged area must be benefited first and that the focus of attention must be upon an adequate amount of planning at the base which is to be neatly co-ordinated with the central planning.

As we read through Gandhi's works (Autobiography 1927, "Rebuilding Our Villages" 1930 and "Young India" 1913) we realize that the Gandhian concept of economic development is an integrated whole and includes economic, social, political and moral reforms of a far reaching nature. Although Gandhi puts forth no economic theory nor a "model" as such, he does have a point of view on aspects of economic development.

Gandhi said: "....I derived great benefit from Tolstoy..."⁵¹

He corresponded with Tolstoy on several occasions. Tolstoy was profoundly impressed by Gandhi's economic thought and expressed his agreement with Gandhi on several important issues affecting the developing countries.

Gandhian economics and philosophy are built around a number of fundamental principles: decentralization, bread-labour, full-employment, production by the masses,

"swadeshi" (native), humanism, socialism, peace, moral and

52

ethical values. Given the above complex of ideas, the

Gandhian approach to development, in essence, is based on the goal of "sarvapi sukhinob santhu". This is a

"Samskrut" word which implies attainment of the greatest happiness for the largest number. Mathur (1962) writes:

Gandhian approach to development is akin to that of
⁵³
 Ruskin's "Unto This Last"

Broadly speaking, the Gandhian concept of economic development is a combination of "economic" and "real" progress. By "economic" progress Gandhi means "material advancement" with limits which consists in the growth of material things needed to satisfy human wants. His concept of "real" progress is referred to as "social and moral"
⁵⁴
 progress. To Gandhi, material progress had to accompany real progress, otherwise the economic development of the society would break down and stagnate, leading to its decay.

Gandhi said: "...I must confess that I do not draw a sharp or any distinction between economics and ethics. Economics that hurts the moral well-being of an individual or a nation is immoral and therefore sinful..."⁵⁵

For Gandhi, there was no economic development unless it was concomitant with spiritual and social development.

Concept of "Village Swaraj"

Gandhi's doctrine of "village swaraj" (village republic) is very much akin to the approaches to regional development which in the modern terminology aim to adopt the techniques of planning "from below". Gandhiji's ideal of "village swaraj" stands for growth of self-contained, self-supporting and self-regulated villages within the framework of democratic decentralization. Gandhi used the term "swaraj" in a wider sense. Swaraj means self-rule in economic, social, political

and moral fields. It has multidimensional aspects. Economic "swaraj" meant easy availability of all basic needs to all the people in the society. The concept of "village swaraj" guarantees economic independence, avoids exploitation, prescribes local participation. It lays stress on the growth and expansion of indigenous industries based on available local resources and use of what he called "intermediate technology". Rural development and employment through the use of intermediate technology is the one of central idea of his "swadeshi" (native) concept. What he meant to say was that science and newer technology is to be adopted to the conditions prevailing in the village and to help people do things better than they were doing before.

For Gandhi, the immediate problem was poverty. His contention was that poverty was the root cause of all evils. Therefore, the objectives of economic development should be to curb the poverty of society. According to him, this had to be tackled directly, through the provision of "intermediate technology", improvements in the agricultural sector, and introducing small-scale village industries, and agro-based industries. His contention was that when the people are self-employed to produce the more common requirements and articles of day-to-day needs, the wealth of the nation will not be monopolized. Having in mind that India lives in villages, Gandhi advocated that the

innovations at the village level are more important than those emerging from cities. He believed that if villages prosper, then India will prosper.

The requirements of people in developing rural areas are different from those in developed parts of the world. The sophisticated capital goods manufactured in the modern factory are not normally an urgent need of the poor. What the poor need most of all is simple things - building materials, clothing, education, primary health care, household goods, agricultural implements, irrigation equipment and better returns for their agricultural products. People in poor developing countries also most urgently need trees, water and crop storage facilities. All such pivotal economic and social problems are addressed in the Gandhian doctrine of "village swaraj". The economic development within the concept of "village swaraj" is different from the "growth-centre" paradigm of development. Because it takes poverty seriously, the Gandhian philosophy of development does not mechanically argue that what is good for the rich must also be good for the poor. It takes care of people from a practical point of view. For Gandhi, people are the primary and ultimate source of any wealth. Therefore, a major thrust is placed on small-scale, rural-based, labour-intensive methods. Agriculture is regarded as "propulsive" or the

leading sector. This means that the concept of "village swaraj", like the new paradigm of development "from below", is a clear departure from the economic concept of development held in the past three decades of India's national planning.

The approaches now proposed by the regional development specialists look similar to those of Gandhian ideals of development. For example, one development economist puts the issue in the following ways:

"...The questions to ask about a country's development are therefore: what has been happening to poverty? what has been happening to unemployment? what has been happening to inequality? If all three of these have declined from high levels then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the results "development", even if per capita income doubled."56

Thus, it is apparent from the development literature that the accent is shifting from mere economic development to a broader definition of social development. The emphasis is moving towards rural poverty, unemployment, inter-regional and inter-personal inequalities rather than functional specialization or the organization of capital-goods industries.

Agropolitan Development: Friedmann & Douglass (1975)

Friedmann & Douglas (1975) have proposed a new strategy of accelerated rural development as an appropriate spatial

framework for planning and development. What such a strategy would hope to achieve is described as "agropolitan development". The following statements are a first attempt made by Friedmann & Douglas (1975) to translate the idea of development "from-below" into operational language.

1. To transform the countryside by introducing and adapting elements of urbanism to specific rural settings. This means: instead of encouraging the drift of rural people to cities by investing in cities, encouraging them to remain where they are, by investing in rural districts, and so transmute existing settlements into a hybrid form. Friedmann and Douglass called these "agropoles or city-in-the-fields".
2. To extend the network of social interaction in rural areas beyond the single village, creating a larger socio-economic and political space, or agropolitan district.
3. To reduce social dislocation in the course of development, preserving the integrity of the family and providing for both individual and social fulfillment in the construction of a new order of community..
4. To stabilize both rural and urban incomes and to reduce differences between them by diversifying opportunities for productive work and more specifically, by joining agricultural to non-agricultural activities within the same territorial community.

5. To use available labour more effectively by directing it towards a greatly intensified development of the natural resource base of each agropolitan district, including improvements in agricultural production, major conservation and water control projects, rural public works, expanded rural services and agriculturally oriented industries.
6. To link agropolitan districts into regional networks by building up and improving physical channels of communication among agropolitan districts and to larger towns.
7. To devise a system of governance and planning that is ecologically specific and gives substantial control over development priorities and programme implementation to district populations.
8. To provide adequate financing for agropolitan development by (a) ensuring the reinvestment of a large part of local savings in the district, (b) instituting a system of work-in-lieu-of taxes for every adult member of the community, (c) transferring development funds from metrocenters and specialized industrial areas to agropolitan development, (d) reversing the adverse terms of trade between peasantry and city populations.

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In "agropolitan" development as defined by Friedmann & Douglass (1975), local resource management, and the creation

and utilization of local skills are important to sustain development. Provision of access to land, or land reform, appears to be the prerequisite in an "agropolitan" model of rural development. According to them, unequal distribution of land inhibits accelerated rural development. So, they have prescribed that landed wealth should be returned to the control of members of each "agropolitan" district. They have concluded in their study that unless a substantial share of the total farm land comes under effective control of the rural population the old inequalities will continue and be reinforced.

Development "from-below": W.B.Stohr (1981)

According to Stohr (1981) rural development, in essence, implies an integral process of widening opportunities for individuals, depressed classes and backward areas, and mobilizing the full range of capabilities of local resources and local skills for the common benefit of all. In this context, the following elements are suggested as essential components of the paradigm of planning for development "from-below".

1. Provision of broad access to land and other territorially available natural resources as key production factors in most less-developed areas.
2. The introduction of new, or revival of the old, territorially organized structures for equitable, communal

decisionmaking on the integrated allocation of regional natural and human resources.

3. Granting a higher degree of self-determination to rural and other peripheral areas in the utilization or transformation of existing peripheral institutions to promote diversified peripheral development.
4. Choice of regionally adequate technology oriented towards minimizing waste of scarce, and maximizing use of regionally abundant, resources.
5. Assignment of priority to projects which serve the basic needs of the population, using to a maximum regional resources and existing social structures.
6. The introduction of natural pricing policies which offer terms of trade more favourable to agricultural and other typically peripheral products.
7. External assistance should be solicited only if locally produced resources are insufficient for meeting basic, local needs and this assistance should be mainly considered as compensation for the eroding effects of previously emerging dependencies.
8. Development of productive activities exceeding regional demand should be promoted only to the extent that they lead to a broad increase in living levels of the population of the territorial unit.
9. Restructuring of urban transport systems to improve and equalize access of the population in all parts of the

country, to them, rather than strengthening the systems oriented to the outside (off continent).

10. Improvement of rural-to-rural and rural-to-village transport and communication facilities.
11. Egalitarian societal structures and a collective consciousness should by preference be retained or initiated through local initiative.⁵⁸

Thus, it is evident from the above statements that the content of development thinking has been changing to be more suitable for local initiative. The policies and programmes proposed in India's seventh Five Year Plan are very similar to those suggested by Stohr and Taylor.

Of course, no major departure from the past can be seen. What is evident is a new desire to change the planning process that will link local projects for rural development. There is still a pressing need for a coherent and systematic framework for the government's new efforts. Therefore, the Indian government and the planners, in their search for a new model of development look back now, once again, to Gandhiji who led the country to freedom and who offered a new model of development for humanity as a whole.

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NOTES & REFERENCES.

1. Friedmann John (1966), Regional Development Policy: A case study of Venezuela, Mass., MIT Press, Cambridge, p. 113.
2. See, for details Charles Gore, (1984), Regions in Question, Space, Development theory, and Regional Policy, Methuen, London and New York, pp. 2-3.
3. Ibid, p. 2
4. Kuklinski Anthoni, (ed.), (1975), Regional Development and Planning: International Perspectives, Leiden, Sifthoft, p. 28.
5. Hilhorst J.G.M., (1981), "Peru: Regional Planning 1968-1977; Frustrated Bottom Up Aspirations in a Technocratic Military Setting", (in) Stohr W., & Taylor, D.R.F., (eds.), Development From Above Or Below?, John Wiley and Sons Ltd. Chichester, p. 13.
6. Salih K., (1978), "Decentralization Policy, Growth Pole Approach and Resource Frontier Development: A synthesis of the response in Four South East Asian countries", (in) Lo, Fu-Chen and Salih K. (eds.) Growth Pole Strategy and Regional Development Policy, Pergamon, Oxford, p. 115
7. Roa V.K.R.V. (1965), "India", (in) Cranelly Onslow, (ed), Asian Economic Development, Weidenfeld & Nicolson, London, pp. 67-92.
8. Broehl G., Wayne, (1978), The Village Entrepreneur: Change agents in India's Rural Development, Harward University Press, Cambridge, Massachusetts and London, p. 21.
9. A good summary of this debate is offered in S. schiavo-Campo and H.W. Singer, (1970), Perspectives of Economic Development, Houghton, Mifflin Company, Boston, pp. 45 - 52.

- 10 Rosentein - Roalan P.N., (1943), "Problems of Industrialization of Eastern and Southern Europe", Economic Journal, Vol. 53, pp. 202-211.
11. See for more details: Hansen, Niles, (1981), "Development From Above: The Centre-Down Development Paradigm", (in) Stohr W. & Taylor D.R.F., (eds.), Development From-Above Or Below?, John Wiley and Sons, Ltd., pp. 15-36.
12. Flaming M., (1955), "External Economies and the Doctrine of Balanced Growth", Economic Journal, Vol. 65, pp. 241-256.
13. Enke S., (1963), Economics for Development, Prentice - Hall, p. 135.
14. Singer H.W., (1949), "Economic Progress in Under-developed Countries", Social Research, March 1949, Vol. II, pp. 1-11.
15. Hansen Niles M., (1981), "Development From-Above: The Centre-Down Development Paradigm", (in) Stohr W., and D.R.F., Taylor, (eds.), Development From-Below Or Above?, John Wiley and Sons Ltd., p. 15-36.
16. Ibid, p. 16.
17. Rostow, W.W., (1960), The Stages of Economic Growth, A non communist manifesto, Cambridge University Press, New York, pp. 62-65. (Second edition published in 1977).
18. Higgins B., (1978), "Development Poles: Do They Exist?", (in) Lo, Fu-Chen, and Salih K., (eds.), Growth Pole Strategy and Regional Development Policy: Asian experience and Alternative Approaches, Pergamon, Oxford, p. 35.
19. Gunnar Myrdal, (1957), Economic Theory and Under Developed Regions, Geraled Duckworth & Co., Ltd., London, p. 16.

- 57
20. Winslow C.E.A.(1957), The Cost of Sickness and the Price of Health, Monograph Series, No. 7, Geneva, p. 19.
 21. Hansen Niles M.,(1981), "Development From-Above: The Centre-Down Development Paradigm", (in) Stohr,W., and D.R.F., Taylor, (eds.) Development From Above Or Below?, John Wiley and Sons Ltd., p. 18.
 22. Gore Charles,(1984), Regions in Question: Space, Development Theory, and Regional Policy, Methuen, London and New York, p. 96.
 23. Hirschman Albert O.,(1958), The Strategy of Economic Development, New Haven, Yale University Press, p. 180.
 24. Ibid, pp. 183-184.
 25. Ibid, p. 186.
 26. Ibid, p. 188.
 27. "La notion de pole de Croissance", Paris: Presses Universitaires de France (1956). (See for details, Charles Gore,(1984), Regions in Question:, pp. 82-88.
 28. Hansen, N.M.,(1970), "Development Pole: Theory in a Regional Context," (in) McKee, D.L., (ed.), Regional Economies: Theory and Practice, The Free Press, New York and London, p. 19
 29. Kuklinski A.,(1981), (ed.), Polarized Development and Regional Policies, Mouton Publishers, The Haghe, Paris, New York, p. 19.
 30. Ibid, p. 20.
 31. Mabogunge Akin L., (1978), "Growth Pole and Growth Centres in the Regional Development of Nigeria", (in) Kuklinski,A., (ed.) Regional Policies in Nigeria India and Brazil, Mouton Publishers, The Haghe, Paris, New York, p. 6.

32. Huggett Richard J., (1981), Industry: Theory in Practice, London (England), p. 82.
33. Gore Charles (1984), Regions in Question: Space, Development Theory and Regional Policies, Mothuen, London and New York, p. 93.
34. Boudeville J.R., (1966), Problems of Regional Economic Planning, Edinburg University Press, Edinburgh, p. 11.
35. Mc Crone, G., (1969), Regional Policy in Britain, George Allen and Unwin, London, p. 72.
36. Nichols V., (1969), "Growth Poles: An Evolution of the Propulsive Effects", Environment and Planning, Vol. I, pp. 193-208.
37. Gore Charles, (1984), Regions in Question: Space, Development Theory and Regional Policy, Methuen, London and New York, pp. 92-93.
38. Misra R.P., and Sundram, (1978), "Growth Foci as Instrument of Modernization in India", (in) Kuklinski A., (ed.), Regional Policies in Nigeria, India and Brazil, Mouton Publishers, The Hague, Paris, New York, p. 135.
39. Holis B., Chenery, (1980), "Poverty and Progress - Choices for the Developing World", Finance and Development, Vol. 17, No. 2, pp. 12-16. (See, also David Morris (1982) Measuring the Condition of the World's Poverty).
40. Friedmann John, (1966), Regional Development Policy: A case study of Venezuela, The MIT Press, Massachusetts, Cambridge, London, p. 6.
41. Gore Charles, (1984), Regions in Question: Space, Development Theory and Regional Policy, Methuen, London and New York, p. 105.

42. Friedmann John, (1966), Regional Development Policy: A case study of Venezuela, The MIT Press, Massachusetts, Cambridge, London, p. 10.
43. Ibid, p. 16.
44. Wallerstein Immanuel, (1974), "The Rise and Future ~~of~~ World Capitalist System: Concepts for Comparative Analysis", Comparative Studies in Society and History, September, 1974, pp. 393.
45. Frank A.G., (1967), Capitalism and Underdevelopment in Latin America, Monthly Review Press, New York, pp. 132-138
46. Richardson H.W., and Richardson M., (1974), "The Relevance of Growth Centre Strategies to Latin America", Economic Geography, Vol. 51, pp. 163-178.
47. Johnson E.A.J., (1970), The Organization of Space in Developing Countries, Harvard University Press, Cambridge, pp. 206-209.
48. UNRISD (1974), International Development Strategy, p.6.
49. Government of India, Planning Commission, New Delhi, Fifth Five Year Plan document 1974-1979, Chapter 8, pp. 87-89; and "20 Point Programme: Pioneering Efforts by State", The Statesman, New Delhi, September 24, 1987, p.11.
50. Stohr W.B., and Taylor D.R.F., (1981), (eds.), Development From Below Or Above?, John Wiley & Sons Ltd., Chichester, p. 1.
51. M.K.Gandhi, (1927), Autobiography, Navajivan Publishing House, Ahamadabad, p. 113.
52. Srinivasan R., (1978), Society Economy and Polity in India, University of Bombay, pp. 92-98.
53. Mathur J.S., (1962), Essays on Gandhian Economics, Prakash Publications, New Delhi, p. 30.

54. Gandhi M.K., (1943), Economic and Industrial Life and Relations, Navajivan Publishing House, Ahamadabad, pp. 3-6.
55. Gandhi M.K., (1924), Hind Samaj, Vikas Publications, New Delhi, p.262.
56. Dudley Seers, (1983), "The Meaning of Development" (in) Charles K. Wilber, (ed.), The Political Economy of Development and Under Development, Random House, New York, p. 7.
57. Friedmann John and Douglass M., (1975), Agropolitan Development: Towards a new Strategy for Regional Planning in Asia, University of California, Los Angeles, pp. 40-43.
58. Stohr W.B., (1981), "Development From-Below: The Bottom-Up and Periphery_Inward Development Paradigm", (in) Stohr W.B., and D.R.F. Taylor, (eds.), Development From-Above Or Below?, John Wiley and Sons Ltd., pp. 64-67.

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Chapter 3

Choice of Paradigm of Development

This Chapter examines some of the deliberate attempts made since the inception of Five Year Plans in 1951 to develop geographic agglomeration of capital intensive industries. An attempt will also be made to review the direction of the government's development efforts and some of the administrative problems of implementation of the policies and programmes. With the coming of independence to India many people looked to the future in awe and expectancy. The freedom struggle led by Mahatma Gandhi had been one of the most inspiring and impressive mass-movements in history. Led by a group of charismatic and liberal leaders, India appeared at that time to provide hope as a model of political and economic growth for all the subsequent newly emerging countries of the Third World. Those who took over political power in India were the leaders of the freedom movement.

Throughout the period of the liberation struggle, the Congress leaders were building a socialist image. Their socialist stance undoubtedly made them popular with the peasants, the workers and the poor. And in general, they won¹ the love and affection of all sections of the people. They

were the devoted followers of Gandhiji, and ardent advocates of a decentralized rural economy. They were also very much interested in bridging the gulfs between the rural and the urban areas, the poor and the rich, and between the intellectuals and the manual workers.

The plan Gandhiji put forward for the development of the country's economy was based on a number of fundamental principles - simplicity, self-reliance, decentralization, full-employment, production by the masses, (not mass² production), egalitarianism, socialism and humanism. But, today, one of the most frequent criticisms of the Congress is that they forgot their earlier promises and strayed from the socialist path after the assumption of power in 1947. (See Sethi J.D.(1978) & Gujral (1979). Gujral (1979) in his study observed that the government "forsook the Gandhian path and followed the western model of development without³ understanding India's peculiar problems."

It appears that Indian planners and the government were impressed by the views of economists like Arthur Lewis (1955), R.Prebisich (1959) and S.Kuznets (1961) who equated development with urban industrial growth. Generally speaking, there was hardly at that time (in the 1950s), any dependable guide to planning in developing countries. India's First Five Year Plan for the period 1951 to 1955, which was the first such plan in the developing world, explicitly

listed as its objectives "maximum production", "full employment" and "the attainment of economic equity and social justice". However, it is clear from the plan documents that the growth strategy resulted in an excessive preoccupation with industrial development and with an urban-oriented approach. The condensed account of the application of this approach was perhaps the Second Five Year Plan (1956-1961) which set forth a growth strategy based on rapid industrialization. Before going to look into the details of the policy shifts and their impact on other sectors of the economy, an effort will be made here to understand the objectives of the first four Five Year Plans.

A literature review of the plan documents reveals that the plans have multiple objectives, emphasizing both economic growth and social justice. In order to encourage greater local⁴ participation in development activities, a three-tier system of elected councils - "Jilla Parishad" (District Council) "Panchayat Samiti" (Block Council) and "Gram Panchayat" (Village Council) was established, for planning and development activities. Community Development Programmes were started in 1952 with 55 community development projects under the Indo-US Operational Agreement. Each of the 55 projects was to cover about three development blocks or 300 villages and a population of about 300,000. Establishment of "Panchayat

Samities" was, in fact, the attempt to take selfgovernment closer to the doorstep of the rural population. These village councils were expected to do in the villages what municipalities did in towns and cities. Community Development was looked upon as the programme which would transform India's rural areas.⁵ (See, for more details K.N. Ray et al. 1979). It was a multipurpose programme which emphasized the coordination of various functions particularly under the National Extension Service at the local and the Village level, through a "Gram Sevak" (Village Level Worker) (VLS) serving about 10 villages and a Block Development Officer (BDO) who was responsible for the 100 villages comprising each development block.

Of course, the Community Development Programme was successful in some respects, partially in demonstrating improved agricultural practices, encouraging the construction of primary school buildings, village roads, drinking water wells using local resources, partly with funds donated by the villagers. But these programmes did not generate the expected results mainly because of the meagre financial resources at the disposal of the local bodies. The village councils were even more handicapped than district councils with regard to financial resources, and lack of power, and expert staff for development work.

The First Five Year Plan stated:

"The central objective of planning in India at the present stage is to initiate a process of development which will raise living standards and open out to the people new opportunities for a richer and more varied life. Economic planning has to be viewed as an integral part of a wider process aiming not merely at the development of resources in a narrow technical sense, but at the development of human faculties and building upon an institutional framework adequate to the needs and aspirations of the people."⁶

The Second Five Year Plan stated:

"The pattern of development and the structure of socio-economic relations must be so planned that they result not only in appreciable increases in national income and employment, but also in greater equality in income and wealth. The benefits of economic development must accrue more and more to the relatively less privileged classes of society, and there should be progressive reduction of the concentrations of income, wealth and economic power."⁷

Similarly, the Third and the Fourth Five Year Plans sought "to establish greater equality of opportunity and bring about reduction in social and economic disparities."⁸ Thus, each Five Year Plan was commended in different terms. They were at one time hailed as plans to evolve a socialistic pattern of society, sometimes as instruments for ushering in growth with social justice. At the later stage (the mid 1970s) they were considered effective weapons for "garibi hatao" (elimination of poverty).

Problems of Implementation of the Policies & Programmes.

Although attempts to reconcile the objectives of growth, the alleviation of poverty and regional

inequality were made in the operational framework by the Indian Planning Commission, there are clamours on the floors of the Parliament and State Legislatures, that India's efforts at rural development have failed to generate positive results. The overall impact of developmental policies pursued till the mid 1970s, can be culled from the evidence marshalled by research organizations, scholars and regional development practitioners. It can be broadly summed up as follows: (1) gradual enrichment of a few localities, (2) enrichment of the classes comprising industrial, commercial and financial groups; the growth of segments of the rural rich, comprising sections of landlords, rich peasants, and a section of urban upper-middle class. (3) the persistent dominance of a few large cities, (4) the phenomenal rise in the population of cities, (5) the continuous aggravation of inequalities of wealth and income distribution. (6) A steady deterioration in condition of the rural areas, and increasing under and unemployment.

The question confronting all those studying India's development and those striving to build a prosperous, developed India is: why has the path of development followed over the last three decades led in practice, to results opposite to the objectives repeatedly proclaimed in

the plan documents? Is it due to lack of resources? Is it due to traditional forces thwarting development? Is it due to complications created by the policies and practices? Is it due to a peculiar imitation of the Soviet-Western model of development? Is it due to lust for power or corruption and nepotism? Is it indifference and lack of developmental spirit in the administrative apparatus and to bureaucratic attitudes and procedures? Political leaders, administrators, development scientists and scholars, by and large, try to locate the causes of the malaise in one or another of the factors mentioned above.

Much of the literature on the failure of the planning policies and rural development efforts assumes that the fault lies with the cultivators, often with their traditional values. Based on the concept of cultural theorists like Lipset (1966), Weber (1958), Fillol (1961), Bradford (1962), and Cochrane (1960) some people lay the blame principally on the supposedly retarding influence of Indian traditional cultural values, the Hindu religion, the joint family system and motivation of the Indian farmer, for the failure to generate any positive results in villages. (See Roa (1971), Dasgupta (1977), Tilman (1969). Looking at the real situation, it does not support the above explanation. In fact most cultivators are highly interested in modernizing and

diversifying their agricultural operations. No one likes to remain backward, whatever religion or caste he or she belongs to. In fact the critical inhibiting factor is, the inadequate basic infrastructure - provision of irrigation, roads, means of transportation, efficient and timely delivery of seeds, fertilizers, and adequate credit facilities. It may be added that only with such well developed infrastructure will most cultivators have an opportunity and capacity to adopt modern techniques, no matter how motivated or what religious affiliation.

Some others argue that government priorities, policies, administrative inefficiencies, biases, and sometimes even corruption are largely responsible for lack of rural progress. (See John Mellor (1976), George Kurian et al., (1973) Pramit Choudary (1975), Gujral (1979), Donald Escher et al. (1981), Jain et al. (1986). In essence, their argument is that insufficient funds have been spent on community development programmes, that agricultural research has been woefully inadequate, that the government credit system is poor. It is also argued that most cultivators are thrown back on moneylenders who charge prohibitively high interest rates, and that the distribution of credit and modern inputs are inordinately biased toward the rich and the powerful.

Holding a similar view, an attempt will be made in the following chapter to examine some of the deficiencies in

government policies and practices for the failure to generate any enthusiasm among the rural masses. We argue that steps should be taken to involve the masses in the process of development, if India wants to take a leap forward into economic prosperity. Serious efforts should be made to find out the actual causes of failure of the ambitious objectives of the Five Year Plans. The real causes which impede agricultural and rural development can only be determined through empirical village-based research in different parts of the country. Previous studies have not provided sufficient empirical information to answer several questions. They have proven unsuccessful mainly because they rest on the wrong hypothesis, that rural-urban interdependence is a neutral factor in the growth process. In fact metropolitan areas also have suffered due to the stagnation of rural areas. They have suffered as a consequence of the shortage of agricultural raw materials, lack of market and inadequate food grain supply. Therefore, an appropriate effort should be made to measure several indicators responsible for fostering an integration of urban areas with the hinterland in all its dimensions. One of the first steps in this regard may be to find out various geographic, economic and social factors inhibiting the inter-regional flows of commodities and services. There have not been in-depth single village studies, done principally by geographers in this direction.

As noted above, the plan objectives are designed to take a leap forward into economic prosperity, but the steps taken to implement them at various administrative levels, are very slow. The lethargy and lack of dedication at all levels of administration appear to be the major impediment to the fulfilment of the planned goals. Administrative delays, and corruption have spread and increased to such an extent that people have no faith in the integrity of the administration. Nor are universities, banks, and courts free from the malady. The grants from the Central or State Government's offices often come too late. On the one hand, in most cases, the budgeted amounts for social services and developmental projects seldom get spent fully, and, on the other hand, delays and technical loopholes result in extravagant expenditure and loss of revenue. Quoting the Comptroller & Auditor General's remarks in a report concerning a housing scheme, the PTI (1987) (Press Trust of India) notes: "The programme for construction of 21,300 houses in general pool in Delhi, Bombay and Calcutta metropolitan cities was to have been completed in 1981, remained incomplete, the report said." It is further explained that the original cost estimates of Rs. 680.9 million in 1979 was revised to Rs. 1,270.3 million due to increases in input costs. Meanwhile, the delay has resulted in the unavoidable payment of Rs. 40 million as house rent allowance to prospective allottees.

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Similarly, some of the major power and irrigation projects have been lingering for more than 10 to 15 years. This has contributed in no small measure to the increase in the cost of the projects. This happens because of the labyrinthine, cumbersome, bureaucratic procedures followed at all administrative levels. Even such daily commercial activities of the government as railways, buses, airlines, and telephones are not free from this cancer. Whether it is the booking of a telephone, parcel, an allotment of railway wagon, or the obtaining of a licence, at various levels of bureaucracy, wherever power and discretion exist in the context of shortages and scarcities, delay and corruption have flourished. The result is not only inconvenience and hardship to the public but also huge losses to the national exchequer.

Another criticism heard very often is that Indian planning is good on paper, but seriously deficient in implementation. ¹⁰ Several examples may be cited in this respect. The 'Zamindari Abolition Act' (Land Reform Act) was introduced and passed in 1951 but it left plenty of exemptions and loopholes. The "Zamindars" (landlords) challenged its validity in the courts, and secured injunctions. The landlords argued in the court that the Act violated Article 14 of the Indian Constitution; this indeed led to the first amendment to the Constitution in

1951. In the 1960s the Land Reform Act was passed, limiting the landholding of an individual to 20 acres of canal irrigated land, or 60 acres of rainfed (dry land) land (in the case of Bihar). Even here, the legislation fooled the people. Since no spot verification was done, the landlords could hold 60 acres of irrigated land instead of the ceiling of 20 acres, because the records mentioned the land to be dry, hilly or sandy etc. The Ceiling Act also showed the landlords several escape routes. For instance, the Act laid down that each member of an undivided Hindu family was entitled to land. To take advantage of this, the large land owners quickly broke up their holdings to distribute the land among their sons, daughters (in some cases unborn) nephews, nieces, and grandchildren. The legislation provided that all transfers of land made before October 22, 1959 were valid and beyond its purview. The landlords, with the help of (corrupt) bureaucrats and revenue officers, especially with the "Talatis" (Village Accountants) got several land transfers duly backdated. The Ceiling Act made yet another fool-proof provision for the sake of the landlords. That is, if ever land was found surplus with the landlords, they were free to select the kind of land for surrendering to the state. According to official estimates about 52 per cent of the land so acquired as surplus, was mostly unfit or uneconomical for

cultivation e.g. hilly or forested land or land eroded by the streams. If such lands were distributed among the poor farmers, they could not produce enough to meet their basic needs. Thus we could find a number of loopholes in the "Fixation of Ceiling Areas & Acquisition of Surplus Land Acts" in different states of India.

Another very important step taken by the Planning Commission was that of decentralizing the pattern of development of ubiquitous industries to fit the ideal of a socialistic society. The Planning Commission recommended that a large number of small towns, distributed over different parts of the country, should be developed into industrial townships, with planned provision for small-scale, agro-based, and light industries. But the actual attention paid to the development of small-scale industries is very niggardly. Of the total allocations of financial resources (under the public sector), only Rs.7,821 million i.e., about 6 per cent is spent for the development of village and small-scale industries during the 25 years of plan period. In fact the development of such industries was necessary for the earlier stages of Indian economic development. These industries use agricultural and other indigenous products, and are essentially artisan enterprises, which use the local labour force, and are oriented towards the village economy. Hence they are more acceptable to rural people.

Development of such industries would have partially filled the gap created by the unequal geographical distribution of heavier industrial concentrations.

Similarly, the laws made to liquidate illiteracy were not strictly enforced. The education imparted at present, in the primary schools, secondary schools and colleges does not make a student learn or help him or her to set up rural enterprises, or help to solve the problems of rural unemployment. From the huge number of institutions created during the planning periods, hundreds of thousands of unemployable young men and women are turned out every year. Numerous reports have been written on the state of education, and adult illiteracy in the country. Numerous recommendations have been made. But barely any of them have been implemented. As Myrdal (1971) has rightly pointed out, the government was continually spelling out the radical ideals of social and economic programmes, but never inaugurated vigorous political action for their speedy realization. He further described the Indian Government as a "soft state".¹²

The rules and extensive legislation passed in all areas of development have left sufficient loopholes to manipulate and manoeuvre. There is a general impression that anything could be done by paying money (bribes) to the bureaucratic, inefficient, corrupt government officers. The Police

Department another government agency, mainly responsible for the maintenance of law and order in the country, is so corrupt and inefficient, that it seldom loses a chance of extracting money from people.¹³ (See Dilip Hiro 1976: 32-36). A similar situation exists in many government departments where in the words of Dharama Vira (1970), the Governor of Karnataka State: "...Nothing happens without money changing hands."¹⁴ Thus, very often those dealing with government bureaucrats find that the only way to change the law or to get results within a reasonable period of time is by bribing them. Donald Eschen (1981) writes: "When corruption is common, this is conducive to autocratic administration, since top administrators will feel that they must centralize decisions in their hands." He further notes: "When bureaucrats will give special favour to those of the rich or same religion or higher social status, and the like, this will lead to recruitment of an inefficient person into managerial positions rather than the most talented or best trained."¹⁵ The Indian administrative system is not immune to what Donald Eschen has suggested. Corruption and nepotism have become institutions of themselves in India. The outcome is total inefficiency and administrative delays which impede plan fulfilment and obstruct rapid economic development. Aneja et al. (1973) write: "The indifference towards the quality of work performed at all levels and the

absence of any commitment to economic growth are responsible for the failure to generate any enthusiasm among the rural masses". Jain et al.¹⁶(1986) in their study "Grass without Roots" have concluded that there is a great unsuitability between developmental policies and the institutions created to translate them into practice.¹⁷ It is argued here, therefore, that the objectives of growth with stability and the achievement of self-reliance aimed for in the Five Year Plans have remained only in the plan documents.

India's Path of Development After Independence.

We have chosen the theme of this lecture for a very special reason. It is one which has not only crucial significance in terms of comprehending the growth that had taken place in India since inception of the Five Year Plans but also very topical importance today. As indicated in Chapter 1, it is claimed by the new (Janata) government that they are setting India on the Gandhian path of development, one which, as mentioned in Chapter 2, emphasises rural development, small-scale industries. This may raise a question: how far the path pursued during the planning period was qualitatively different from the one it is now proposed to follow? To understand this question it is necessary to know the Nehruite concept of development. The point to note here is that there were fundamental differences on the basic

question of concepts and approaches to economic development within the first, founding, government. The Congress Party was not homogenous in its thinking on the orientation of development to be pursued to achieve the primary objectives. There were two development ideologies. One was based on the concept of "Sarvodaya" (welfare of all) which was evolved by Gandhiji. This philosophy of development conveys that the welfare of all is served by promoting the welfare of the poorest and the last first.¹⁸ This concept advocates a village oriented economy which is free from violence and exploitation. The other, the socialist one with Nehru as its spokesman (V.V.Bhatt 1982: p.85). Unlike Gandhi, Nehru's approach to development was through large-scale industrialization with emphasis on capital goods and machine building industries. Thus, Nehru's socialist ideology like the "growth-centre concept, lays stress on modern and industrial sector and recognizes the role of science and newer technology to play in augmenting the national income, creating employment and eliminating poverty. The major objectives of both the concepts were similar, economic and social development was to be achieved within the democratic framework, but through different approaches.

Thus, the Gandhian plan was principally oriented towards the development of agriculture and rural industries. Nehru's group, on the other hand, looked to

industrialization planned from the centre, as the solution
¹⁹
 to the development problems. However, it is clear that
 some of the original ideas suggested by Gandhiji were not
 seriously considered while implementing the planning
²⁰
 policies. One group of Congress elites argued for greater
 state-control and growth-oriented planning policies as a
 means to achieve developmental objectives. They visualised
 the expansion of the national economy by more state
 controlled industrial development. The Gandhian concept of
 self-reliant village republics was considered by them as a
 regression to primitivism and the past and they chose the
 type of paradigm based on the growth patterns which operated
 in Western Europe and the United States and equated deve-
 lopment with urban industrial growth.

Before going to look into the impact of such
 development on the rural and agricultural sector it would be
 useful at this stage to review and analyse briefly the major
 efforts made during each plan period.

The Major Achievements of the FYPs (1951-75).

The Indian government turned its attention to the
 country's basic problems and development three years after
 India achieved its independence. The first three years after
 independence were mainly occupied with the politics of
 constitution - making, the liquidation of princely authority,

the integration of states, refugee relief and resettlement. The Planning Commission was formed in 1950. Jawaharlal Nehru held the chairmanship of the commission. This commission finally presented a plan in 1952 to be adopted as the first Five Year Plan for 1951. The plan covered the Five Year period from April 1951 to March 1956. The plan was intended to rehabilitate the Indian economy which had been hit by World War II and the partition of the country. It aimed at agricultural growth to meet, first, the deficiencies of foodgrains and industrial raw materials created by the partition. Thus it was mainly concerned with effecting the post-war and post-partition readjustment required by the economy rather than dealing with the country's long term economic problems.

It is quite evident from the structure of the outlay in the First Plan that agriculture, irrigation, and hydro-power generation were given priority (Table 3). Four large-scale multipurpose river-valley projects were initiated at this time. They were:

- (1) The Bhakra - Nangal project for Punjab and Rajasthan.
- (2) The Kosi project for northern Bihar.
- (3) The Damodar Valley project for southern Bihar and West Bengal.
- (4) and the Hirakud project for Orissa.

The total investment of the plan was Rs.35,200 million. Of this Rs.19,600 was invested under the public sector:

Table 3
Distribution of Plan Outlay

By Major Heads of Development
(Public Sector)

(in million Rs.)

Heads.	First FYP Total Expen- diture	Per cent.	Second FYP Total Expen- diture	Per Cent	Third FYP Total Expen- diture	Per cent	Fourth FYP Total Expen- diture	Per cent	Fifth FYP Total Expen- diture	Per cent	Sixth FYP Total Expen- diture	Per cent
1 Agricultural Programme	2,060	11	3,760	6	7,350	9	19,440	12	47,300	13	33,460	5.0
2 Community Development	790	4	2,190	4	2,920	3	2,600	2	NA	-	38,388 *	5.6
3 Cooperation	50	-	340	1	760	1	2,060	1	NA	-	9,142	1.2
4 Major Irrigation	4,340	22	3,720	8	5,720	7	8,490	5	26,810	6	111,149	16.0
5 Flood Control	NA	NA	480	1	850	1	1,150	1	NA	-	104,51	1.5
6 Power	1,490	8	4,460	10	12,620	14	20,300	13	61,900	17	192,654	28.0
7 Industry and Mining	970	5	10,750	24	19,550	23	43,060	27	89,390	25	132,375	19.0
8 Transportation and Communication	5,180	26	13,000	28	21,160	25	30,100	19	71,150	20	241,20	3.5
9 Social Services and Miscellaneous	4,720	24	8,300	18	14,220	16	32,100	20	60,650	17	148,367	21.0
	19,600	100%	47,000	100%	85,150	100%	159,300	100%	357,200	100%	700,466	100%

Note: Excludes financial provision for

Soil Conservation, Animal Husbandry, Forests, Fisheries, Ware housing & marketing, Village & Small-Scale Industries, Defence, Public Administration, and Science & Technology.

* Includes provision for Integrated Rural Development and Rural Employment Programmes.

Source: Planning Commission, Government of India, New Delhi,
Fourth Five Year Plan : A Draft Out line, P.132

Fifth Five Year Plan (1974-79) Vol. I p. 86, and

Sixth Five Year Plan (1980-85) Annexure 4.3, pp. 57-58

Agriculture including community development and irrigation claimed the lion's share, accounting for 37 per cent. The outlay on industrial development was Rs.5,600 million, out of which Rs.970 million was in the public sector and Rs.4,630 million in the private. A few major public-sector enterprises - the Hindustan Machine Tools Factory at Bangalore (Karnataka), the Sindri Fertilizer Factory, at Sindri (Bihar), the Chittaranjan Locomotive Works, at Chittaranjan (West Bengal), the Integral Coach Factory at Madras (Tamil Nadu), and the Indian Telephone Industry at Bangalore (Karnataka) were launched during this period.

Industrial production rose (base year 1960) from 54.8 in 1951 to 72.7 at the end of the plan. With respect to certain industries such as steel, aluminium and fertilizers there were shortfalls, and the targets could not be achieved. Yet, despite a very modest investment over the plan period, overall industrial production increased and power and transport and other facilities were built up during the period. The plan period saw favourable monsoons which led to bumper harvests. Thus the agricultural targets of the plan were over-fulfilled. National income rose by 17.5 per cent, at the end of the plan instead of the targeted figure of 11 per cent. The prices actually recorded a decline. As V.K.R.V.Roa (1965) has described: "Truly, planning was not only successful

but also appeared to be painless; and the country saw the close of the first plan period with a great feeling of optimism and self-confidence. But there were some shortfalls in the performance that Roa further notes "...even the modest industrial target was not achieved, Land Reforms Act got blocked up in legal tangles and unwillingness of the landed interests to give up their privileged positions."²¹

Second Five Year Plan (1956-1961)

The Second Five Year Plan was formulated on a more ambitious scale. The plan outlined raising the GNP and per capita income by 25 per cent and 11 per cent respectively in the five year period. The emphasis was now shifted to industry; and not just industry, but basic industry, steel, cement, power, oil and engineering industries such as machine tools, machine building, heavy engineering and heavy chemicals which were expected to give the country its growth potential in the physical sense, and set it on the road to self-sustaining and self-accelerating economic development. To get the economy to "take off" was the objective.

The strategy of the Second Plan was to make investment not only more massive but also more growth-oriented and more based on foreign resources and to leave consumer goods industries to the private sector. Cottage and

small scale industries were allocated small funds. The total volume of investment of the plan was about Rs.72,000 million of which the governmental investment was Rs.47,000 million. This time agriculture, including irrigation and community development, accounted for only 18 per cent of the public outlay as against 37 per cent in the First Five Year Plan. Social Services like education, health, housing, rural water supply also recorded a decline from 24 per cent to 18 per cent (Table 3). The most significant change was in the investment on industry and minerals in the public sector outlay. This increased from 5 per cent to 24 per cent. There was also a commensurate rise in the investment on industry in the private sector. Mainly because of this emphasis on industry, there was a big increase in the foreign exchange requirements. The plan estimated the foreign aid required to be Rs. 6,750 million compared to Rs.1530 million for the First Plan. In absolute terms, foreign aid requirements were estimated at more than four times those actually used in the First Five Year Plan period.

As stated above, implementation of the plan required Rs.72 thousand millions. Of this, 73 per cent was available from domestic sources and the balance of 27 per cent had to come from abroad as aid. India applied to the World Bank for a loan. The World Bank stipulated the condition that

the public sector should be reduced. Jawaharlal Nehru visited the United States in 1957. It is said that after his visit to the U.S. he became less radical and his criticism of the Western model of development was less sharp. India accepted both the loan of \$ 600 million and the conditions laid down by the donor agency. As a result, the whole course of Indian development was swung gradually away from its original goal of "Socialism" and moved towards free, capitalistic enterprise.

Achievements of the Second Plan

Impressive industrial achievements can be identified in this period. In addition to expansion of the pre-existing steel plants, three new state-owned plants were completed during the plan period. These were at Bhali (in Madhya Pradesh), Rurkela (in Orissa), and Durgapur (in West Bengal). The Chittaranjan Locomotive Factory (in West-Bengal), the Hindustan Shipbuilding Yard of Visakhapatnam (in Andhra Pradesh), and the Hindustan Machine Tools Plant at Bangalore (in Karnataka) were expanded to a considerable extent. A heavy electrical equipment manufacturing plant was established in Bhopal (in Madhya Pradesh) (Figure 5) Apart from expanding the Sindri Fertilizer factory, two more new units, one at Nangal (in Punjab), and the other at Rourkela (in Orissa) were opened. Rapid progress was made

Figure 5

in the production of consumer durables like fans, radios, television sets, refrigerators, air conditioners, motor cycles, cycles, scooters and electrical goods in heavy industries. There was expansion of the capacity of essential producer goods like cement, fertilizers, and heavy chemicals, and modernization and re-equipment of jute, textile and sugar mills.

Some basic defects of the Second Five Year Plan are also evident. Its neglect of agriculture was highly unrealistic in view of the Indian economic situation, where almost half of the national income was generated from agriculture. In this period the country was faced with a severe shortage of food grains. The import of foodgrain had to be increased substantially (under PL 480 Agreement with the United States²³) in order to exercise a curb on rising domestic food prices and augment the country's food supplies. And due to inflationary conditions abroad, import prices rose. As a result foreign exchange requirements increased. The country became dependent for its needs on developed countries. This raised the import bill of the nation and led to balance of payment difficulties. Altogether, the Second Plan, in the words of the Indian Economist, Dr. V.K.R.V. Rao (1970): "...woke up the country 'to the real implications of planning for a rapid rate of

2

economic growth and made the people realize that economic development was in some respects like war involving sweat and toil; if not also tears.²⁴ It may be added that no doubt it brought sweat for the rich and urban elites, but more tears to the rural masses.

The Third Five Year Plan

(1961-1966)

The Third Plan envisaged a pressing need for long-term growth in employment. It was, therefore, considered necessary, first, to continue with the establishment and expansion of basic capital and producer goods industries with a special emphasis on machine building industries. Secondly, it was thought important to concentrate on the acquisition of related skills, technical know-how and design ability. Thirdly, self-sufficiency in food grain production was to be accomplished. Fourthly, regional and personal disparities in income and wealth were to be reduced. The role of cottage goods and small-scale industries was conceived as one way of providing larger employment opportunities and of increasing the supply of consumer goods.

Theoretically, industrial expansion in the Third Five Year Plan was governed by the Industrial Policy Resolution of the Second Plan.²⁵ Accordingly, private and public sectors were conceived as being complementary. In addition some changes were made in the plan to favour the private sector. That is,

fertilizer production, which was previously reserved for the public sector, was thrown open to the private sector, and also in the case of pig iron, the policy was relaxed to allow²⁶ establishment in the private sector.

The distribution of outlay and investment in the Third Plan reveals that the industrial sector was given a high priority. The total financial outlay for the industrial sector was Rs. 27,050 million. Of this Rs. 19,550 million was in the public sector and Rs. 10,500 million in the private sector. Although small-scale industries were considered as providing larger employment opportunities, a very small sum was allotted for the development of this sector. The agricultural sector became secondary both in terms of total percentage allocation (9.1 %) and priority. The Plan also proposed to increase irrigated land, to set up production and use of chemical fertilizer and, extended community development programmes.

Achievements of the Third Plan

The important achievements of the Third Plan included substantial additions to existing capacity in the steel and machine tools industries. New units were started in other branches of machine building, metallurgical and engineering goods, locomotives, shipbuilding, wagon building, aircraft manufacturing, drugs, petro-chemicals, oil-refineries,

fertilizers and pharmaceuticals. Progress was made in the reduction of imports with regard to spare parts for machines, automobiles, electric motors, transformers and switch gears. The output of basic metals increased by 57 per cent, transport equipment by 50 per cent, electrical machinery by 71 per cent, non-electrical machinery by 82 per cent and petroleum products by 48 per cent.²⁷

Though the achievements of the Third Plan were significant in the industrial sector, the overall performance appears to be poor when compared to the Second Plan. The progress made was disappointing in the sense that the expected level of employment and national income and self-sufficiency in agricultural production were not attained despite huge planned investment. The objectives of growth with stability, and "self-reliance" remained unrealised. The movement of national income, output of agriculture and organised industry during the period of the Third Plan is shown in Figure 6. The national income increased by 20 per cent (at 1961 prices) during the first four years. But in the last year it registered a great decline. This²⁸ was almost less than one third of the Second Plan. In the field of agriculture, the progress was most discouraging. The food grain production fell down to 72.3 million tons. Such a decline in food production was much lower than that of 1961 (end of Second Plan). The output of agricultural

Performance of the
THIRD FIVE YEAR PLAN

(1961-66)

(Base Year 1960)

Figure 6.

Source: Government of India, Planning Commission, New Delhi,
Fourth Five Year Plan: Draft Outline - 1965, p.5

produce decreased considerably during the later part of the plan period. The dream of self-sufficiency in agricultural production was not only shattered but the country was again forced to import increasing amounts of food grain, mainly wheat from the U.S.A. This disturbed India's export-import balance drastically. The importation had cost the country the loss of millions of dollars of foreign exchange (Table 4), which could have been used for the extension of irrigation facilities or the import of scarce raw materials for the development of the economy as a whole. However, the Planning Commission admitted that the shortfall in agriculture in the second Five Year Plan period was mainly due to

Table 4.

Import of Wheat during the Third Plan
(in million Rs.)

1961-62	1962-63	1963-64	1964-65	1965-66
939	1,131	1,348	2,420	2,647

Source: Publication Division, Govt. of India, New Delhi;
Reference Annual, INDIA 1967. p.332

the failure to extend irrigation. Adequate attention to extend irrigation works was not paid in the Third Plan period either. The employment situation did not show any progress by the end of the Third Plan. When this Plan was

begun in 1962, there were 7 million unemployed in the country. The Planning Commission accepted the fact that: "Over the Third Plan period, the labour force increased by 17 million and the additional employment created during the plan was estimated at 14.5 million³⁰". This meant a total of 10.5 million people remained unemployed at the end of the plan. Thus the employment situation was also worse although a huge amount was spent for implantation and expansion of organized industry. It may be added that such deterioration in employment was the direct result of the singular interest and over-emphasis on capital intensive, labour saving, heavy industrial enterprises.

The Third Plan was actually a continuation of the unrealistic trends of the growth-oriented Second Five Year Plan. However, the plan had flopped. Several reasons are said to be responsible for its poor³¹ performance. The principal ones are mentioned below:

1. The shortage of foreign exchange,
2. Cessation of aid flow.
3. The Pakistan War in 1965.
4. Shortage of power.
5. Untimely monsoon rains, and the unprecedented drought in 1965.
6. Political instability and fall of the Congress Government in few states.
7. The hoarding and speculation of essential commodities by the private sector,

resulting in price hikes and inflationary pressures.

8. A high growth rate (2.5 per cent) of population.

Thus, due to such serious shortfalls the objectives of the third Five Year Plan were said to have failed to generate expected growth in per capita income, employment and the fourth Five Year Plan, under the circumstances, was postponed. That is, the fourth plan was supposed to begin on April 1966³². A draft outline for the plan was published in August 1966. Later on it was declared by Professor D.R. Gadgil, Deputy Chairman of the Planning Commission that the fourth plan would start in 1969-70 as the economy was in a precarious condition. There was a three year period of plan holiday.

Annual Plans 1966-1969

Abnormally high food grain imports caused a strain on the limited amount of foreign exchange available³³. Adding to this difficulty, foreign aid was stopped in the year 1965. All of the above factors including others, forced the Indian Planners to postpone the Fourth Plan. Still, they adopted annual plans for three years -1966 to 1969 in order to maintain continuity of planning. These Annual Plans were modest both in terms of total outlay and goals. The national income rose nominally by only 1.1 per cent in 1966-67 following a serious drought.

In 1967-68, with a spectacular recovery in agriculture, the national income improved by 9.2 per cent. Again in 1968-69 the national income declined to 4 per cent. ³⁴ Some important steps were taken during this period. The "New ³⁵ Strategy for Agricultural Development" was introduced which contained plans for the production and supply of improved and high yielding varieties of seeds, the promotion and availability of agricultural loans to the farmers, and programmes to bring the farmers closer to the latest scientific technology. Emphasis was placed on the development of minor irrigation mainly by means of diesel and electrically operated pumps, and a significant increase in the use of fertilisers. Plans were made to increase dramatically indigenous production capacity. Also, for the first time there was a planned drive for vigorous population control.

It appears that when such major constraints and uncertainties confronted India, the Planning Commission, realized that they were building on an unrealistic foundation. Thus the Annual Plans, in essence, absorbed the economic shocks that the country had sustained during the period of accelerated industrialization, especially between 1956-1965, and prepared the ground for a smoother take-off for the Fourth Five Year Plan. By the end of the Fourth Plan (the mid 1970s) it was abundantly clear that equity

objectives through industrialization were not being achieved. This fact is clear if we examine the planning performance of the Fourth Plan.

Fourth Five Year Plan

(1969 - 1974)

The Fourth Five Year Plan started in the year 1969.

In view of the previous state of the economy, there was countrywide economic recession. The Fourth Plan, therefore, had to make a start from a very feeble base. The broad objectives of the Plan were as follows:

1. To introduce safeguards against fluctuations of agricultural production, as well as uncertainties of foreign aid.
2. To prevent concentration of economic power and regional imbalances.
3. To promote social justice and equity of employment opportunities.
4. To step up the tempo of economic activity to such an extent that more productive employment might result while maintaining a stable and self-reliant economy.
5. To accentuate the process of industrial dispersal and stimulate the economy of weaker or less developed areas through regional and local planning process.

The targets set were modest: an annual rate of growth of national income of 5.7 per cent, an annual increase of

agricultural production of 5 per cent, industrial production³⁷ of 8 - 10 per cent and export of 7 per cent. The keynote of the Fourth Plan was growth with stability and "achievement³⁸ of self-reliance". One of the major election promises of Mrs. Indira Gandhi's Congress (R) in the 1971 general election was to reduce unemployment and rural poverty drastically. Agriculture, which was seemingly a neglected field throughout the Second and Third Plans, appears to have been given priority during this period. The review of the planning document reveals that the Fourth Plan actually started to make a genuine balance between industries and agriculture.

Out of a total outlay of Rs.159,300 million for the Plan, the under public sector, outlay for the industrial and mineral sector was Rs.43,160 million. The share of the village and small-scale industries was a meagre- Rs. 2,980 million. (See Fourth Five Year Plan document 1969).

If we look at the actual performance during the plan period it seems to have been very poor and we could identify shortfalls throughout the period. For instance, the average rate of growth of GNP was 3.5 per cent as against the anticipated rate of 5.7 per cent. The rate of agricultural growth varied from year to year. It was 5.1 per cent in 1969-70, 5.3 per cent in 1970-71. It declined to 1.8 per cent in 1971-72 and 5.1 per cent in 1972-73. The output of

foodgrains was 99.5 million tons in 1969-70, 107 million tons in 1970-71. In 1971-72 it fell to 95.2 million tons. In the final year of the Plan, it rose to 103.6 million tons; a figure 11.4 million tons short of the Plan target of 115 million tons. Whereas in the case of organized industries the growth rate did not exceed the plan target (7.4 per cent), it was not as bad as the performance of the rural and agricultural sector. In general, in none of the sectors were the results satisfactory.³⁹

Several factors are said to have contributed to the failure of the plan targets. The failure of the monsoons and inadequate production of foodgrain and industrial raw materials between the year 1972-74 is one of the major factors. The bad harvest years were invariably years of hardship for the rural masses, low rates of growth of GNP and difficulty for the Indian economy as a whole. In this regard, Gujral (1979) has observed: "...The capriciousness of the monsoons - are lessons that Indian planners never imbibed. If they had, they would have concentrated on expanding the country's irrigation potential to its very limits. This they never attempted or did."⁴⁰ Other causes were: 1. The Indo-Pakistan War, again in the year 1971 and the cost of looking after nearly 10.8 million refugees, 2. the excessive deficit financing and monetary expansion, 3. the shortage of power supplies

and the underutilization of industrial capacity,
 4. political crisis. Due to all these reasons the condition
 of the country became pretty grim. In December 1973 Dr. B. S.
 Minhas resigned from the Planning commission on the ground
 that the "draft fifth Plan" targets were utterly unreali-
 stic and impossible to achieve.⁴¹

This brief survey of developmental efforts made
 during each plan period reveals that plan policies were
 oriented toward building a strong capital goods sector
 in the Indian economy. Such strategies, followed in the
 initial FYPs, have created contradictions in relation to
 the benefits they were expected to yield.

By the mid 1960's the Indian economy had broadened and
 greatly enlarged its industrial sector and diversified its
 trade by geographic area and by commodities, with an
 emphasis on exports with higher growth potential. It had
 also laid the basis for modernizing the agricultural
 sector. Agriculture did indeed accelerate its growth rate
 to some 3.4 per cent per annum from 1965-75 through the
 introduction of Intensive Area Agricultural Research
 (IAAR). Industrial production, which had grown at a 6.2 per
 cent annual rate in the 1950s, accelerated to an annual
 growth rate of over 9.1 percent in the mid 1960s. More
 dramatic production shifted radically to heavy industry.
 It appeared to Indian Planners that the time for a

'take-off' had arrived. Instead, the Indian economy lapsed into a decade of stagnation.

It may be due to the fact that the increased industrial and agricultural output did not benefit the larger proportion of the population. A big rise in agricultural output, due to introduction of the "green revolution", had become possible only in limited, selected, well watered, irrigated areas like Punjab, Haryana, Uttar Pradesh and some areas in the southern states, Tamil Nadu, and Andhra Pradesh. It is notable that the per capita income of about 65 per cent of the population, some 370 million people, averaged a 2.1 per cent growth per annum. Whereas the remaining 35 per cent of population had experienced in excess of a 5 per cent average annual growth rate in their real income. One needs to consider why such a disparity occurred although efforts to reduce the inter-regional disparities were made through the Five Year Plans. This question is addressed in Chapter 4.

It is stated in the Second Five Year Plan document:

"While agriculture was given a high priority it was also recognized that in the context of an unfavourable man-land ratio, capital enrichment of the Indian economy could not proceed very far within the bounds of an essentially agrarian economy and that, beyond a point, capital enrichment necessarily means industrialization."⁴³

This may be regarded as a shift or new direction in development thinking, which resulted in a single-minded

concentration on investment. Thus the epitome of the application of a growth-oriented approach was the Second Five Year Plan (1956-60) which set forth a growth strategy based on rapid industrialization through capital intensive, import-substitution, with an emphasis on heavy industry.

Jawaharlal Nehru (1958) said :

" I do not see any way out of our vicious cycle of poverty except by utilizing the new sources of power which science has placed at our disposal."⁴⁴

As the above quotation indicates, political leadership in India reached this conclusion in the mid 1950s. Indeed, the planners began to vigorously develop India's capabilities in science and technology and new technologically based industries. Emphasis was placed on organized industry and mining to achieve a break through and diversify the economy.⁴⁵ Therefore, the larger proportion of investment was devoted to establish and expand capital intensive industries and institutions of scientific industrial research in several large cities.

Tremendous progress was made in developing the industrial sector. There were only 5 public undertakings in 1951 with an investment of Rs. 290 million and by 1975 they numbered 217 with an investment of Rs.340 billion. These enterprises produce diverse and sophisticated (notably military) products. In addition, self sufficiency had been reached

with regard to power generating equipment and equipment for rail and road transportation. The production of steel went up from 1.5 million tonnes in 1950 to 7.5 million tonnes in 1974, ~~that~~ of cement from 2.7 million tonnes to 16.8 million tonnes, cotton textiles from 4,215 million meters to 9,346 million meters. (Table 5) The nation at the end of the fourth Plan was the second largest producer of steel in the east, and eighth in the list of world's industrial nations. India's cotton textile industry was outranked only by that of the United States. In jute goods the country was the world's leading producer. Spear (1976) has observed that value added in modern industry shows a 15 fold expansion from 1951 to 1975. But, it appears that such an unprecedented growth took place at the cost of the rural and agricultural sector.

During the period 1951 to 1974 the pace of industrial development was remarkable. Development of industrial and agricultural production and population growth is presented in Figure 7. During this period of 23 years the index of industrial production rose by 323 per cent - from 143 per cent in 1955 to 423 per cent in 1974. In contrast to the growth in industrial production, agricultural production was barely able to keep pace with rising population.

Similarly, India's science and technology complex grew relatively rapidly (Table 6). The Country had the world's

Progress of Industrial Production
(Production of some selected commodities)
(1951 - 1985)

Items	Unit	1950 -51	1960 -61	1970 -71	1973 -74	1984 * -85
MINING:						
1. Coal	Mln.tons.	32.8	55.7	76.3	81.5	147
2. Iron ore	"	3.0	11.0	32.5	35.8	49
METALLURGICAL INDUSTRIES:						
3. Pig iron	"	1.7	4.3	7.0	7.3	10
4. Steel ingots	"	1.5	3.5	6.4	7.6	9
5. Raw steel	"	1.5	3.4	5.1	6.1	9
6. Steel castings	1000 tons.	--	34	62	71	86
7. Aluminium	1000 "	4	18	--	--	--
8. Copper	1000 "	7	9	--	--	--
ENGINEERING INDUSTRIES:						
9. Machine tools	Mln. Rs.	3	70	430	1,839	2,800
10. Railway wagons	1000 nos.	3	12	11	13.5	17
11. Cars & Trucks	1000 "	17	55	88	100	152
12. Motorpumps	1000 "	35	109	259	331	376
13. Motor Cycles	1000 "	--	20	97	125	401
14. Diesel engines	1000 "	6	45	68	148	163
15. Electric motors	1000 "	99	728	2,721	2,908	45290
16. Radio receivers	1000 "	54	282	1,794	1,876	1,439
17. Electric fans	1000 "	200	1,059	1,720	2,230	4,100
18. Cement	Mln.tons.	2.7	8.1	14.4	16.8	25.2
TEXTILE INDUSTRY						
19. Jute textile	1000 tons.	837	1,097	1,060	1,392	1,338
20. Cotton Cloth	Mln.mts.	4,215	6,378	7,787	9,600	9,346
FOOD INDUSTRY						
21. Sugar	1000 tons.	1,134	3,029	3,710	4,000	8,223
22. Peanut oil	1000 "	170	340	558	448	889
23. Coffee	1000 "	21	54	72	87	136
24. Tea.	1000 "	277	322	430	467	563

Source: Ministry of Planning, Government of India, New-Delhi
Statistical Abstract of India 1977, pp. 354-55

* Statistical Abstract of India (1985) pp. 346-47

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Figure 7.

Source: Government of India, Publication Division, New Delhi,
Economic Survey 1975, p. 256.

third largest number of trained scientists and engineers by ⁴⁸ 1975. Over the 24 years period from 1951 the average rate ⁴⁹ of growth was 9 per cent annually.

Table 6
Growth in India's Scientific
and
Technological Personnel

(Figures in 000)

Category	1951	1961	1975
1. Engineering and Technology			
Degree	21.6	62.2	193.4
Diploma	31.5	75.0	256.4
2. Science			
Post Graduate	16.1	48.7	149.3
Graduate	60.0	166.8	485.2
3. Agricultural Science			
Post Graduate	1.0	3.7	13.5
Graduate	6.9	20.2	47.2
4. Medicine.			
Degree	18.0	45.1	101.2
Licentiate	33.0	37.2	30.1
Total	188.0	450.0	1,174.5

Source: Government of India, Department of Science and Technology, National Committee on Science and Technology, Research & Development Statistics, 1974-75, New Delhi, p. 43

One of the developments of major social relevance that took place during these years was the massive growth of higher education. More than a hundred universities, with a few thousand colleges affiliated to them, and dozens of specialized research institutions⁵⁰ emerged. Ironically, at the same time the overwhelming majority of the population was deprived of such educational opportunities. Technical and professional education particularly, such as engineering, medical and polytechnic skills are accessible only to those who have resources to buy them. This type of development tends to accentuate social inequality in the country despite the educational opportunities created. The "trickle-down" mechanism which was supposed to spread to reach the poorer strata of the society in the process of development, seems to have not occurred in this case. The point to note here is that an increasing number of activities were undertaken to promote the educational facilities to the majority, yet with those activities at the end of the fourth Five Year Plan over 65 per cent of the population remained illiterate⁵¹ (60 % in 1981).

Another disappointing fact is that about 60 per cent of the population had not any knowledge of either the Community Development Programme or the Five Year Plans

which were basically designed to improve the social and economic conditions of the masses. This fact is made clear from the NCAER (1971) (National Council of Applied Economic Research) in one of its national surveys (a sample of 3,395 families spread over 16 Indian States)⁵² (Table 7). It is observed from the table that only 38 per cent of family heads in developmental areas⁵³ and 22.6 per cent in non-developmental area had the knowledge about the Five Year Plans. Another 13.9 per cent in the developmental areas and 9.6 per cent in the non-developmental areas had merely heard of the plans without being able to give any evidence that they knew any thing more about them. The NCAER (1971) survey also provided the data to ascertain the people's knowledge and attitudes towards the community development programme (see Table 8). An analysis of the data in this table seems to indicate that the people's knowledge of community development programme is no better than their knowledge of the Five Year Plans. About 57 per cent of the families in the developmental areas and 62.4 per cent in the non-developmental areas had not heard of the community development programmes. This was the situation after twenty years of planning efforts.

Although one of the major objectives of the community development programme was to promote local participation in development activities, the disturbing fact is that a large

Table 7

**Percentage Distribution of Families by the
Knowledge of the Heads of the Family about
Five Year Plans.**

Knowledge of Five Year Plans.	Developme- ntal area	Non-develop- mental area	All India	Size of the sample (All India)
1 Heard of Plans and knows about them	38.0	22.6	39.5	1,342
2 Heard of Plans but knows nothing about them	13.9	9.6	11.3	383
3 Not heard of Five Year Plans	47.5	67.6	48.9	1,660
4 Information not available	0.6	0.2	0.3	10
Total	100%	100%	100%	3,395

Source: NCAER (1971), All India Consumer Expenditure Survey, New Delhi, Vol. II, p. 25.

Table 8

Percentage Distribution of Families by the
Knowledge of the Head of the Family about
Community Development Programme.

Knowledge about Community Development Programme.	Develop- mental area.	Non-deve- lopmental area.	All India.	Size of the sample (all India).
1 Heard of the programme and knows about it	32.4	31.1	38.0	1,293
2 Heard of the programme but knows nothing about it	9.2	6.2	6.6	225
3 Not heard of the programme	56.9	62.4	53.9	1,829
4 Information not available	1.5	0.3	0.5	18
Total	100%	100%	100%	3,395

Source: NCAER (1971) All India Consumer Expenditure Survey, New Delhi, Vol. II, p. 27.

proportion of the population remained ignorant of the policies and programmes and their basic dimensions implemented in the country. As noted in Chapter 2, in the new paradigm of development "from-below", peoples' participation is identified as one of the essential prerequisites for accelerated regional development. This lack of awareness and participation must be seen as one of the reasons for the disappointing performance of the rural development efforts during the initial plan periods.

NOTES & REFERENCES.

1. Roy Chaudhury P.C., (1972), Gandhi and His Contemporaries, Sterling Publishers Pvt. Ltd., New Delhi, pp. 1-15; Kapila R.K., (1966), The Time Demands an analysis of Present-day India, Rituraj Publishers, Delhi. pp. 1-19; and Sethi J.D., (1979), Gandhi Today Carolina Academic Press, Durham, North Carolina, pp. 1-19.
2. See, for more details, Gandhi M.K., (1926), Young India, New Delhi, pp. 115-142.
3. Gujral M.L., (1979), Economic Failure of Nehru and Indira Gandhi, Vikas Publishing House, (U.P.) India, p. xvi.
4. Morawetz David, (1975), Twenty Five Years of Economic Development - 1950-1975, World Bank, Washington D.C., p.8.
5. Jain L.C., Krishnamurthy B.V., & Tripathi P.M., (1986), Grass Without Roots: Rural Development Under Government Aupices, Sage. Publications, New Delhi, London, p.1.
6. Planning Commission, Government of India, New Delhi, Second Five Year Plan document, p. 15.
7. Planning Commission, Government of India, New Delhi, Second Five Year Plan document, p.21.
8. Myron Weiner, (1979), "Political Evolution Party Bureaucracy and Institutions" (in) John Mellor (ed), India: A Rising Middle Power, Westview Press, Boulder, Colorado. pp. 15-40
9. The Statesman, New Delhi & Calcutta, June 14, 1987, p.3
10. Gujral M.L., (1979), Economic Failures of Nehru and Indira Gandhi, Vikas Publishing House, Ghaziabad (U.P.) pp. xvi- xxvii.
11. See for more details, Arun Sinha (1978), "Legal Loopholes to Landlords' Rescue" Economic and Political Weekly, Vol.XIII, No. 41, pp 1758-1760.

- 12 Gunnar Myrdal, (1968), Asian Drama The Twentieth Century Fund. Inc., New York, Vol. II, Chapter 18, pp. 894-95
- 13 Dilip Hiro (1976), Inside India Today, Routledge and Kegan Paul, London and Henley, pp 32-36.
- 14 Dharma Vira (1970), (in) Journal of Tamil Chamber of Commerce, December 14, 1970 p. 13.
- 15 Donald Eschen, & Ashok Bandopadya, (1981), The Conditions of Rural Progress in India, McGill University Vol. I, p. 235.
- 16 Aneja R.K. and George Kurian, (1973), Agenda for New India, Young Asia Publication, New Delhi, p. 15.
- 17 Jain L.C, Krishnamurthy B.V., & Tripathi P.M., (1986), Grass Without Roots: Rural Development Under Government Auspices, Sage Publication, New York, p. 201.
- 18 Gandhi, M.K., (1958), Sarvodaya, Navajivan Publishing House, Ahmedabad, (reprint.) pp. 1-15
In the early part of his stay in South Africa Gandhiji, came under the influence of a book "Unto This Last" written by Ruskin. Gandhiji later translated this book into Gujarati language and, entitled it "Sarvodaya". This book emphasizes the role of agriculture, small-scale industries and labour in economic development.
- 19 Misra R.P., & Nataraj V.K., (1981), "India: Blending Central and Grassroots Planning", (in), Stohr W., and Taylor D.R.F., (eds), Development From Above or Below? John Wiley and Sons Ltd., pp. 259-279.
- 20 After the British left the, big landlords and the big Businessmen previously the enemies of the Congress, became overnight Congress allies. They due to their power and influence in the village became the "Congress Vote Banks." They contested and won seats in several committees and in the house of legislatures. The power, thus passed into the hands of the urban-based and the rich who blocked legislation pre-judicial to their interests. (see for more details Gujral M.L. (1979)).

- 21 Roa V.K.R.V., (1965), "India" (in) Cranely Onslow, (ed), Asian Economic Development, Weidenfeld and Nicolson, London, p.73.
- 22 Gujral M.L., (1975), U.S. Global Involvement, Vikas Publishing House, (U.P.), India, p.45.
- 23 Government of India, Publication Division, New Delhi, Reference Annuale, INDIA 1957, p.355.
- 24 Roa V.K.R.V., (1965), "INDIA", (in) Cranley Onslow (ed), Asian Economic Development, Weidenfeld and Nicolson, London, pp 72-74.
- 25 For details of the industrial police resolution of the Second FYP, see, INDIA 1968, Publication Division, Govt. of India, New Delhi, pp. 157-69.
- 26 Planning Commission, Government of India, New Delhi, Towards Self-Relient Economy: Third Five Year Plan document 1961-66, pp. 63-71.
- 27 Publication Division, Government of India, New Delhi, Reference Annual, INDIA 1967, p.129.
- 28 Planning Commission, Government of India, New Delhi, Fourth Five Year Plan: A draft outline 1966, p.3.
- 29 Ibid, p. 106.
- 30 Planning Commission, Government of India, New Delhi, Towards Self-Relient Economy: Third Five Year Plan, p. 303.
- 31 Ibid, p. 300.

- 32 The year 1966-67 was a year of great political turmoil. There were defections from the Congress Party. Congress Government fell in several states. The Communists came into power in West Bengal, the DMK was established in Tamil Nadu and in several states- Punjab, Haryana, Uttar Pradesh, Bihar, Orissa, and Madhya Pradesh the Congress majority had dwindled. The year 1969 was the year of the great "Divide for the Congress Party- Congress(Ruling) & the Congress (Organized) came into being. In the circumstances there was little energy to spare for the economic development of the country.

- 33 Publication Division, Government of India, New Delhi, Reference Annual, INDIA 1967, pp. 329-332.

- 34 Planning Commission, Government of India, New Delhi, Annual Plans 1968-69, pp. 10-35.

- 35 In 1966 the Food and Agricultural Minister, C. Subramaniam, put before the parliament the Intensive Area Agricultural Programme (IAAR) (HYV Programme) a plan of self-sufficiency in food by the end of the fourth FYP period. The only people who had been much benefited from it were the rich farmers in a few selected areas. Under this new strategy, it is said that the needs of the marginal farmer, out side the selected areas got less attention than before. At the NDC meeting (National Development Council) in New Delhi, in October 1976, Prime Minister, (Mrs) Indira Gandhi admitted that the new strategy was a mistake. But she justified it by saying that it was necessitated by a period of serious food shortage.

- 36 Planning Commission, Government of India, New Delhi, Fourth Five Year Plan: A Draft Summary 1969-74, p. 21.

- 37 Reserve Bank of India, (1969), Fourth Five Year Plan: Draft Summary, Vol, 23 - 1017-40, pp. 18-19.

- 38 Ibid, p. 25

- 39 Planning Commission, Government of India, New Delhi, Fifth Five Year Plan document* (1975-79), pp. 18-32.

- 40 Gujral M.L., (1979), Economic Failure of Nehru and Indira Gandhi, Vikas Publishing House, (U.P.) India, pp. 179-180.

- 41 Times Of India: New Delhi, December 11, 1973, p. 1.

- 42 Planning Commission, Government of India, New Delhi,
Report of the Study Team, (1966), Administrative
Reform Commission,
- 43 Jawaharlal Nehru, (1958), "The Tragic Paradox of Our Age",
New York Times, Magazine, September 7, 1958 p.5.
- 44 Government of India, Publication Division, New Delhi,
Reference Annual, INDIA 1975, pp. 243-44.
- 45 Sukhuwal B.L., (1971), India: A Political Geography,
Allied Publishing, Bombay. p.56.
- 46 Percival Spear, (1976), India Pakistan and The World
Oxford University press, New York, p.9.
- 47 Government of India, Department of Science & Technology,
National Committee on Science & Technology,
Research & Development Statistics, (1974-75) p. 26.
- 48 Government of India, Department of Science & Technology,
National Committee on Science & Technology,
Research and Development Statistics, (1985-86), p.54.
- 49 Government of India, Publication Division, New Delhi,
Reference Annual, INDIA 1984, pp. 46-51, Table 5.1
- 50 Census of India 1981, Provisional Population Totals,
pp. 64-65.
- 51 NCAER (1971) National Council of Applied Economic
Research) All India Consumer Expenditure Survey,
Vol. II, pp. 25-28.
- 52 The classification of the places into developmental
and non-developmental is made on the basis of infor-
mation concerning to several socio-economic character-
istics, such as use of improved seeds, fertilizers, use
of tractors, and use of electricity for agricultural and
industrial purposes, existance of small and medium
industries, existence of market facilities for purchase
and sale of commodities, existance of cooperative
societies, existance of educational institutions, social
recreational, medical facilities. (See for details,
NCAER 1971: pp 11-12).

Chapter 4

The Evaluation of Sectoral & Regional Disparities -----

A brief survey of developmental efforts made during each plan period reveals that plan policies were oriented toward building a strong capital goods sector in the Indian economy. Such strategies, followed in the initial FYPs, have created contradictions in relation to the benefits they were expected to yield. We will now review and analyse briefly some of the sectoral and regional inequalities created during the period.

It is clear that if we look at the single criterion of investment in different sectors of the economy, disparities become more glaring. Investments in the organized industrial sector have gone up from Rs. 970 million in the First Plan to 43,060 million in the Fourth Plan and thus it has registered about a 40 fold increase during the period of about 25 years. During 1951-56 the organized industrial sector accounted for 5 per cent of the total plan outlay as against 27 per cent during the Fourth Plan. It is evident from the figures in Table 3 that the importance of industry was fully realized by the spatial planners.

An important sector like agriculture and community development and social services - education, health, housing,

artisan training, family planning, and schemes relating to educated unemployment, have not experienced such a phenomenal rise during this period. The disparity becomes quite glaring even when we consider governmental expenditures incurred in agricultural programmes, community development, and irrigation on the one hand and industry and mining and power on the other. A total sum of Rs.41,110 million

Table 9

Investment in Industries
In The Private & Public Sectors
(1956-1961)

(Rs. in million)			
Heads	Public	Private	Total
1. Producer Goods Industries	4,630	2,960	7,590
2. Consumer Goods Industries	120	1,670	1,790
3. Industrial Machinery	840	720	1,560

Source: Economic Survey 1961, Go of India
Publication, New Delhi, p.86.

or 23.3 per cent, had been invested in agriculture, community development and irrigation as against a sum of Rs. 113,200 million or 64.1 per cent in industry and power generation during the period of about 25 years. In spite of frequent professions regarding the importance of the village

and small-scale industries, the financial allocations to this sector have been very meagre (Figure 8). The disparity became all the more glaring during the mid 1950s. For example the total outlay on industrial development during the Second Plan period was envisaged at Rs.10,940 million split into producer goods industries, consumer goods industries, and industrial machinery, under public and private sectors (Table 9). The table shows that the public sector was assigned a higher responsibility for the manufacture of producer and capital goods industries and the development of consumer goods industries was to be in the private sector. What is important to know here is that the share of the consumer goods industries in the public sector was only 2 per cent, whereas it was a substantial 32 per cent in the case of the private sector. Even in the case of producer and capital good industries, the private sector was to invest a higher proportion of the total allocations.

If we bear in mind that, first, the private sector is highly profit-oriented, which led to the acquisition of large fortunes by a few big industrial houses. Second, this sector engaged in large-scale production of super-fine, luxurious items - fabrics, cosmetics, pharmaceuticals, household electrical appliances and consumer durables which only an insignificant minority of the population, say, an elite of less than 5 per cent, can afford to buy. Finally, due to the very limited

Allocation of Resources Between the Main Heads of Development (1951-1974)

Figure 8

Source: Government of India, Planning Commission, New Delhi,
Fourth Five Year Plan(1969-74), p. 215.

demand of the items they produced stalled growth and led to stagnation. And again stagnation in the economy has led to scarcities of essential goods. Scarcities occurred mainly due to the malpractices like hoarding and black marketing. And again due to inflation the rich became richer and the poor still poorer. The above figures in the table also indicate that a large amount of available capital was frittered away in the establishment of large-scale consumer goods industries in the private sector for the production of luxury items in a few urban enclaves. In turn this stood in the way and prevented the growth of village and small-scale industries to serve the needs of the vast majority of people - medium and marginal farmers and agricultural labourers living in India's 600,000 villages. Such trends during the process of development have further aggravated disparities of wealth and income between the poor and the rich and given the rich political power, which made them a new class of rulers (exploiters).

The Spatial Distribution of Factories and Factory Employment

Although rapid strides have been made in the field of industrial production, it has not markedly changed the regional distribution of industries and industrial employment. An analysis of the spatial distribution of

factories and factory employment leads to the painful conclusion that development has been lopsided, with regional imbalances. Looking at the single criterion of numbers, it is clear that by 1974, one third of the factories were concentrated in two states - Maharashtra and Gujarat, followed by West Bengal (10 %) and Tamil Nadu (9.4%) (Table 10). Some of the major states like Orissa (1.2%), Assam (2.7%), Rajasthan (1.8%), Madhya Pradesh (4.9%), Karnataka (5.5%) and Andhra Pradesh (6.5) lag far behind although they are richly endowed with resources both human and natural.

A study of only the number of factories may lead us to wrong conclusions as it includes factories of various sizes. For determining the size of industrial concentration, therefore, the ratio of employment in industries to the total population of the state is computed. The location quotient of industrial employment of a region (state) is worked out using the following formula:

$$L.Q. = \frac{\frac{\text{State's Total Industrial Population}}{\text{State's Total Population}} \times 100}{\frac{\text{National Total Industrial Population}}{\text{National Total Population}} \times 100}$$

The computed figures for individual states show that four regions have a L.Q. of more than 1.0 and the remaining 20

Table 10
Pattern of Location of Factories
and Factory Employment

States.	Number of Working Factories (1975)	Persons Employed (in 000) (1975)	Total Population (as on 1974)	Location Quotient of Industrial Population	Total Productive Capital (in million Rs.)	Area (in million sq. kms.)
1. Andhra Pradesh	1,069	327	40,502,708	0.89	8,532	276,814
2. Assam	435	98	14,655,152	0.74	2,187	78,523
3. Bihar	666	267	56,353,369	0.52	7,721	173,876
4. Gujarat	1,622	431	26,697,475	2.09	9,559	195,984
5. Haryana	447	105	10,036,808	1.16	3,533	44,222
6. Himachal Pradesh	65	20	3,460,434	0.64	340	55,673
7. Jammu & Kashmir	58	12	4,616,632	0.26	104	222,236
8. Karnataka	924	239	29,299,014	0.90	4,998	191,773
9. Kerala	920	208	21,347,375	1.08	4,336	38,864
10. Madhya Pradesh	807	212	41,654,119	0.65	6,617	442,841
11. Maharashtra	3,346	969	50,412,235	21.40	18,196	307,762
12. Manipur	5	1	1,072,753	0.10	5	22,356
13. Meghalaya	4	1	1,011,699	0.10	74	22,489
14. Nagaland	NA	NA	516,449	---	NA	16,627
15. Orissa	195	85	21,944,615	0.43	6,977	155,782
16. Punjab	545	105	13,551,060	0.83	5,875	50,362
17. Rajasthan	298	98	25,765,806	0.42	5,268	342,214
18. Sikkim	NA	NA	209,843	---	NA	299
19. Tamil Nadu	1,531	463	41,199,168	1.25	13,867	130,069
20. Tripura	35	2	1,556,342	0.14	8	10,477
21. Uttar Pradesh	1,235	414	88,341,144	0.52	18,779	294,413
22. West Bengal	1,674	798	44,312,011	2.91	16,315	87,858
23. Delhi	297	75	4,065,698	2.05	2,355	1,485
24. Others.*	120	26	2,234,595	0.01	943	---
INDIA.	16,314	4,857	548,159,652			

* Include other Union Territories.

Source: Ministry of Planning, Government of India,
Statistical Abstract of India 1977, p.3

Figure 9

Source: Table 10.

regions have an index of a less than 1.0. Thus, a value over 1.0 indicates a high concentration of industrial wage earners. A location quotient measures the degree to which a specific region has more or less than its share of employment in modern manufacturing industries (Table 10). Maharashtra (Bombay-Poona area) alone accounts for about 20 per cent of the country's industrial wage earners followed by West Bengal (Calcutta-Howra area), Tamil Nadu (Madras metropolitan area) and Gujarat (Ahmadabad-Baroda area), 16.4%, 10.1 % and 9.2 % respectively as second, third and fourth largest concentrations. One thing can be observed here, that West Bengal and Delhi, although lacking natural resources compared to other large states (both in areal extent and population), like Orissa, Bihar & Rajasthan, stand high in the index of concentration of industrial employment (Figure 9). This calls for a re-orientation of the establishment of industrial units to reduce the regional imbalance in the country.

Based on average daily factory employment, the size and location of industrial zones are worked out. For the purpose of delimiting these zones the following method is used. Each region having a minimum daily factory working labour force of 150,000 is regarded as a major zone and the areas 25,000 as minor ones. The remaining regions having a minimum of 2000 workers are regarded as manufacturing districts.

Table 11
Industrial Regions of India

Regions	Factory wage earners (in 000)
A. Major Regions.	
1. Hooghly belt (West Bengal)	591
2. Bombay-Poona region (Maharashtra)	564
3. Ahmedabad-Baroda region (Gujarat)	374
4. Madurai-Coimbatore region (Tamil Nadu)	206
5. Chotanagapur Plateau (Bihar & W.B.)	195
B. Minor Regions.	
1. Delhi-Meerut region	95
2. Godavari- Krishna delta area	84
3. Kanpur	83
4. Malbar Coast (Quilon)	77
5. Indore-Ujjain region	63
6. Madras	62
7. Brahmaputra valley	57
8. Nagapur-Wardha region	44
9. North Ganges Plain	43
10. Malbar Coast (Malbar)	39
11. Sholapur region	36
12. Darjeeling-Terai region	27
13. Hubli-Dharwad-Belgaum region	26
14. Malbar Coast (Trichur)	25

Source; Government of India, Publication Division,
Statistical Abstract of India 1976. p. 213

Note; The industrial districts with less than 20 thousand
factory wage earners are shown in the Map 10.

Source: Table 11

Figure 10.

Following this classification, 5 major, 14 minor and, 12 small manufacturing districts have been identified all over the country. In this case, again, the 5 major zones are the same which show a location quotient of more than 1.0. (Figure 10 & Table 11). Various geographical, political, and economic reasons are responsible for the original concentration and further expansion of those centres.

Regional Imbalance

It is needless to emphasise further the prevailing disparities in distribution of factories and factory employment. There are regions which are poor despite their rich raw materials and human resources. Such disproportionate rate of growth, of course, was associated with the historical facts viz, the decisions of the foreign rule during the pre-independent India. But continuation of those irregular spatial patterns of growth even during the national planning period reveals that certain decisions of the central government, particularly, in respect of investment locations or allocating funds for industrialization have further perpetuated inter-regional disparities. During the period 1951-1975 a few Indian states have developed much faster in establishing manufacturing units. This brings us to the inevitable conclusion that if the

chosen paradigm of planning for development was accelerated industrialization, industries should have been also established in several major states like Orissa, Rajasthan, Madhya Pradesh, Karnatak, Assam, and Kerala which have been richly endowed with resources. Delhi (Union Territory) although small in area (1,485 sq.kms.) provides factory employment for 75,000 people which is much higher than the situation in Assam, Jammu & Kashmir, Rajasthan, Orissa or Karnatak, which have a larger proportion of the population and geographical area. The imbalanced distribution of factory employment becomes more glaring as Maharashtra, Gujarat, Delhi and West Bengal provide as much industrial employment as 10 major states put together do (Table 10).

We are of the opinion that for the sake of balanced regional growth and to provide economic opportunities for the people of other regions, and in the greater interest of the country as a whole, less than optimum location should be pursued. Because, in a socialistic pattern of society, in a chosen democratic model of planning for development, such regional disparities are undesirable, and should not be allowed to continue.

Of course, in the theoretical literature, there is a view that policies which reduce the spatial concentration of investment will lead to a less efficient location pattern of economic activities. (see, for instance, Alonso (1968),

Gore (1984), Richardson (1979), Alonso (1975). The crux of their argument is that interregional equilibrium can only be achieved at the expense of the national growth rate. Alonso (1968) is of the opinion that manufacturing investments should be concentrated in a few locations in order to maximize their efficiency.¹ He has suggested such a policy measure in order to take advantage of agglomeration economies. Alonso (1968) remarks: "The pursuit of interregional equity is not necessarily a desirable goal."² In addition, according to Alonso (1975) in most newly industrializing, developing countries "the primate city provides the most hospitable seedbed."³ Thus, he advocates the concentration of industries in a favourable few localities. Thus it is argued by some people that the policies designed to reduce interregional equity are likely to reduce the aggregate growth rate. How sound is such an argument? There is not yet any agreed theory concerning concentrated industrial development, overall national growth and equity.

Inter-regional and Inter-personal Income Differentials

The past experiences of the planned efforts in India also indicate that although per capita growth in GNP had been relatively rapid, the inter-regional and inter-personal income disparities were not reduced as anticipated. A series

of cross-country studies on trends in income distribution, employment and poverty showed that many groups were not benefiting from increased aggregate growth level⁴. For example, the available statistics show that impact of the economic development in terms of raising the levels of income is not uniform and that income of certain groups has risen much faster than those of other groups (Table 12). A classification of the groups by occupation indicates that the greatest advance in income is made by those groups who are engaged in urban-based activities. It would appear that the farmers, village craftsmen and agricultural labourers have experienced the least impact of development efforts on their incomes. Again there are differences between relatively developed areas and non-developed areas. The difference in income between the developmental and the non-developmental areas for farmers and related agricultural workers is of the order of 26.5 per cent (see Table 12).

Perusal of the primary census statistics disclose that there are marked inter-regional disparities in levels of economic development. For example, the inter-state variation in per capita income, level of poverty, percentage of sown area and other factors related to rural and agricultural sectors are presented in Table 13. The inter-state variation in per capita income is from Rs.478 in Maharashtra to Rs.265

Table 12

Annual Average Income per Family in Different Occupation.

Occupation of the Head of the Family.	Developme- ntal area		Non-develop- mental area		All India	
	Sample Size	Average disposable Income per Family.	Sample Size	Average disposable Income per Family.	Sample Size	Average disposable Income per Family.
Professional technical and related workers	145	4,790	82	2,491	227	3,905
Administrators and executive officials	42	6,707	21	2,668	63	4,694
Clerical and related workers	161	1,757	81	1,572	242	1,677
Farmers and fishermen	454	1,570	1,122	1,241	1,576	1,313
Miners, craft- smen, product- ion and process workers	340	1,510	219	967	559	1,274
Sales workers	223	2,605	123	2,277	346	2,444
Sports and recreation workers	86	1,117	56	1,046	142	1,081
Others	99	2,168	67	1,263	166	1,692

Source: NCAER (1971), All India Consumer Expenditure Survey,
New Delhi, Vol. II, p. 111.

in Bihar, with all India average at Rs. 372 (at 1971 prices). The five states in order of per capita income are Maharashtra, Punjab, West Bengal, Gujarat, Tamil Nadu, Assam and Andhra Pradesh. These seven states may be considered as relatively developed and the remaining states as less developed. The point to note here is that the states in the north-eastern part of India such as Bihar, Orissa, eastern Madhya Pradesh, where deliberate attempts were made to develop capital goods industries during second Five Year Plan, have remained backward in respect of generating per capita income. Massive investments in this coal-steel belt have failed to radiate any significant economic benefits. Although this region produces over 90 per cent of the country's steel and 89 per cent of its coal and is rich in other minerals and power, its per capita income is lower than the national average and much of its agriculture is barely above subsistence level. Bihar and Orissa are the poorest among the Indian States.

Estimates of the percentage of the population below the poverty line for the states as of 1972 and 1978, prepared by the Planning Commission, are shown in Table 13, columns 3 and 4. The population living below the poverty line is defined in terms of the consumption level which would allow a daily minimum per capita intake of 2,400 calories in rural areas and 2,100 calories in urban areas. ⁵ Using

Table 13

Levels of Economic Development
(by major States in India).

States	Per capita Income at 1971 prices (Rs).	Population Below Poverty line (in percentage).		Literacy rate (in percentage). (Excluding 0-4 age group).		Rural population (in percentage).	Net Sown Area as percentage of total area.	Net Irrigated Area: percentage share of India.
	1971	1972	1978	1971	1981	1981	1979	1980
Andhra Pradesh	412	55	42	25	29	77	41	10
Assam	393	47	57	28	28	91	34	2
Bihar	265	54	57	20	26	87	49	8
Gujrat	462	38	39	35	43	69	51	5
Haryana	327	23	25	27	35	78	85	8.5
Jammu & Kashmir	302	36	NA	34	37	74	31	0.5
Karnataka	373	50	48	31	38	71	54	4
Kerala	341	57	47	60	70	81	57	0.6
Madhya Pradesh	325	58	57	22	27	80	43	6
Maharashtra	478	47	48	39	47	65	59	5
Orissa	306	68	66	26	34	88	38	3
Punjab	473	21	15	33	40	72	84	10
Rajasthan	314	46	33	19	24	79	45	8
Tamil Nadu	400	59	53	39	45	67	50	8
Uttar Pradesh	306	52	51	21	27	82	58	3
West Bengal	465	56	52	33	41	73	64	4
INDIA	372	50	49	33	40	76	47	100

Source: Planning Commission, Government of India, New Delhi,
Report of the Working Group (1971), pp. 18-20;

Planning Commission, Government of India, New Delhi,
Sixth Five Year Plan 1980-85, January 1980, Annexure
1.12, Census Of India 1981, Provisional Population
Totals, pp. 65-68; CMIE, (Centre for Monitoring
Indian Economy), The States 1984, Vol. II,
Table 14.1, September 1984.

this poverty line index and the NSS consumer expenditure data (National Sample Survey), the Planning Commission's figures show that in the states of Maharashtra and Gujarat, which are India's most industrialized regions, the percentage of the population below the poverty line was well below the all-India average.

Another distinguishing feature is that the poverty line index in Punjab and Haryana states is not only lower than the national average but also well below the level of industrially advanced states of India. The point to note here is that the states of Punjab and Haryana have achieved rapid growth in agricultural production. It may be, therefore, understood that rapid growth in agriculture had a substantial direct impact on the incidence of poverty. In several other states like Bihar, Orissa, Assam and Madhya Pradesh the poverty line has not significantly changed with the growth of the national economy. In fact, in some instances the percentage of the population below the poverty line has increased. The process of economic development has not affected the economic welfare of the larger masses of the population in the country.

The data in respect of agriculture and rural sectors show the irregularities of growth among the states (Table 13, columns 7, 8 & 9). As can be seen, 76 per cent of the total population in the country live in villages. In many states

the percentage of rural population is much higher than the national average: in Bihar (87%), Assam (91%), Kerala (81%), Orissa (88%), Uttar Pradesh (82%) and Madhya Pradesh (80%). Since 1961 to 1981 the growth of urban population has risen fairly rapidly from 18.2 per cent to 23.71 per cent⁶. The presidency cities, such as Bombay, Madras, Calcutta, Delhi, Bangalore, Hubli all developed Western-style central business districts (CBD) with banks, insurance offices, cinema halls, hotels, large-scale retail and wholesale establishments, inter-city and inter-continental transport and communication offices. But these facts are hardly adequate to bring out the real nature of the regional-spatial problems. There are large tracts of hinterland which have large proportion of marginal and medium farmers and agricultural workers. Those agriculturally potential hinterlands are yet to be developed to their full capacity. For example, the vast Gangetic plain which has much more favourable conditions of moisture, soil and crop security has still remained underdeveloped.

The disparities in respect of net area sown and net irrigated area are shown in the table. The percentage share of net irrigated area in the country varies sharply from one state to another. The net irrigated areas is the highest for Punjab and Andhra Pradesh. These differences raise the basic issue of whether it is possible to bring about some kind of an

equity in the sphere of rural and agricultural sectors. There are vast differences in agricultural output across the country. Only five states, namely, Punjab, Haryana, Tamil Nadu, Uttar Pradesh and Madhya Pradesh contribute an annual average of about 52.3 per cent of the foodgrain production. The spatial distribution of areas according to levels of productivity in agricultural output is presented in the following chapter (Table 17).

Thus, in several respects the data point to a dichotomy in levels of economic development between the western and southern states on the one hand and the eastern and north-central states on the other. Although the explanations appear to be historical, associated with the decisions of the colonial government, those patterns are allowed to continue during the post independence planning period. It may be added that certain decisions of the independent India, particularly in respect of investment locations, have further perpetuated regional disparities. The result is that till now, the country has a pattern which is grossly uneven and unbalanced.

Having a look at the imbalanced pattern of economic development, a question arises: why the mineral rich states of Bihar, Orissa, Madhya Pradesh (coal-steel belt of India) should continue as backward and poor regions despite major attempts made to develop heavy industrial complexes in

this region? This problem deserves careful investigation.

The state level analysis, however, is inadequate for delineation of regional differences in economic development with any degree of precision. Because some of the states of India are very large, namely Uttar Pradesh, the largest, had a population of about 110 million and six other states had population in excess of 50 million. The state level analysis has to be supplemented by district level to understand regional variations in economic development. The Census of India publications contain a district level statistics. Due to unavailability of census publications the differences at the district level is not presented.

As we have discussed in Chapter 2, whether spatially concentrated growth will have "trickle-down" effects, on surrounding areas is a major subject of debate within the regional development literature. However, if we have a look at the available data in the recent sixth Five Year Plan document, they reveal the desirability of achieving both rapid growth and reducing poverty and interregional inequality. The feasibility and ways of achieving a more equitable spatial pattern, as suggested by the Indian spatial planners will be examined in the following chapter. Mention must be made here, that the paradigm that helped in the growth of the thinly populated, capital rich Western nations is of no value for the development of a poor nation

like India, where capital is in short supply and where there is a superabundance of unskilled and semi-skilled labour, where about 76 per cent of the people live in the villages and are poor without work. Since the primary opportunities for the productive use of unskilled labour can be found in rural and agriculture-related activities, rather than urban-industrial or service employment, the focus of development efforts must be shifted from the urban industrial sector towards rural transformation. Such a paradigm may not build an affluent society which academic economists dreamed of, but will surely take care of the problems of unemployment and poverty and provide the minimum living standard that most people in India need. So we argue here, that industrialization should not be concentrated in one or two massive centres in India. A decentralized economy is best suited to its needs as it requires very little capital, is labour-intensive, utilizes local raw materials, requires the use of simple (intermediate, appropriate) tools, is self-reliant and does not depend on imports of foreign aid and does not create regional imbalance.

The Efficacy of 'Centre-Down' Paradigm

Indian planners and the government recognized in the 1960s that the community development program and cottage industries could benefit the poor in the short-run and that in the long-run capital intensive growth could provide the

basis for increased employment and incomes of the poor. David Morawetz (1975) has observed in a study that Indian planners typified "...the view that prevailed during most of the late 1950s and 1960s that the 'trickle-down' mechanism would solve the poverty and income distribution problems if only growth were fast enough." However, by the late 1960s observers were beginning to question the desired effects of the Second and Third Five Year Plans which were supposed to ensure that the benefits of growth would eventually be widely distributed. The basic question raised very often was on the relationship between industrialization and employment. It is true that the growth of industries did not absorb the labour force at a satisfactory level. Most of the energies and resources which had been diverted to costly enterprises and to the import of capital intensive technology benefited a very small percentage of the population. The skilled labourers, investors, businessmen, industrialists and rich farmers found greater security and quicker rewards in their undertakings, whereas the bulk of the population which contains small and medium farmers and agricultural unskilled labourers remained where they were. The perceived results could not be achieved mainly, perhaps, due to the following two factors. First, the community development programmes although ambitious and adequate to carry out development tasks were handicapped by

lack of financial resources. Second, the capital intensive growth, although it benefited the economy, kept a larger proportion of the population out of the modern production system and strengthened spatial, sectoral and personal disparities. It also placed the commanding heights of the economy in fewer and richer hands.

This is not to say that "centre-down" planning achieved nothing. As mentioned earlier, significant progress was made in industrial production. For example, the index of industrial production during the First Five Year Plan (base year 1960) rose from 54.8 in 1951 to 72.8 in 1956. In the second Five Year Plan it rose from 72.8 in 1956 to 100 in 1960. During the first four years of the Third Five Year Plan, industrial production increased by 10 per cent. Agricultural production also increased by 250 per cent during the period. The improvements in the tertiary subsectors are equally significant. Between 1956 and 1975 India's per capita GNP grew at an annual average rate of 1.5 per cent which may be well below that of other developing countries like China, South Korea, and Singapore during that period. But this rate was substantially higher than India's previous per capita GNP growth rate of only 0.2 per cent at the time of independence or before the commencement of the Five Year Plan (1945-1951).⁸ But all these achievements fade into insignificance or

even appear to be irrelevant when one observes the relative increase in poverty of the rural masses. Problems like the extension of intensive cultivation methods to other areas, rural unemployment, poverty and rural-urban inequality remain unsolved. By the mid 1970s it was abundantly clear that the equity objectives of the first four Five Year Plans were not being achieved. In response to disappointment with the perceived results of the growth-oriented strategies of the almost quarter century planned efforts, Indian planners and the Government were exhibiting a renewed interest in the possibility of meeting basic human needs.

The New Experiment

The "centre-down" paradigm, in the Indian context, finally ended with political and economic crises. At the end of the fourth Plan i.e. in 1974-75 the country was facing a serious crisis. Almost twenty-five years of planned efforts were not at all fruitful. Closer examination of the figures in the plan documents reveal that the year 1966 would appear as a watershed in respect of the growth and development of the country. From this year onwards till the end of the fourth Plan the country's economy stagnated and made little progress. In addition, the war with Pakistan and the case of about 10,000 refugees from East Pakistan, now Bangladesh, had put additional strains on the country's exchequer. Above all, the frequent failure of monsoons shattered the economy and further

led to acute scarcity and shortages of not only food but also all other essential commodities.

This situation was further exploited by the urban elites - traders, merchants, industrialists, (corrupt) government officials, black-marketers and smugglers. The prices of all commodities soared. The price hikes and loss of buying power aggravated the misery of the common man and the rural marginal farmers. There were food riots, "gheraos" (public clamours) and frequent strikes in protest against price hikes and shortages of food and essential goods. As the economic situation in the country deteriorated, drastic measures were taken by the Central Government to curb inflationary pressures.

On 1st, July 1975 the Central Government announced a vigorous operation of a radical "20 Point Programme", (Table 14) which is considered to be one of the cutting edges of the plans for the poor.⁹ It declared war on poverty and unemployment and is a land mark in the history of planned economic and social development of the country. The detailed examination of this "20 Point Programme" reveals that the experiment of a new policy formulation had taken place since the mid 70s. It may also indicate that the major shift in the direction of spatial planning for development - blending "centre-down" and "bottom-up" planning. The new strategies seem to be skewed more towards the grassroots level development.

10

In 1977 the Janata Government was installed in New Delhi.

Table 14

Twenty-Point Programme

-
1. Attack on rural poverty
 2. Strategy for rain-fed agriculture
 3. Increase irrigation potential
 4. Implement agricultural land ceilings and distribute surplus land
 5. Special programmes for rural labour
 6. Clean drinking water for villages
 7. Enforce minimum wages for agricultural labour
 8. Health for all
 9. Two child norm
 10. Expansion of education
 11. Housing for the people
 12. Justice to scheduled castes and scheduled tribes
 13. Equity for women
 14. New opportunity for youth
 15. Improvement of slums
 16. New strategy for forestry
 17. Protection of the environment
 18. Concern for the consumer
 19. Strict action against hoarders & tax evaders.
 20. A responsive administration.
-

Source: Publication Division, Government of India Press,
Reference annual, India 1975, New-Delhi. p. 235

The most popular Congress Party, which had led the nation to freedom and which offered a new model of development for humanity as a whole, was defeated in the general election in 1977. This may be regarded as an expression of the people, or reaction to the marked presence of inter-personal and inter-regional disparities. The clamour among the poor people arose from the feeling that their economic interests were always subordinated to those of the urban elites and the rich farmers. The new Janata Party in its election manifesto promised the people to develop the country on "Gandhian" lines and to eradicate unemployment and poverty within a period of 10 years. The new leaders took a pledge at "Gandhiji's Samadhi" (cemetery at Rajghat near New-Delhi) to work for a decentralized village economy and rural development. All such activities reveal the fact that the experiences of the first two and half decades had made India realize that the western model of growth did not adequately answer its development problems. Therefore, the Janata and Congress governments have generated new thinking and opened new vistas for re-articulated integrated planning "from-below" with planning "from above". The current debate on planning, its political overtones notwithstanding, centres partly on the conflict between the bottom-up approach of "Gandhiji" and centredown approach of "Panditji" (Pandit Nehru). It is now commonly argued among the public that centre-down organization never allowed planning to reach

the grass-roots levels. Instead it strengthened semi-feudal class relations, and placed the commanding heights of the economy in fewer hands. Such studies are also receiving growing attention from research scholars, in the universities.

v

NOTES & REFERENCES.

- 1 Alonso W., (1968), "Urban and Regional imbalances in economic Development", Economic Development and Cultural Change, Vol. 17, No. 1, pp. 1-14.
- 2 Ibid, p. 13.
- 3 Alonso W., (1975), "Industrial location and Regional Policy in Economic Development", (in) Friedmann John, and Alonso W., Regional Policy: Readings in Theory and Applications, MIT Press, Mass., Cambridge, p. 82.
- 4 NCAER (1971) All India Consumer Expenditure Survey, Pattern of Income and Expenditure, Vol. II, pp, 14-16
- 5 Government of India, Planning Commission, New Delhi, Percentage of Population Below the Poverty line by States, pp. 41-43.
- 6 Census of India 1981, Series I, Paper 2, pp. 19-22.
- 7 Morawetz David (1977), Twenty Five Years of Economic Development, 1950-1975, World Bank, Washington D.C., p. 16.
- 8 Ibid, p 14, Table 2.
- 9 Times of India, New Delhi, July 1, 1975, p.1
- 10 This new party although promised to people to develop the country on the Gandhian lines, could not fullfil its objectives. On 15th July 1979, The Janata Government fell. More than 80 members of the parliament defected and joined hands with the two Congress- Congress (I) and Congress (S) Therefore, Janata Government reduced to minority and fell. And again Congress (I) party came to power in the midterm pool of August 1979.
- 11 An egalitarian, socialist and self-reliant paradigm of decentralized rural transformation was spelled out for India by the the Congress leaders even before India had its independence.

v

Chapter 5

Agriculture and Equitable Growth

(Towards A New Strategy)

The present chapter deals with the shift in official planning policies, and the government's renewed rural development efforts in recent years. It examines the inter-relationship between agricultural growth and rural poverty and unemployment, and analyses the role of irrigation and ancillary industry in the process of economic development.

The results of planning during the first phase of development (1951-1974), reviewed in the previous chapters, show that material benefits accumulated in a few major urban enclaves of economic growth but failed to "trickle-down" to the poor regions. And the adoption in the mid 1960s of the New Agricultural Strategy (HYVs Programme) also resulted in uneven growth, by favouring better-endowed regions and failing to alleviate rural poverty and unemployment in other regions. But the last two years of the fourth Five Year Plan (1973-74) seemed to signal a new state of affairs. The urgency of the situation at that time called for heightened political commitment to a rurally-based strategy of national development.

A search started for new and substantially different approaches to national development. It focused on the problems of the rural people who make up the majority of the population¹ and whose needs had been largely ignored by the authorities for the almost two and a half decades of planned development in India. The new commitment confronted Indian policy makers with many practical problems; not least, how to engage the millions of rural households in the development process. As Friedmann (1974) has pointed out: "It cannot be denied that the task of developing the rural economy is a task of enormous complexity". He further notes: "How does one reach the hundreds of thousands and even millions of individual production units that are scattered over the entire territory of a nation? The problem is difficult enough in rich countries. It is infinitely more² so in countries that are poor."

In the context of the proposed new strategy of rural development, India's Sixth Five Year Plan (1980-85) makes an important observation. "It is a relatively simple matter to prepare projects for setting up industries or power stations or expanding capacities of ports or airlines or tele-communication systems. A limited number of experts, planners, contractors, and workers are needed to implement such schemes. A programme of rural development, on the other hand, involves investment decisions by

hundreds and thousands of individuals and their ability³ to evoke response of millions of potential beneficiaries. It calls for the active participation of a large number of people, a substantial proportion (65 %) of whom are illiterate and unskilled. In such a situation, the government machinery has to be much more active than before.

As indicated in Chapter 2, successful rural development in poor countries is now recognised to involve a major re-ordering of investment priorities and adoption of a new spatial framework for the formulation and execution of the appropriate policies. The Fifth (1974-79) and Sixth (1980-85) Five Year Plans declare their objectives to include reducing geographical imbalances between the regions, income inequalities, and rural poverty and unemployment through direct investment in rural areas. The Seventh Five Year Plan (1986-1990), proclaims an intent to benefit not only primarily the small and low-income farmers but also those living in agriculturally based service towns, and to commit industrial development to a long-range strategy for balanced agricultural and industrial development.⁴ These objectives appear to be similar to those approaches now proposed by regional theorists, such as Stohr and Taylor (1981) and Friedmann and Douglass (1975).

The "20 Point Programme" declared in 1975 (revised in

1980) has been one of the principal guiding factors in the formulation of the recent Five Year Plans⁵. The National Programme of Minimum Needs (NPMN) was incorporated in the Fifth Five Year Plan. It envisages a frontal attack on the problem of rural poverty and unemployment by attempting to allocate adequate resources for the creation of diversified and dispersed employment, income generating activities and direct provision of minimum needs in the rural and backward areas⁶. It was declared that initial attention should be concentrated on elementary education, public health facilities (which include preventive medicine, nutrition, clean drinking water, provision of developed home sites for the poor and landless labourers in rural areas and slum improvement) and rural-to-rural all-weather roads and rural electrification. It was anticipated that implementation of such a programme would go a long way towards establishing a healthy environment for social well-being and economic growth and also create a feeling of participation in national development among the rural masses.

The thrust of the revised "20 Point Programme" included in the Sixth Five Year Plan not only continues to be on providing better living conditions for the poor and less privileged sections of the population but also aims at an all-round improvement in productivity and the

growth of national economy. It lays particular stress on the pace of agricultural development, taking steps to: remove regional and cropping imbalances, evolve new varieties of seeds, expand irrigation facilities, foster decentralization and the organization of consumer goods industries, village and small-scale industries and the provision of basic amenities - health, education, house sites and so on. All such measures are considered to go a long-way towards improving the economic and social conditions of the rural masses, and are also intended to increase rural employment, strengthen the resource base of the rural poor and raise their incomes.

Many studies have demonstrated that approaches which aim to provide basic infrastructure for agricultural development and minimum needs and services tend to have a better than average performance in terms of economic growth (Ahluwalia and Chenery (1974), Chenery (1980) Hicks and Pstreeten (1979), and Hicks (1980)). No doubt the main problems that the rural sector of the economy has been confronted with can be successfully tackled by carrying out such far-reaching reforms. But, the extent to which programmes embodying this new shift in official policy towards national development can effectively redress the contradictions created by continued reliance on a

strategy of accelerated industrialization, needs to be examined empirically at the village level.

Agriculture and Equitable Growth

The substantial literature which has been produced in recent years provides two broad perspectives on equitable growth. These concern the overall relationship between development and distribution, and the role played by the agricultural sector in fostering equitable growth. However, there is controversy about whether improvements in agricultural technology that expand food output improve or worsen the lot of the rural poor. It is argued that the poor-to-marginal farmers, who have little land, produce food largely for themselves, and the land-less labourers, employed in agriculture and other construction services, depend on market purchases for the major share of their consumption needs. Under these circumstances, increased agricultural production and higher producer prices will benefit the rich farmers.

However, we argue that the negative effects of increased agricultural production will be overwhelmed by its positive effects. Basically, the question which needs to be considered is: what causes the incidence of rural poverty to increase or decrease? No single criterion can define precisely what poverty is. There are problems with

the measurement of poverty, whether its incidence be determined by per capita income, minimum needs, consumption levels, or by access to health, education or land and so on. To identify the real causes and nature of poverty in the Indian context, and the means to alleviate it, needs village-based empirical research that may reveal its dynamic nature. Some systematic efforts have been made in this direction (Srinivasan (1974), Mellor and Desai(1986), Ahluwalia (1977), Narain (1961), D.Narain(1965). They all deal with the conceptual basis of the relation between agricultural production and poverty. Most of the studies conclude that the condition of rural poverty is the direct result of farm output. One empirical study has observed that the fluctuations in the Indian poverty rate could be explained by the growth of agricultural production and changes in the prices⁷ of agricultural commodities consumed by the rural poor. Another study, examining India's National Sample Survey (NSS) consumption expenditure data, has found a statistically significant relationship between growth in agricultural production⁸ per capita and reductions in rural poverty.

The Indian Planning Commission (1977) prepared estimates of the population below the poverty line for the period 1972 to 1978, for a poverty line defined in terms of the consumption levels which would allow a

daily minimum per capita intake of 2,400 calories in rural areas and 2,100 calories in urban areas. Using this poverty line and NSS consumer expenditure data, the Planning Commission observed that the percentage of the population below the poverty line declined from 52 per cent in 1972 to 48.8 per cent in 1978 for rural areas. The estimated figures of the Planning Commission reveal that the poverty rate is indeed a zigzag one. It has risen and fallen several times during the past 30 years (see Table 15). The percentage of the population below the poverty line declined sharply from 53.4 per cent in 1957-58 to 42.3 per cent in the early 1960s, but then climbed sharply to 58 per cent in 1967-68. It then declined again, reaching 48 per cent in the mid 1970s. The Government's most recent estimates indicate that about 40 per cent of the Indian population live below a minimal poverty line.¹⁰

If most people agree that the poverty zigzag is a function of agricultural output, it seems logical to argue that rural poverty and unemployment are largely determined by Indian weather conditions. The basis for our argument is that about 73 per cent of the cropped area is still unprotected by artificial irrigation. Therefore, rainfall is the predominant variable governing agricultural output. For example, if we look at food grain production over a

Table 15

**Percentage of Rural Population
Below the Poverty Line**

Years	Rural Population below poverty line (in %)
1957-58	53.4
1959-60	48.7
1960-61	42.0
1961-62	42.3
1962-63	49.1
1963-64	48.9
1964-65	50.4
1965-66	51.1
1966-67	57.4
1967-68	57.9
1968-69	53.5
1969-70	52.3
1970-71	49.1
1973-74	47.6
1977-78 *	48.9
1982-83 **	40.1

Source: Journal of Development Studies. Vol.13, July 1977
p. 305, Table 3 (a)

* Government of India, Planning Commission 1977, New Delhi.

** The Economist, Newsweekly Aug. 13, 1987. P.13

Table 16

Foodgrain Production in India

Year	(1950-19820)				(in million Tons)
	Rice	Wheat	Sereals	Pulses	Total Foodgrains
1949-50	25.1	6.8	18.9	10.0	60.8
1950-51	22.1	6.8	16.9	9.2	50.0
1951-52	22.6	6.3	17.5	9.1	55.6
1952-53	24.3	7.6	20.0	9.8	61.8
1953-54	29.8	8.1	23.3	11.1	72.3
1954-55	26.5	9.1	23.4	11.6	70.7
1955-56	28.7	8.9	20.1	11.7	69.3
1956-57	30.2	9.5	20.6	12.2	72.5
1957-58	26.5	8.0	22.0	10.1	66.6
1958-59	32.0	9.9	23.6	13.2	78.8
1959-60	31.8	10.3	23.1	11.9	77.1
1960-61	34.6	11.0	24.0	12.7	82.3
1961-62	35.6	12.1	23.1	11.7	82.4
1962-63	33.4	10.8	24.6	11.5	80.3
1963-64	37.0	9.8	23.8	10.1	80.7
1964-65	39.3	12.3	25.4	12.4	89.4
1965-66	30.6	10.4	21.4	9.9	76.3
1966-67	30.4	11.4	24.1	8.3	74.2
1967-68	37.6	16.5	28.8	12.1	95.1
1968-69	39.8	18.7	25.2	10.4	94.0
1969-70	40.4	20.1	27.3	11.7	99.5
1970-71	42.2	23.8	30.5	11.8	108.4
1971-72	43.1	26.4	24.6	11.1	105.2
1972-73	39.2	24.7	23.1	9.9	97.0
1973-74	44.1	21.8	28.8	10.0	104.7
1974-75	39.6	24.1	26.1	10.0	99.8
1975-76	48.7	28.8	30.4	13.0	121.0
1976-77	41.9	29.0	28.9	11.4	111.2
1977-78	52.7	31.7	30.0	12.0	126.4
1978-79	53.8	35.5	30.4	12.2	131.9
1979-80	42.3	31.8	27.0	8.6	109.7
1980-81	53.2	36.5	29.0	11.2	129.9
1981-82*	53.3	37.5	31.1	11.5	133.4
1982-83*	47.1	42.8	27.7	11.9	129.5
1983-84*	59.8	45.1	33.9	12.7	151.5

Source: Government of India, Bulletion on Food Statistics 1982, Ministry of Agriculture, New Delhi. pp. 136-37 (see Table 15)

* Figures for 1982- 1984 are from Centre for Monitoring Indian Economy (CMIE) (1985) Agricultural Production in India. State-Wise and Crop-wise Data: Bombay, pp.18-19

period of 30 years, the large fluctuations in output (Table 16) are largely the function of favourable weather conditions. Those years of increased agricultural production are the years of timely rainfall. In other words, the principal factor behind the increased agricultural output is not the increased area under food crops, nor the increased use of superior technology, but the benevolent "Rain-God" - monsoon.

Secondly, there are marked spatial variations in foodgrain production. A small number of states in India contribute the major production of foodgrains. Only five states - Uttar Pradesh, Punjab, Haryana, Tamil Nadu and Madhya Pradesh - with 46.7 per cent of the total area under foodgrain production, contribute an annual average of about 52.3 per cent. And again there are great sub-regional disparities within these states. A very high degree of concentration of output is found only in a few favoured districts. The spatial distribution of areas according to levels of productivity in foodgrains output is presented in Table 17 and Figure 11. It is clear that the high productivity districts are mainly concentrated in the states of Punjab, Haryana, Tamil Nadu, some parts in Karnatak, and Kerala.

The JNU-PPD (Jawaharlal Nehru University's Perspective Planning Division) study revealed the vast differences in

Table 17
Spatial Distribution of Areas Accordind to
Levels of Productivity in Foodgrain
(1978-79)

Yield Levels (Kgs/Hect)	Number of Districts in Various States																	
	Punjab	Tamil Nadu	Haryana	Andhra- Pradesh	Kerala	Karnatak	West- Bengal	Uttar- Pradesh	Jammu & Kashmir	Maharas- htra	Assam	Bihar	Himachal Pradesh	Gujrat	Rajastan	Madhya- Pradesh	Orissa	TOTAL
Above 2000	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
1600-2000	4	5	1	1	1	2	1	-	-	-	-	-	-	-	-	-	-	15
1200-1600	2	1	2	3	6	8	6	6	1	3	2	2	1	-	-	-	-	43
1000-1200	-	4	2	1	-	3	8	11	1	1	3	2	-	4	3	1	1	45
800-1000	-	-	1	4	-	1	-	25	-	1	3	6	-	3	8	11	5	68
600-800	-	-	1	3	-	3	-	7	1	1	-	5	-	8	3	27	5	64
400-600	-	-	-	5	-	2	-	-	-	8	-	-	-	2	5	4	-	26
200-400	-	-	-	-	-	-	-	-	-	11	-	-	-	1	4	-	-	16
Less than 200	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	1	-	5
TOTAL	11	12	7	17	7	19	15	49	3	26	8	15	1	18	6	44	11	289
Regions above average.	11	12	5	6	7	13	15	24	2	5	6	6	1	5	5	4	2	229

Source: Balla and Alagh (1979) Performance of Indian Agriculture, p. 62, Table 13(b)

Note: The average productivity of foodgrains in India is 915 Kgs/Hect., as on 1978-79

Source: Table 17

Figure 11.

yields across the country. Of 282 districts studied, 69 accounted for 20.5 per cent of the cultivated area in 1973 but contributed 38.7 per cent of the national foodgrain output. At the other extreme, 83 districts accounted for 33.8 per cent of the total cropped area but produced only 14.6 per cent total output. Thus, high, medium and low output areas could be identified throughout the country. It has not been possible for us to analyse fully in this report the various factors that are responsible for high levels of growth in certain areas and lack of growth elsewhere. Nevertheless, some patterns emerging from the JNUPPD study reveal that the areas with high agricultural productivity are significantly associated with areas of assured water supply. The critical importance of developing water works to achieve sustained growth in Indian agriculture, therefore, cannot be denied. The farmers and agricultural labourers are at the mercy of the monsoon. If precipitation fails to occur in time the whole economy collapses. The prices of foodgrains, pulses, edible oils soar to new heights. The poor farmers have to go out of their villages to hire out their labour for wages in order to meet their livelihood. This happens because the "Kharif" output - the monsoon harvest (June-October) accounts for about 60 per cent of the annual production of foodgrains and about 55 per cent

of oil seeds production. Therefore, the development of irrigation works is an essential prerequisite to creating regional equity and employment within the rural sector.

Land-Reforms and Equitable Growth

There is no example or model which Indian planners can exactly follow in solving the problems of reconciling the development of the rural areas with the growth of the national economy. Nor is there an agreed theory relating rural development and the fair distribution of incomes in individual households. There are, of course, some developing countries which have grown relatively rapidly and avoided an absolute worsening of rural poverty and unemployment. The People's Republic of China, South Korea, and Taiwan are cited most frequently as cases of equitable growth. However, the conditions under which the agricultural sector has promoted more equitable growth in these countries has to be understood. All three began their phases of modern economic growth with either revolution or war. In China, the Communist Revolution in 1949 was followed by the radical re-distribution of endowments through land reforms and nationalization (see Gurley 1975). In South Korea, the Korean War was followed by a significant land reform (see Westley 1986). In the case of Taiwan, total disruption of the Taiwanese social order by the Nation-

alist Chinese fleeing from the mainland was also followed by a thoroughgoing land reform. Thus, radical change represented by major redistributive reforms seem to have been the prerequisite to agricultural growth and the reduction of rural poverty, unemployment and inequality in these countries. Another characteristic of these three countries is their unified cultural heritage, which has a considerable impact on economic performance. India is a country of subcontinental size, with great geographical, ecological, cultural, religious, political and economic diversity. Under the circumstances, whether the Korean or Chinese model of rural development is applicable to the prevailing conditions of India has to be analysed.

However, there are contrasting views about such policy measures. One group of economists argues that basic structural changes through redistributive land reform is the key element of any strategy for equitable growth. (See Gurley (1975), Lardy (1980), Mason (1980), Fei, et al. (1979) Perkins (1980), Griffin (1979)). According to them, agricultural development can contribute substantially to equitable growth only through a structural shift in land endowments.

The opposing group maintains that equitable growth is possible without radical redistributive land reforms. (See Lipton (1977), Mellor (1978), Johnstone (1982), Mellor

(1976). Holding a similar view, we argue here that radical land reforms may not do much to increase agricultural production or ameliorate rural poverty and unemployment in the case of India.

Land reform has been suggested by Indian planners, and to a certain extent adopted, as one of the measures to reduce rural poverty and unemployment. Two principal types of land reform have been adopted:

(1) imposition of a ceiling on land-holdings and redistribution of surplus land to the land-less, (2) and tenancy reform. In the context of ceilings it has to be understood that they have primarily a redistributive impact. That is, imposition of the ceilings takes away land from some, the relatively rich, and hands it over to others, the relatively poor. It does not create any new assets, nor does it create new employment - at least immediately. Whether it increases total employment in the long-run is also the question to be analysed. In addition to this, in India the poor are so many and the rich are so few that even if at the very low ceiling limit, the land of the rich were transferred to the poor, no substantial benefit is likely to occur. In fact there is a view that such redistribution of land will hamper the growth of agricultural production. This measure may still be

considered desirable, as an egalitarian strategy, but that is a separate issue.

Secondly, reform of the tenancy system also has limited relevance because the tenancy picture in India is quite distinctive. Purely landless tenants are relatively few in number. Their proportion among the tenant class is not more than one fifth. About 70 per cent, or an overwhelming majority of the tenants, are themselves land-owners, who take some land on lease. And again, among landlords, most are owner-cultivators who lease out some part of their land. Pure landlords are also very few in proportion. The majority of the people benefited by the enforcement of tenancy laws are medium size land-owners who took some land on lease from the poor.

Some regional analysts, therefore, suggest that increased agricultural production and poverty reduction is feasible without land reform if countries shift away from the capital intensive "Industry-First" policies of the past, under which agriculture was neglected or actively discriminated against. (See B. Johnston et al. 1982).

Johnston distinguishes two basic agriculture strategy¹² options, "bimodal" (or dualistic) and "unimodal" According to him, the collectivization pattern of agriculture¹³ in the Soviet Union was clearly bimodal, whereas collect-

ivized agriculture in China has evolved along essentially unimodal lines, based on the decentralization of decision making to relatively small production units and the use of labour-intensive techniques.

The distinction between the bimodal and unimodal patterns of development is based principally on the size distribution of farming units and the technologies adopted. A bimodal pattern, involving excessively large state and collective farms, results in a slower rate of growth of opportunities for productive employment within the agricultural sector because of its labour-saving technology. Under the "unimodal" pattern of development Japan, Taiwan, and South Korea were able to achieve widespread increases in productivity, employment and incomes within the existing framework of the small-scale farm. The "Japanese model" of agricultural growth is based on continued use of labour-intensive, technologies, innovations in HYV's seeds, and fertilizer-responsive crop varieties which are figured in the green revolution.¹⁴ Johnston's contention is that equitable growth is possible with an adequate "sectoral shift" toward agriculture and allied industries. Lipton (1977) contends that the "better strategy is to concentrate first upon high-yielding mass-rural development supported by such selected ancillary industry as rural development makes viable."¹⁵

In the existing Indian situation, even an effective land reform programme would not be enough. Simultaneous programmes to increase agricultural productivity, to expand irrigation and the area under HYVs and to develop the basic infrastructure are needed for effective rural development. Even with increased agricultural production and extended areas under HYVs, the agricultural sector may not be able to absorb the growing labour force in India. For this reason, it is important to foster agriculturally related activities in rural areas, for example, poultry raising, dairying, sericulture, fisheries, agro-processing industries, and consumer goods industries. Employment opportunities could also be created by building roads, minor irrigation tanks, wells, canals, soil conservation bunds, terraces, warehouses for storing foodgrains and in extensive programmes of tree planting and pasture development.

Greater emphasis on afforestation and pasture development is necessary to reduce soil losses and maximize groundwater recharge. These works can be considered investments rather than expenditures because they promise to increase future yields. They are also highly labour intensive, complementary to agricultural productivity and require few resources. Rural poverty in India is associated with unemployment. Sustained expansion

of activities such as these would stimulate the growth of employment throughout the rural economy. Improved agricultural productivity would release resources to produce goods in ancillary rural industries and increased agricultural income would, in turn, increase the demand for such goods and services. Indian planners now turning to the creation of such work opportunities - what are called "Public Rural Works." Such programmes had been occasionally undertaken in the initial plan periods, but they were sporadic and the financial outlays on them very small.

Irrigation As a Source of Equity

Another basic question facing Indian planners is: can the "Green Revolution" contribute to reducing the inter-regional disparities in income and creating employment within agriculture? It is argued here that if investment in irrigation and dryfarming technology is directed properly, if priorities are re-ordered from large-scale, costly projects to small-scale irrigation schemes, and if concerted efforts are made to reduce the cost of HYV technology (which is economically appropriate to an average Indian farmer), it is possible to create greater equity and more employment opportunities within the rural sector.

First of all, the ultimate irrigation potential of

available Indian river water, surface and groundwater should be harnessed and fully utilized. Second, and most important, vulnerability to drought should be reduced through suitable changes in agricultural operations in rain-fed and drought prone regions. The development of technology for conserving soil moisture, and the evolution of new varieties of seeds and fertilizers for semi-arid and rain-fed areas are critical. It is in this field that research and extension services need to be concentrated. Fortunately, the endeavours of the International Crop Research Institute for the Semi Arid Tropics (ICRISAT) are beginning to yield promising results. The Director General of ICRISAT suggested in New Delhi in 1981 that: "...It is not difficult to believe that the low yields (below 800 kg/ha in rainfed areas in the case of India) can be increased by 60 to 100 per cent." He further said: "Pilot scale testing is being done in farmers' fields by ICRISAT and the results are highly promising." It appears that the agricultural picture is potentially bright in the rain-fed areas. With improved land management and adoption of new dry-farming technology, it would be quite possible for an average farmer to increase gross returns by Rs.3,086 per hectare. Therefore, large tracts of dry-land could be

major contributors to growth to increasing employment, and to the reduction of rural poverty.

Similarly, there are bright agricultural prospects within the controlled water supply areas. Most of the growth in agricultural production over the past two decades has resulted from increased productivity of cropland. This has resulted from the use of a wide range of physical, biological and chemical inputs - improved farm implements, fertilizers, pesticides, the breeding of high-yield varieties, and the development of fast-growing cultivars that allow double and even triple-¹⁸ cropping. Based on achievements in demonstration plots, yields of most crops could be increased 4 to 11¹⁹ times. However, behind this high-input agricultural system, irrigation plays an important role. The increased productivity of existing land is attainable if the remaining large percentage of cropped land is brought under irrigation. Most studies have shown that irrigation is an important input and also a prerequisite for full adoption and extension of the HYV programme. The importance of irrigation is shown in Table 18, in which one "Gramsevak" (VLW) Village Level Worker has calculated the yields of rice per acre for different combinations of the three inputs of

Table 18
Response of Rice Crop to Inputs
 (Irrigation, Fertilizer and HYV Seeds)
 (as on November 1984)

Irrig ation	Chemical Fertilizer	HYV Seeds	Total Yield Per Acre (in Quintals)	Per cent. Increase in Yield
0	0	0	4.8	-
0	0	1	-	-
0	1	0	5.4	12.5
0 *	1	1	-	-
1 **	0	0	6.0	25.0
1	0	1	-	-
1	1	0	9.0	87.5
1	1	1	10.5	118.7

Source: Data derived from local observations made for two successive 'Kasif' seasons by VLW of Block Development Office, Haveri, Karnatak State, India.

Note: * Input not applied. ** Input applied

irrigation, chemical fertilizers, and HYV seeds, in a
20
village in the State of Karnatak (India).

The data shows that irrigation alone significantly raises yields (about 25 per cent in this village), which points to the importance of irrigation as a prerequisite for the adoption of other inputs. The table shows that without irrigation, fertilizer only increases yields by about 12 per cent. With irrigation, on the other hand, fertilizer increases yields by 50 per cent. The empirical data calculated at the micro level is consistent with findings elsewhere at macro levels. It is almost universally stated in the development literature that the same relation exists (see, for example Mellor 1976). And one notices in the Indian countryside that without irrigation, villagers are afraid to invest in modern inputs, and barely adopt the HYV programme. Chemical fertilizers and pesticides are quite harmful to the crops if the soil contains insufficient moisture. If the farmers are questioned about why they do not adopt new varieties of inputs, many of them will explicitly mention the need for timely water supply.

The fact is, in Indian agricultural operations, timely water supply or precipitation is necessary, particularly in a one-week period at the beginning of

the "Kharif" season (first week of June). Crops need an adequate start to resist the wind, heavy rainfall (monsoon) or high temperature that may follow thereafter. And it is necessary to get crops started in time to permit harvesting before the next set of crops (the "Rabi" season, winter harvest) are to be sown. Delays in sowing cause severe crop damage either by diseases or by retreating monsoons (winter rain). Thus if the monsoons fail to occur during the precise period needed, farmers are subject to adverse consequences in the following period. Timely water supply is necessary to avoid this risk period.

Thus, lack of irrigation is a critical factor in preventing farmers from achieving increased gross returns per acre. This being the so, the Indian economic planners have been severely deficient in supplying adequate resources for the extension of irrigation in large tracts of rural areas. As every farmer in the villages know, those who cultivate land with better access to irrigation get higher returns at the same input level than those who cultivate land without irrigation. This simple principle appears never to have been imbibed by the urban-based spatial planners during the initial four Five Year Plans.

If we have a look in Punjab, Haryana, and in some

parts of Rajasthan and Tamil Nadu, irrigation has made the largest contribution to increased agricultural production. In these areas, it can double or triple yields during the main growing season, make even a third crop possible and can sharply reduce the risk of crop failure due to untimely rainfall. Irrigation has raised the productive capacity of the land in these areas and several studies have shown that labour absorption and equity have also been increased in Punjab and Haryana regions (see for example, Westley (1986), Singh and Shidhu (1976)).

The most important downstream effects of irrigation are observed by the World Bank study team led by Turnham et al. (1982). Empirical research conducted in the Muda region of Malaysia shows what additional investments and employment may be induced from the irrigation. It is calculated that farmers' income rose by about 73.4 per cent and landless farm workers earnings rose by 70.1 per cent. Farmers' increased income from paddy generated demand for goods and services equivalent to 43.2 per cent of the total benefits of the irrigation scheme. This demand was in such sectors as, housing and other construction works, rice-milling, commerce, road transport, and hotel and restaurant services. All such activities are labour intensive. Higher earnings in

these activities in turn multiplied jobs and incomes for workers in still other parts of the economy. Thus the direct benefits of investment in irrigation are not hard to identify within the rural economy. By the increased foodgrain output, essentially, the poor consumers will benefit from lower food prices.

Impact of Green Revolution on Employment.

It is commonly observed that agriculture in the developing countries is faced with the problem of disguised unemployment. This is because of the seasonal nature of the traditional agriculture and the low level of intensity of cropping. For instance, there is a certain season in India (April to mid June) when there will be practically no agricultural work for the labourers. The solution to this problem, as indicated in Chapter 2, lies in utilizing the surplus labour force more productively to build up long-term assets within the rural sector. This may however, be a partial solution to the unemployment problems in rural areas. The problem of seasonal unemployment could be solved by undertaking measures to provide increased and continuous employment on the farm. This can be done by the adoption of modern farm technology or widespread introduction of "green revolution."

A number of empirical studies undertaken in Asia with special reference to India have noted that labour use in the cultivation of HYVs was considerably higher when compared to traditional varieties. (Herdt 1980, Bartsch 1977, Chinnappa 1977, Sidhu 1974 and Lavania et al. 1977). Adoption of HYV crops resulted in higher labour inputs per unit of cropped area and more continuous employment for the labour on the farm throughout the year.

Chinnappa's (1977) study relating to HYVs of rice in North Arcot district of Tamil Nadu, observed that the increase in demand for hired labour from cultivation of HYVs, as compared to traditional varieties of rice, was 22 per cent. In absolute terms, every acre that went over to HYVs of paddy generated an additional demand for 17 per cent ²³ person/days of labour.

Lavania et al. (1977) estimated the impact of the green revolution on crop-specific employment. The study covered a stratified random sample of 120 farmers, of whom 60 were adopter farmers of new farm technology and 60 were non-adopters. The farmers were selected from 10 villages ²⁴ in Madhya Pradesh. The comparison of rates of growth of employment on adopter and non-adopter farmers is analysed in their study. The four major crops - paddy, corn, wheat and sorghum (jowar) - were selected for study. It can be observed from the Table 19 that

Table 19

**Employment of Human Labour Per Hectare
in Farm Business & Major Crops by size of Farm**

Farm size (hectares)	Adopters	Non- adopters	Adl. utili- zation on adopter's Farm.	Percentage increase over non- adopters
Farm Business				
Below 2.00	124.89	107.12	17.77	16.59
2.00 - 4.00	121.54	102.92	18.62	18.09
4.00 & above	111.55	93.59	17.96	19.19
All Farms	113.47	95.54	17.93	18.77
Sorgum (Jower)				
Below 2.00	97.68	82.47	15.21	18.44
2.00 - 4.00	88.37	73.53	14.85	20.18
4.00 & above	80.93	65.85	15.08	22.90
All Farms	82.05	67.49	14.57	21.57
Paddy				
Below 2.00	116.66	98.83	17.72	17.93
2.00 - 4.00	103.45	90.63	12.82	14.14
4.00 & above	92.27	81.45	10.82	13.28
All Farms	96.79	85.21	11.59	13.59
Corn (Maize)				
Below 2.00	119.42	95.24	24.18	25.39
2.00 - 4.00	114.63	86.94	27.69	31.85
4.00 & above	105.35	81.17	24.18	29.79
All Farms	107.61	83.33	24.28	29.14
Wheat				
Below 2.00	173.57	148.75	24.82	16.69
2.00 - 4.00	162.25	139.33	22.92	16.45
4.00 & above	152.75	124.45	28.30	22.74
All Farms	154.83	127.96	26.83	21.00

Source: Lavania et al. (1977), Economic Affairs, Vol. 22, pp. 354.

employment for all the four crops is higher on adopter farms. For the farm business as a whole, adopter farms provide 18.7 per cent more employment^a, in terms of man/days per hectare. The cropwise rates of increased employment are: paddy(13.59%), wheat(21.00%), sorghum (21.57%) and corn (29.14%). The study also indicates the significant variations between adopter and non-adopter farms with regard to the seasonal rates of increased farm employment.

It is clear, therefore, that the impact of the green revolution as such on employment is in the direction of greater labour-intensity. The dominant reason for this is the requirements to complete farm operations within a short period of time. This trend of increased employment is particularly useful from the point of view of solving the problems of landless and unskilled labourers, which would not be possible with increased industrialization alone.

Another favourable effect of the green revolution-
ison is the improvement in the income status of
landless agricultural workers. This fact may be clear if
we look into the trends in real wages of agricultural
labourers in the country in the pre-green revolution and
post-green revolution period. How far the green revolution has
slackened or accentuated the pace of inter-regional

variations in agricultural wage rates will be an interesting and important branch of study to understand the economic and social implications of the green revolution. Due to unavailability of data pertaining to inter-district variation in wage rates, an attempt is not made here to analyse this aspect.

On the other hand, HYV agriculture has a number of drawbacks. Some have argued that the rapid agricultural change associated with the green revolution has increased inter-regional and inter-personal inequalities (Nicholson 1984, p.570). Critics have directed their attention towards the problems of the small farmers, who have not been able to participate fully in HYVs cultivation because, as indicated earlier, it is expensive. The adoption of modern inputs and diversification into different crops generally entails a considerable increase in expenses. For instance, it generally takes about 190 kgs of chemical fertilizers to treat one hectare of HYV paddy in Karnataka, and this costs about Rs.265. Although HYV seeds are given to the small farmers free of charge by the community development officers, to be productive, farmers still need other inputs such as irrigation equipment - tubewell, pump set, pesticides, fertilizers, and the hiring of more labour all of which involve more expenses. These costs are a barrier to the

small farmers for adoption of new farm technology. To counter this barrier, an adequate institutional credit system and the provision of medium and minor irrigation facilities are of utmost importance.

The lessons from past experience in India reveal that the introduction of the "green revolution" in the mid 60s created inter-regional and inter-personal inequalities. But these disparities reflected the fact that governmental investment in irrigation and drainage had concentrated on the already better-endowed regions. Moreover, in only a few areas was the agricultural sector supplied with electric power adequate to support groundwater and surface water development. Notably, efforts to develop Punjab and Haryana as exporters of foodgrain led to heavy investment in irrigation, rural electrification, and the construction of the huge Bhakra and Nangal multi-purpose projects on a perennial river of Himalayan origin. By 1950, Punjab accounted for 1/2 of the cropped area covered by government's irrigation works. (Ray et al. 1979, p.17). Similarly, by 1970, per capita electric power consumption was growing at 8.5 per cent and 7.3 per cent annually in Punjab and Haryana, respectively, as compared with 4.2 per cent for India as a whole (CMIE Basic Statistics, Vol.II, 1984).

In other regions, the benefits of the green revolution were accumulated by the rich who can afford to invest in the exploitation of surface and groundwater and in chemical fertilizer. Consequently, the disparities between the regions with and without public investment widened. There is no doubt that the green revolution has made a tremendous impact on the development of the national economy.

Impressive increases have been registered in the use of ²⁵ tractors, oil engines, pump-sets, tubewells, and in the consumption of fertilizers. Rapid strides have been made in foodgrain production, which reached another plateau in the late 1970s and early 1980s (Table 16). In 1987 the Indian Food Corporation has 23.5 million tons of ²⁶ foodgrain in storage compared to none 20 years ago. The World Bank Report (1986) commended India for its success in achieving self-sufficiency in foodgrain production. It stressed, however, the need for the continued and substantial net transfer of capital to the country for the creation of employment and the ²⁷ alleviation of poverty.

Certainly, although the intensive cultivation based on the HYV programme has made agriculture more profitable, this has not solved the problems of rural poverty; unemployment and inter-personal and inter-regional disparities. Some people argue that large increases in

agricultural output have further aggravated these problems. (See, for instance, Chakrawarti (1973), Dantwala (1986). Why has this happened, despite tremendous progress? Partly because, as mentioned above, growth has been uneven and favoured a few localities. Wheat-growing areas have benefited more than rice growing areas, and besides wheat and rice, no improved seeds have been evolved for other commercial crops. In most parts of the country the peasants are still practising the traditional subsistence type of agriculture. This is because the spread of the green revolution critically depends upon availability of irrigation facilities. Water is the leading input and in most of the country this can only be assured and controlled through irrigation. The production potential of the HYV programme has not been fully utilized due to the inadequate network of irrigation and since development of such a network is the government's responsibility, the authorities are at fault, for the low level of adoption of the HYV programme, rather than the poor motivation of the farmer.

Although 47 major and 470 medium irrigation reservoirs were under operation (by 1980) and 52 more major on-going schemes are likely to be completed by 1988 in different parts of the country, and even though an ultimate

irrigation potential of more than 93.2 million acres has been created, still about 72 per cent of the fertile cropped area is unprotected by irrigation facilities.

The irrigation potential of available Indian river water and groundwater has been estimated by the Planning Commission (1976) as follows.

River Water. -----	Million Acre-feet -----
1. Total surface flow of river water is about	1,360
2. Usable river water for irrigation	550
3. Unusable water for irrigation owing to physiographic condition	810

Actual utilization up to the end of the Fourth Five Year Plan period (1974) was about 200 million acre-feet or 36.3 per cent of the usable river water resources, leaving 350 million acre-feet or 63.6 per cent to run to the sea. This indicates the vastness of nature's gift to India in the form of river water. A huge task is still to be accomplished in harnessing these water resources

4. Total area which can ultimately be irrigated by irrigation schemes utilizing all the usable river water resources.	Million acres. 118
5. Area which can be irrigated by minor irrigation schemes of surface and ground water resources. (Surface-36 mln. Ground-43 mln.)	79 -----
Total	197

Thus against the total cropped area of about 385 million acres in the country, only about 197 million acres can be economically irrigated if the entire available water resources are utilized. The remaining 188 million acres will have to depend on monsoons. Only 94.8 million of the 197 million acres had been brought under irrigation by major, medium and minor schemes up to the end of the Fifth Five Year Plan (1979) (Table 20). This shows that a large percentage of the fertile arable land is still allowed by the Indian economic planners to depend on the vagaries of the monsoon.

The largest spread of the unirrigated areas is in the western and central areas of the country. This vast region comprises the states of Maharashtra, Madhya Pradesh, Rajasthan, Karnataka, Andhra Pradesh and Orissa. These states together account for 179 million acres, or about ³⁰ 2/3 of the country's total unirrigated areas. There are numerous rivers and rivulets in which, adequate water is available. In particular, the rivers of northern India rising in the Himalayas are snow fed and flow all the year round.

With regard to groundwater, there are certain areas in the country which have a very high potential. Although the presence of groundwater is estimated to be almost everywhere in the country, it is found at varying

Table 20
Area Under Irrigation by Different Sources

		(1950-1979)			(in 000 hectares)	
Year	MAJOR(Canals)		MINOR			Total
	Public	Private	Tanks	Tube- Wells	Other Sources	
1950-51	71,58	11,37	36,13	59,78	29,67	2,08,53
1955-56	80,25	13,60	44,23	67,39	22,11	2,27,58
1960-61	91,70	12,00	45,61	72,90	24,40	2,46,61
1965-65	98,59	10,99	42,58	86,53	24,75	2,63,44
1970-71	119,72	9,66	41,12	118,87	22,66	3,11,03
1974-75	126,52	8,60	35,44	142,29	24,22	3,37,09
1975-76	129,04	8,63	39,82	143,63	23,79	3,44,91
1976-77	130,31	8,48	39,10	150,62	22,96	3,51,47
1977-78	137,25	8,44	39,01	156,03	24,80	3,65,59
1978-79	142,70	8,38	39,18	164,10	25,25	3,79,61
Perc- centage change (1950 -79)	99.3	-26.2	8.4	174.5	14.9	82.0

Source: Government of India, Publication Division, New Delhi,
Statistical Abstract of India- 1982, p. 75, Table 33.

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depths and in varying quantities. The most abundant amounts of groundwater are thought to be economically available in four main zones. The most important are: the Gondwana sedimentary zone - (Barkar and Godavari river basins of Andhra Pradesh and Orissa); the Cenozoic sedimentary zone of Tamil Nadu, Kerala, and Gujarat; the Cenozoic Fault Basin - the rift zone of the Narmada, Tapti and Purna river valley areas in Madhya Pradesh and Maharashtra; and the Ganga (Gangetic) and Brahmaputra alluvial zone of Punjab, Uttar Pradesh, Bihar, and West Bengal. Despite the great quantities of groundwater available in all these areas, relatively little of it has actually been tapped. Part of the problem is that the costs and type of equipment needed to extract it is beyond the capacity of an average farmer. There is not much governmental effort to develop these areas to their full capacity due to want of funds and other facilities.

Ironically, with regard to the existing major irrigation projects, there has been a low percentage of utilization of water compared to the potential created. This under-utilization of the potential has been mainly due to the delay in the construction of field channels and lack of other coordinated development work in the command areas. India cannot afford to be slack in this respect in view of the vast amounts of money which have

been invested on these large-scale projects. And in view of the crucial role of water in stepping up the production capacity of the marginal farmers, it is of paramount urgency and importance that the authorities should concentrate on geographically decentralized and dispersed minor irrigation schemes.

Priority to Minor Irrigation

Irrigation is not only a prerequisite for increased agricultural production but the type of irrigation is also important to reduce the regional differences in land productivity. Types differ in their ability to supply water when and where it is needed to the farmers. As is generally known, the monsoons are erratic in nature. After a brief period of uncertainty (sometimes 3 to 4 weeks) flooding rain usually occurs. The lakes, rivers and streams will overflow from the delayed downpours. Therefore, a given amount of water will be helpful to farmers if it can be delivered in those areas where it is most needed at the particular week of the sowing season in June.

In the circumstances, a few large-scale, multi-purpose reservoirs, in a few localities, do not serve the needs of most farmers, whose farmholdings are scattered over a wide geographical area. We suggest

that taking advantage of all rivers, perennial streams and groundwater resources, investment in irrigation should be made in a decentralized way to meet the needs of all regions. The Japanese experience indicates that interregional equity in land productivity was achieved through direct investment in small-scale irrigation. The statistics with regard to irrigation schemes in India show that the initial Five Year Plans concentrated too heavily on large-scale irrigation projects at the expense of other minor irrigation methods. The First Five Year Plan placed almost exclusive emphasis on large scale projects, and although the emphasis decreased somewhat in the next three plans, nevertheless, in all of them expenditure on large scale projects substantially exceeded that on medium and small-scale ones (John Mellor et al. 1968, p.44).

As Indian economic planners had been initially intended, multi-purpose schemes have not been capable of supplying enough water in the command areas. Although 47 key reservoirs have been constructed at great cost, over time they have been silting up rapidly, due to
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deforestation and denudation of pasture and other non-agricultural lands which expose the top soil and leave it defenceless. A greater emphasis on afforestation and pasture development should be taken up in the catchment

areas. This will not only reduce soil losses but also increase the potential availability of underground water. Otherwise, the reservoirs will lose their capacity to hold water for the droughts which regularly occur every several years.

Another problem is that the dams are used not only for irrigation, but also, primarily, for hydro-electric power generation. This means that a certain minimum level of water must be maintained behind the dam. During the monsoon season, when the demand for water is less acute, a large supply of water is available in the reservoirs, whereas during the dry season, when water is really needed, the dams can serve only a portion of it. Thus, the reservoirs have not been able to meet the full demand for irrigation. For example, although the canal irrigation system in the northern states of India, like Uttar Pradesh, Punjab and Haryana, is generally regarded as the most efficient and most equitable in the country, it has become much less reliable. Available statistics show that increasing numbers of farmers in these areas are adopting tubewell or other minor methods of irrigation since these methods are controlled by an individual farmer. Between 1960-61 and 1979-80, Punjab's net irrigated area increased from 2.02 million hectares to 3.52 million hectares (or from 54% to 78% of net

Table 21
Area Irrigated by Different Methods
Of Irrigation in Punjab & Haryana
(1960-1982)

Methods.	1960-61	1970-71	1981-82	Percentage Change 1960-1982
PUNJAB.				
Canals	1,173	1,286	1,415	20
Wells	829	1,591	1,976	138
others	18	11	17	-5
Total	2,020	2,888	3,408	69
Net sown area irri- gated (%)	54	71	81	
HARYANA.				
Canals	824	965	1,183	44
Wells	166	594	1,034	523
Others	17	6	16	-40
Total	1,007	1,565	2,248	123
Net sown area irri- gated (%)	30	44	61	

Source: Government of Punjab, Statistical Abstract of Punjab, 1983, Chandigarh, p. 197 Table 8.1

Government of Haryana, Statistical Abstract of Haryana 1982-83, Economic and Statistical Organization, Chandigarh, p. 141, Table 7.1

sown area, see Table 21), and Haryana's net irrigated area increased from 1.01 million hectares to 2.17 million hectares (or 30% to 61% of net sown area). By 1981-82 there were 610,000 tubewells in Punjab and 343,000 in Haryana. As of 1980 42 per cent of Punjab's net sown area and 21 per cent of Haryana's were irrigated by tubewells, compared with the all India average of 6 per cent. In terms of coverage, tubewells accounted for 96 per cent of the area irrigated in Punjab as of 1978 and 98 per cent in Haryana as of 1981-82. Similarly, in Uttar Pradesh and Bihar with substantial potential for tubewell development, the percentage of net sown area irrigated by tubewells was 24 per cent and 9 per cent respectively. This shows that minor irrigation methods have been displacing canal irrigation systems, which are becoming less advantageous, since they permit little control over the timely delivery and quantity of water provided to the farmers. As noted above HYV crops are highly responsive to fertilizer use, but farmers are likely to apply fertilizers at higher levels only if they are sure about the timeliness and quantity of water available for the crop. Since minor irrigation methods allow the farmers much greater control over water application, they are more suitable for High Yielding Variety cultivation.

In view of the above problems, and to avoid the huge

investment in constructing large-scale projects, priorities should be shifted to small and medium scale irrigation works. First of all, systematic surveys should be conducted to explore the possibilities of using local water resources to devise innovative methods of irrigation which are appropriate to specific local conditions. The necessary research to determine the relative costs and benefits of an alternative system of irrigation should be undertaken. Few such studies have been carried out by the Indian Planning Commission.

Field observations have shown the benefit/ cost ratio of minor irrigation schemes to be greater than that of large-scale projects (see R.B.Reidinger 1980). Moreover, they can be completed quickly and thus are immediate and reliable sources of irrigation in the hands of an individual farmer. The minor irrigation programme is essentially implemented through individual efforts, and should be supported by adequate financial assistance through institutional sources. The pump-sets, flexible pipes, steel pipes and other equipment necessary for shallow tubewell and lift irrigation schemes are, in cost, beyond the capacity of marginal, poor farmers. For example, to buy and install a shallow tubewell generally costs Rs.5,600 to 6,800 and the maintenance and running costs are in addition, about Rs.800 to 900 a year.

Table 22

**Electric Power Sold
To Industry and Irrigation
(1967-68)**

(in million kWh.)

States	Total Gener- ation	Energy Sales to the States	Sales to Industries	Sales to Irrigation
Andhra Pradesh	1,589.3	1,034.9	576.8	172.6
Assam	97.5	59.2	22.5	0.1
Bihar	3,231.9	2,021.4	1,374.9	29.3
Gujarat	2,207.2	1,796.4	1,421.1	100.5
Jammu & Kashmir	93.6	102.5	40.1	1.9
Kerala	841.9	749.8	602.9	24.1
Madhya Pradesh	1,206.9	1,028.4	859.2	11.7
Madras	4,209.1	3,216.9	1,793.6	817.6
Maharashtra	5,650.8	4,760.6	3,257.7	89.5
Karnataka	1,875.3	1,381.6	1,035.5	66.1
Orissa	947.8	976.6	890.9	1.7
Punjab	3,415.6	2,306.3	1,906.1	213.5
Rajasthan	164.9	325.7	197.8	19.5
Uttar Pradesh	3,030.3	2,371.1	1,639.1	315.8
West Bengal	3,874.9	4,099.8	3,018.5	2.7
Others *	414.7	683.8	217.4	25.6
INDIA	32,851.1	26,915.4	18,854.8	1,892.2

Source: Government of India, Administrative Reform
Commission, Report of the Study Team
Vol.II Annexure XIII (A) p. 785

* Others include all Union Territories & minor states.

Therefore, it requires an adequate credit system. But the bureaucratic administrative procedures typically involved need to be simplified.

A few medium-scale, public, lift irrigation projects have been constructed along the course of the river Tungabhadra, in Karnataka, and they are operating most successfully. Such medium scale river pump systems are usually capable of irrigating three or four villages near the river. This method has become a most appropriate one for drought affected areas of Karnataka. Another system, the deep tubewell, is one where the well is sunk much deeper - varying from 200 to 800 feet. A deep tubewell can irrigate around 200 to 250 acres of land. Needless to say, the pump both these cases are expensive (about Rs.50,000) and by and large have to be established and run by the government.

The minor irrigation programme up to the end of 4th Five Year Plan suffered on account of the slow rate of rural electrification and insufficient flow of institutional credit for shallow tubewells and the purchase of pumpsets. Table 22 shows the limited amount of electric energy supplied to irrigation. It is evident that of the total energy produced, only 7.3 per cent is made available to irrigation, whereas 70.5 per cent is sold to industries.

One can conclude from this that the appropriate infrastructure for agricultural production had not been built up to the end of fourth Five Year plan. This is one measure of the government's failure to create equity and employment within the rural and agricultural sector.

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NOTES & REFERENCES

- 1 See, Misra R.P., and Nataraj (1981), "India: Blending Central and Grassroots Planning" (in) Stohr and Taylor, (eds.) Development From Above Or Below?, John Wiley and Sons Ltd., pp. 259-279.
- 2 Friedmann John, (1974), A Spatial Framework for Rural Development: Problems of Organization and Implementation University of California, Los Angeles, p.4.
- 3 Planning Commission, Government of India, New Delhi, Sixth Five Year Plan document (1980-85), pp.17-18.
- 4 Iqbal B.A., and Mahamad T., (1986), "Sustained Agriculturral Production", Food Policy, Vol.II, No.2, p.94-98
- 5 For details of the revised "20 Point Programme" see, Annual reference, INDIA 1984, Government of India, Publication Division, New Delhi, pp.237-239.
- 6 Planning Commission, Government of India, New Delhi, Fifth Five Year Plan document (1974-79), Chapter 8, pp. 87-93.
- 7 Narain Dharam (1965), The Impact of Price Movements on Areas Under Selected Crops in India, Cambridge University Press, Cambridge. pp.43-46; and Narain (1976), "Growth of Productivity in Indian Agriculture", Journal of Agricultural Economics, Vol. 32, (Jan-Mar.(1977)), pp.93-98.
- 8 Ahluwalia S., Montek (1977), "Rural Poverty and Agricultural Performance in India", Journal of Development Studies, Vol. 13, (July 1977), pp.298-310, Table 3(b).
- 9 Government of India, Planning Commission, New Delhi, Percentage of Population Below the Poverty Line by States, New Delhi, p.135.
- 10 The Economist, Newsweekly, May 9, 1987.
"India Flying Solo" pp 14-15
- 11 Dantwala M.L., (1986), "Technology Growth and Equity in Agriculture", (in) John Mellor (ed), Agricultural Change and Rural Poverty, The Johns Hopkins University Press, Baltimore and London, pp. 110-115.

- 12 Bruce F., Johnston and William Clarke, (ed.) (1982), Redesigning Rural Development, Johns Hopkins University Press, Baltimore. p.72
- 13 Ibid, p. 70
- 14 Ibid, p. 71
- 15 Micheal Lipton, (1977), Why Poor People Stay Poor, Harvard University Press, Cambridge, pp.24-28.
- 16 Swindale L.D., (1981), Coromandel Lecture on "A time for Rainfed Agriculture", 10th, December 1981, (in) Times Of India, New Delhi. p. 1 and 4.
- 17 Ibid, p. 4.
- 18 High-input agriculture has also a number of serious drawbacks, for instance, first, it is expensive. And some other long-term limiting factors may be concerning to environmental costs, like the salinization and waterlogging of soils, the spread of water-borne diseases and the poisoning of non-target species (river and sea water fish, including human beings) by pesticides. However, the negative effects of intensive cultivation may be reduced to considerable degree, through the concerted research efforts, and farmer's training in better management of land, water and pesticides etc.
- 19 Raj Krishna (1986), "Economic Outlook for India", (in) Tames Koach, (ed), India 2000: The Next Fifteen Years, Allied Publishers Pvt. Ltd. New Delhi, pp. 170-178.
20. The data obtained from a personal communication from VLW, Block Development Office, Haveri, (India).
- 21 World Development Report (1982), Oxford University Press. p. 61.
- 22 Ibid, p. 61.
- 23 Chinnappa N., (1977) "Rice growing areas in Tamil Nadu", (in) Farmer B.H., (ed.), Green Revolution? Technology and Change in Rice Growing Areas of Tamil Nadu and Sri Lanka, Westview Press, Boulder, Colo., Chapter 8, p. 215.

- 24 Lavania G.S., Bhalerao M., and Jain B.L., (1977), "Modern technology and human labour utilization in developing countries - A sample study in India," Economic Affairs, Vol 22, pp. 352-358.
- 25 Government of India, Publication Division, New Delhi, Annual reference, India 1984, pp. 213-216.
- 26 India Abroad, Weekly News paper, Fort Erie, Ontario. August 14' 1987 p. 6.
- 27 High Commission of India, Ottawa, India News, Weekly News Bulletin, February, 1987. p.1.
- 28 Government of India, Planning Commission, New Delhi, Report of the Study Team 1979, Vol. II, p.136
- 29 An acre-foot represents a volume of water sufficient to cover an acre of land with one foot depth of water.
- 30 Naidu I.J., (1975), All India Report on Agricultural Censes (1970-71), Ministry of Agriculture and Irrigation Publication, New Delhi, p. 57.
- 31 Most of the forest loss is occuring since people started cutting trees for selling firewood in the towns. As fuel-wood has becoming prohibitively expensive, people find it selling firewood is most remunerative employment. In the absence of other avenues of employment, this is the only way the poor people can keep their home fires burning.
- 32 Government of Punjab, Statistical Abstract of Punjab (1983), pp. 194-195.
- 33 Ibid, p. 195
- 34 Reidinger R.B., (1980), "Water management by Administrative Procedures in an Indian Irrigation System", (in) E.Walter Coward (ed), Irrigation in Agricultural Development in Asia, Cornell University Press, Ithaca, p. 265.

Chapter 6

Summary and Conclusion.

Our intention in this thesis has been, first, to review and assess the growth centre experiences of the Indian Five Year Plan strategies, pointing to failures and successes and, second, to examine the positive role of the agricultural sector in supporting equitable growth, creating employment and reducing rural poverty. As we delved into the record of national accomplishments it seemed to us that the adoption of "growth centre" strategies in the initial Five Year Plans had created serious contradictions in relation to the benefits they were expected to yield. They had brought into being dualistic structures that, while they had helped in achieving relatively rapid economic growth rates, had also created a set of related problems. These included widespread unemployment, rising income inequalities, persistent and growing food shortages and deteriorating material conditions in the countryside.

Our principal findings can be summarized as follows:

- a) Although attempts were made, through the growth-centre policies of the first four Five Year Plans, to reconcile the objectives of growth with those of social justice, the alleviation of poverty, and the reduction of regional inequalities, those multiple objectives were not equally attained. The whole course of Indian development planning

appears to have strayed away from its original goal of socialism and moved towards free capitalistic enterprise. The epitome of the application of the "growth oriented" approach was the Second Five Year Plan, which set forth a growth strategy based on rapid industrialization through capital intensive, import-substitution investment, with an emphasis on heavy industry.

b) Significant differences are observed in the income status of the families whose heads pursue the same occupations in different areas. The relatively high incomes attained by urban professional groups, are particularly striking. Differences are observed in the income status of farms and related agricultural workers between the developmental and non-developmental areas.

c) Table 7 and 8 disclose that a significant proportion of the population had no idea about the Five Year Plans and community development programmes. This indicates the magnitude of the work to be done to familiarise the people with the plans and to motivate them to participate in the task of national development.

d) We find that India's experience over the two decades of Five Year Planning efforts can be characterized as showing an increasing trend in unemployment and in the incidence of

poverty despite increased industrialization and urbanization.

e) Although there has been a significant improvement in agricultural productivity, only a few areas seem to have become capable of fully exploiting the benefits of new farm technology and increased output. A large part of India is characterised by medium or low rates of growth. This has happened because, as the statistics presented reveal, the emerging spatial pattern of high rates of growth is positively associated with areas of better watered facilities.

f) We have presented evidence for three propositions with respect to irrigation: (i) that it is both an important input in its own right and an important prerequisite to the full adoption of other inputs and crop diversification; (ii) that in several parts of the country, during the period under review, it was inadequate; (iii) that government policies and practices have been to a large extent responsible for this. One important way in which the planners have failed to fulfill their irrigation responsibilities is that they have made little effort to carry out a comprehensive study of the irrigation potential of different parts of the country. The necessary research to determine the relative costs and benefits of alternative systems of irrigation has not been carried out and a meager amount of government resources has

been spent on research and extension associated with irrigation facilities.

g) The evidence reviewed documents trends in agricultural production and rural poverty. Several studies have concluded that agricultural growth by itself tends to reduce the incidence of rural poverty. The data presented in this thesis show that the growth of India's agricultural output has only just kept pace with the growth of the population. Moreover, the time series shows a pattern of fluctuation, with the incidence of poverty falling in periods of good agricultural performance and rising in periods of poor performance. This has happened because agriculture is the dominant source of income in rural areas. The scale of income generating activity in allied sectors, such as dairying, sericulture, poultry and small-scale agro-processing industry almost entirely depends upon the level of agricultural production. If there is any "trickle-down" mechanism at work in the rural economy, one should expect to see increases in the agricultural production per capita.

h) Lastly, we find that by the mid 1970s, Indian spatial planners, realizing that only the upper crust of the population (both rural and urban) reaped the benefits of economic prosperity, modified their policy and instead of depending on the "trickle-down" theory of poverty

alleviation, sought through a new policy to tackle target groups, such as the depressed classes and backward areas, directly.

By 1977, it became clear that the contradictions noted above had become critical for the maintenance of political stability. By 1975, under conditions of relative economic stagnation, the Congress Government realized that the "growth centre" strategy had become untenable and its place was taken by an opposite strategy of accelerated rural development that was oriented to human needs, the more equitable distribution of economic benefits, the direct involvement of local people in the process of development, and growth based on the activation of rural people and their resources. Giving practical shape to the new "20 Point Programme" for the socio-economic development of the people, several state governments have shown a sense of dedication and involvement in their speedy implementation of the programme. Andhra Pradesh, for instance, since the new "Telgu Desam" government assumed office in 1983, has introduced policy measures attending to the needs of the poorest of the poor and establishing a clean and efficient administration, striving for the all-round development of the region (The Statesman, November 16, 1987 p. 3). The results of this new turn to rural development are not discussed in this study. Instead, as stated earlier, the

study focused on the assessment of the growth-centre experiences and some of the profound consequences of the "centre-down" paradigm of planning for development.

Chapter 2, reviewed the theories of accelerated industrialization and urbanization and argued that the paradigm that helped in the growth of western industrial nations is of little value for the development of a country like India, where both land and capital are in short supply and where there is a superabundance of unskilled labour which is growing at a fast rate. Since the primary opportunities for the productive use of unskilled labour are found in rural and agriculture-related activities, rather than in urban-industrial activities, the focus of development efforts in the initial Plan periods should have been oriented from industrialization towards rural transformation. Even with regard to industrial development, some of the emphasis seems to have been misplaced. If India had started a large number of agro-industries in the early years of planning, Indian farmers would not have been now faced with the acute shortage and high cost of farm inputs. If Indian economic planners had laid more emphasis on agro-processing industries, it would have helped in industrializing agriculture. This would have provided an economic stimulus to agricultural development, and would have lessened the problem of rural unemployment.

Chapter 4 demonstrated that the "centre down" paradigm of planning had generated and reinforced spatial economic and social disparities and thereby confounded the most ambitious objectives of the community development programmes. The continued discrimination between industry and agriculture seemed to be responsible for the sluggishness of the rural sector on the one hand, and for the unprecedented growth in urban activities on the other. The indicators suggest that the majority of the population (75 per cent) who live in villages are relatively untouched by modern developments even after the prolonged period of development efforts. What one finds in the peripheries of the core regions today, is usually a large illiterate population; unemployment and underemployment which leads to out-migration and leaches peripheral communities of their ablest young persons; lack of capital and relatively inexperienced entrepreneurship; lack of adequate and quick means of transportation; lack of buying power, which impedes the adoption of advanced farm techniques and modern methods; and significant amounts of abject poverty.

Why has such a situation been allowed to persist despite the Government's efforts to launch a vast number of schemes to alleviate rural poverty? To identify the specific causes of object poverty and to suggest the means to ameliorate them needs village-based empirical

research. The issues discussed in this thesis are at the national scale. Based on the available data, an endeavour has been made to demonstrate the government's priorities and biases, which are largely responsible for the failure to generate positive results in villages. It appears that the malaise plagued the entire period of the first four Five Year Plans. Some people have attributed it principally to the retarding influence of natural and political calamities - war with China, wars with Pakistan, failure of monsoons, price hikes in oil and the increasing cost of raw materials, components and capital goods from the developed nations. Often the basic assumption underlying such explanations has been that these difficulties were transitory or else beyond the control of the planners' efforts to create equity along with the growth of the national economy.

Our study has focused the argument more on the deficiencies in planning policies and practices. We have presented data documenting the major direction in which considerable governmental funds have been spent. We have shown that the government's priorities and reliance on "trickle-down" process have been largely responsible for the failures of national development. We have argued that the government critically failed to provide the factors - provision of irrigation, rural electrification, development

of agricultural education, research, credit system, in short the basic infrastructure - needed for accelerated rural development.

In Chapter 5, we considered some of the new policy measures which the Indian government has already implemented and which might be seen as related to the decentralization of industries and organization of agriculture in the manner recommended by Gandhiji. Gandhiji's scheme of decentralized industrialization envisaged a network of cottage and small-scale industries on a cooperative basis all over the country. Such industries were to produce the more common requirements of day-to-day needs using local labour and resources. His idea of "village ~~swaraj~~" is that: "... It is a complete republic independent of its neighbours for its own vital needs..." Among his vital wants were: balanced and adequate food, suitable and sufficient clothes, proper housing, education, health and medical care. The minimum needs approach to development as suggested by Gandhiji and more recently by many other regional development experts should be considered as building a strong human base in an economy. The most obvious relationship between an economy's growth and basic needs is that workers and farmers can produce more and work better if their living conditions are improved.

This leads us to conclude that if Gandhiji's advice were adhered to, if Plan implementation were better matched with the objectives of Plan documents, and if priority were given to the rural and agricultural sector, the economic condition of India would become significantly different from what it is today. Although the more recent fifth and sixth Five Year Plans give greater emphasis to accelerating the pace of agricultural and rural development, there has been no marked change in investments in agricultural sector. The discrimination between the industrial and agricultural sector still seems to persist. If these contradictions are allowed to continue the Indian economy will experience deep political crises. The new policies designed to benefit the poor masses and backward regions need prompt and radical implementation.

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Bibliography.

- Ahluwalia, Montek S., (1978)
"Rural Poverty and Agricultural Performance in India",
Journal of Development Studies,
Vol.14, No.2, pp. 298-323.
- Ahluwalia, M.S., and Chenery, H.B., (1974)
"A Model of Distribution and Growth",
(in) Chenery et al., Redistribution With Growth,
Oxford University Press, Oxford. pp. 12-23.
- Alonso W., (1968)
"Urban and Regional Imbalances in Economic Development",
Economic Development and Cultural Change,
Vol. 17, No. 1, pp. 1-14.
- Alonso W., (1975)
"Industrial Location and Regional Policy in Economic
Development",
(in) Friedmann J., & Alonso W.,
Regional Policy: Readings in Theory and Applications,
MIT Press, Massachusetts, Cambridge, p. 82.
- Aneja R.K., and George Kurian, (1973)
Agenda for a New India,
Young Asia Publication, New Delhi, pp. 15-20.
- Achuta Roa, T.N., (1984)
"Regional Imbalances in Karnataka: Need for a
Reconciliation with Economic Policies and Social
Objectives",
ACARSH, Qly. Journal, Belgaum, Vol. 2, pp. 33-37.
- Broehl G., Wayne, (1978)
The Village Entrepreneur: Change Agents
in India's Rural Development,
Harvard University Press, Cambridge, Massachusetts,
and London, pp. 12-16.
- Bardhan P.K., (1971)
"The Incidence of Rural Poverty in the Sixties",
Economic and Political Weekly,
Vol. VIII, (February 1973) pp. 345-53.
- Boudeville J. R., (1966)
Problems of Regional Economic Planning,
Edinburgh University Press, Edinburgh, p. 11.
- Bruce F., Johnston, and Clarke William, (1982)
Redesigning Rural development,
Johns Hopkins University Press,
Baltimore, p. 72.

- Bruce F., Johnston, and Mellor John, (1961)
 "Role of Agriculture in Economic Development",
American Economic Review, Vol. 51, p. 571.
- Bradford Sax, (1962)
Spain in the New World,
 D. Van. Nostrand, Princeton, pp. 16-23.
- Bhat V.V., (1982),
 "Development problem, strategy and technology choice:
 Sarvodaya and Socialist Approaches in India,"
Economic Development and Cultural Change,
 The University of Chicago, pp. 85-99.
- Basu D.K., and Richard S., (1986)
 "Social and Economic Development in India",
 (in) Basu D.K., & Richard S., (ed.),
Dimensions of Development,
 Sage Publication, Icc., California, pp. 18-35.
- Bartsch W.H., (1977), Employment and Technology Choice
 in Asian Agriculture, Praeger Publishers, New York.
- Coraggio J.L., (1974)
 "Towards a Revision of the Growth Pole Theory",
Viertel Fahres Berichte,
 Vol. 53, pp. 283-308.
- Chenery Hollis B., (1980)
 "Poverty and Progress - Choice
 for the Developing World",
Finance and Development,
 Vol. 17, No. 2, pp. 12-16.
- Cranley Onslow, (ed.), (1965)
Asian Economic Development,
 Weidenfeld and Nicolson, London, pp. 72-74.
- Chakrawarti A.K., (1973)
 "Green Revolution in India",
Annals of the Association of American Geographers,
 Vol. 63, No. 3, pp. 319-330.
- Cochrane Thomas, (1960)
 "Cultural Factors in Economic Growth",
Journal of Economic History,
 Vol 20, No. 4, pp. 515-530.

Chinnappa N., (1977), "Rice growing areas in Tamil Nadu" (in) Farmer B.H. (ed.), Green Revolution? Technology and Change in Rice growing areas of Tamil Nadu and Sri Lanka, Westview Press, Boulder, Colo.,

Darwant D.F., (1969)

"Growth Poles and Growth Centres in Regional Planning: A review", Environment and Planning, Vol. I, No. 1, pp. 5-31.

Dilip Hiro, (1976)

Inside India Today,

Routledge and Kegan Paul, London & Henley, pp. 32-38.

Donald Eschen, and Ashok Bandopadya, (1981)

The Conditions of Rural Progress in India, McGill University, Vol. 1, pp. 235-240.

Dudley Seers, (1983)

"The Meaning of Development",

(in) Charles K. Wilber, (ed.),

The Political Economy of Development and Under Development,

Random House, New York, p. 7.

Dudley Seers (1977)

"The New meaning of Development",

International Development Review,

Vol. 3, pp. 2-7.

Dantwala M.L., (1986)

"Technology Growth and Equity in Agriculture",

(in) Mellor John, (ed.),

Agricultural Change and Rural Poverty,

The Johns Hopkins University Press,

Baltimore and London, pp. 110-115.

Dasgupta Subhyu, (1977)

Hindu Ethos and The Challenge of Change,

Arnold-Heinemann Publishers, New Delhi, pp. 138-146.

Deshmuk C.D., (1972)

Aspects of Economic Development,

Young Asia Publication, New Delhi, pp. 5-16.

- Enke S., (1963)
Economics for Development,
 Prentice-Hall, New York, p. 135.
- Enke Stephen, (1966)
 "Agricultural Innovations and Community Development",
 (in) Lewis P., Fickett, (ed.),
Problems of the Developing Nations,
 Thoms Crowell Company, New York, p. 24.
- Evenson Robert E., and Kislev Y., (1975)
Agricultural Research and Productivity,
 Yale University Press, New Haven, pp. 165-168.
- Friedmann John, (1966)
Regional Development Policy: A Case Study of Venezuela,
 MIT Press, Massachusetts, Cambridge, pp. 113-125.
- Friedmann John, and Douglas M., (1975)
Agropolitan Development: Towards a new strategy for
 Regional Planning in Asia,
 University of California, Los Angeles, pp. 13-20.
- Friedmann John, (1974)
A Spatial Framework for Rural Development:
 Problems of Organization and Implementation,
 University of California, Los Angeles, pp. 4-13.
- Friedmann J., and Weaver C., (1979),
Territory and Function: The evolution of Regional
 Planning, Edward Arnold, London.
- Friedmann J., and Douglas M., (1978),
 "Agropolitan Development: towards a new strategy for
 regional planning in Asia", (in) Lo F.C., and Salih K.,
 (eds.), Growth Pole Strategy and Regional Development
 Policy, Pergamon press, Oxford, pp. 163-92
- Flaming M., (1955)
 "External Economies and the Doctrine of Balanced Growth",
Economic Journal, Vol. 65, pp. 242-256.
- Fillol Tomas, Roberto., (1961)
Social Factors in Economic Development:
 The Argentine Case,
 MIT Press, Massachusetts, Cambridge, pp. 18-26.

Goulet D. (1979)

- "Development as liberation: policy lessons from case studies, International Foundation for Development Alternatives", Dossier, Vol.3, January, Geneva.

Gore Charles, (1984)

Regions in Question: Space, Development Theory and Regional Policy, Methun, London and New York, pp. 2-3.

Gunnar Myrdal, (1957)

Economic Theory and Under Developed Regions, Geraled Duckworth & Co. Ltd., London, p. 16.

Gunnar Myrdal, (1968)

Asian Drama, The Twentieth Century Fund, Inc., New York, Vol. II, pp. 894-96.

Gujral M.L., (1979)

Economic Failures of Nehru and Indira Gandhi, Vikas Publishing House, (U.P.) India, pp. xvi-xxvii.

Gandhi M.K., (1943)

Rebuilding Our Villages, Navajivan Publishing House, Ahamadabad, Vol. II, p. 348.

Gandhi M.K., (1926)

Young India, New Delhi, pp. 115-142.

Gandhi M.K., (1958) (reprint),

Sarodaya, Navajivan Publishing House, Ahemdabad. pp. 1-15.

Gerralld M., Meier and Robert E., Baldwin, (1957)

Economic Development: Theory and Policy, John Wiley & Sons, New York, p. 29.

Griffin Keith, (1974)

"Rural Development: The Policy Options",
(in) Edgar O.E., (ed.),
Employment in Developing Nations,
Columbia University Press, New York, p. 18.

Griffin Keith, (1979)

"Growth and Improvement in the Rural Areas of Asia",
World Development,
Vol. 7, (May-June) pp. 361-383.

Goheen John, (1978)

"A Comment on Professor Singer's Cultural Values in India's Economic Development",
(in) Economic Development and Cultural Change,
Vol. 7, No. 1, pp. 1-3.

Gurley John G., (1975)

"Rural Development in China - 1949-72 and the Lessons to be learned from it",
World Development,
Vol. 3, No. 7-8, pp. 455-471.

Hilhorst J.G.M., (1981)

"Peru: Regional Planning 1968-1977; Frustrated Bottom-Up Aspirations in a Technocratic Military Setting",
(in) Stohr W., and Taylor D.R.F, (eds.),
Development From Above or Below?,
John Wiley and Sons Ltd., Chichester, p. 13.

Higgins B., (1978)

"Development Poles: Do They Exist?",
(in) Lo, Fu-chen and Salih K., (eds.),
Growth Pole Strategy and Regional Development Policy: Asian Experience and Alternative Approaches,
Pergamon, Oxford, p. 35.

Hansen Niles M., (1981)

"Development From Above: The Centre-Down Development Paradigm", (in) Stohr W., and Taylor D.R.F., (eds.),
Development From Above or Below?,
John Wiley & Sons Ltd., p. 18.

Huggett Richard J., (1981)

Industry: Theory in Practice,
Arper, London - England, p. 82.

Hirschman Albert O., (1958)

The Strategy of Economic Development,
New Haven, Yale University Press, p. 180.

Hicks Norman L., (1980)

"Is there a Trade off between Growth and Basic Needs",
Finance and Development,
Vol. 17, No. 2, pp. 17-20.

Hicks Norman L., and Streeten Paul, (1979)

"Indicators of Development: The Search for a Basic
Needs Yardstick",
World Development, Vol. 7, pp 567-580.

Hicks Norman L., (1979)

"Growth Vs. Basic Needs: Is There a Tradeoff?",
World Development, Vol.7, pp. 985-994.

Hensen B., (1970)

"Development Pole Theory in Regional Context",
(in) McKee David, (ed.),
Regional Economics, Theory and Practice,
The Free Press, New York, p. 130.

Harvey S.P., and Lowdon W.J., (1961)

"Natural Resource Endowment and Regional Economic Growth",
(in) Joseph, (ed.),
Natural Resources and Economic Growth,
Inc., Washington D.C., pp. 40-43.

Hirashima S., (1986)

"Poverty as a Generation's Problem:
A note on the Japanese Experiences",
(in) Mellor J., and Desai G, (eds.),
Agricultural Change and Rural Poverty,
The John Hopkins University Press, Baltimore and London,
pp. 149-159.

Hopgood David 91968)

"The policies of agriculture",
Africa Report, Vol. 13, pp. 10-13.

Herdt Robert W., (1980), "Changing Asian rice technology:

Impact, Distribution of Benefits and Constraints",
CPC/ Agriculture and Rural Development Department and
Personnel Management Department, World Bank Preceedings
of the Agricultural Sector Symposia, (7 - 11 January)
pp. 81-127.

- Isard W., and Kuenne R.E., (1953)
 "The Impact of Steel Industry Upon Greater New York-Philadelphia Region",
Rev. Eco. Stat., Vol. 21, pp. 289-301.
- Iqbal B.A., and Mohammed T., (1986)
 "Sustaining Growth in Indian Agriculture",
Food Policy,
 Vol. II, No. 2, pp. 94-98.
- Jain L.C, Krishnamurthy B.V., and Tripathi P.M., (1986)
Grass Without Roots: Rural Development Under Government Auspices,
 Sage Publications, New Delhi, pp 1-10.
- Jawaharalal Nehru, (1958)
 "The Tragic Paradox of Our Age",
New York Times, Magazine, September 7, 1958 p.6.
- Johnston Bruce F., and Clarke William C., (1982)
Redesigning Rural Development,
 Johns Hopkins University Press,
 Baltimore, pp. 5-16.
- Johnston Bruce F., and Kilby P., (1975)
Agriculture and Structural Transformation,
 Oxford University Press,
 New York, pp. 78-80.
- Johnson E.A.J., (1970)
The Organization of Space in Developing Countries,
 Harvard University Press, Cambridge, pp. 203-209.
- Kuklinski Anthoni, (ed.), (1975)
Regional Developmmt and Planning: International Perspectives,
 Leiden, Sifthoft, pp. 28-32.
- Kuklinski Anthoni, (ed), (1981)
Polarized Development and Regional Policies,
 Mouton Publishers, The Haghe, Paris, New York, pp. 19-25.
- Kapila R.K., (1966)
The Time Demands an Analysis of Present-Day India,
 Rituraj Publishers, Delhi, pp. 1-19.

Lasuen J. R., (1974)

"A Generalization of the Growth Pole Notion",
(in) Thoman R.S., (ed.),
Progress of the Commission on Regional Aspects of
Development of the International Geographical Union:
Methodology and Case Studies Canada, Vol. I, p. 72.

Lipton Michael, (1968)

"Strategy for Agriculture: Urban bias and Rural Planning",
(in) Streeten Paul, and Lipton, M., (eds.),
The Crisis of Indian Planning
Oxford University Press, Bombay, pp. 83-95

Lipton Micheal, (1977)

Why Poor People Stay Poor,
Harvard University Press, Cambridge, pp. 24-28.

Lefebvre Louis, (1974)

Economic Theory and Planning,
Essays in honour of A.K. Dasgupta, London, p. 139.

Lipset S.M., and Aldo Solari, (eds.), (1967)

Elites in Latin America,
Oxford University Press, New York, pp. 66-69.

Lele Uma J., (1975),

The Design of Rural Development: Lessons from Africa,
John Hopkins Press, Baltimore.

Lavania G.S., Bhalerao M., and Jain B.L., (1977),

"Modern technology and human labour utilization
in developing countries - A sample study in
India", Economic Affairs, Vol 22, pp. 352-358

Lardy Nicholas. R., (1980)

"Regional Growth and Income Distribution in China",
(in) Robert F., Dernberger, (ed.), (1980)
China's Development Experience in
Comperative Perspective,
Harward University Press, Cambridge, pp. 153-190.

Miechael P., Conzen, (ed.), (1986)

World Pattern of Modern Urban Change,
The University of Chicago, pp. 176-180.

- Mc Kee D.L., (ed.), (1970)
Regional Economies: Theory and Practice,
 The Free Press, New York, London, pp. 125-128.
- Mabogunge Akin L., (1978)
 "Growth Pole and Growth Centres in the Regional
 Development of Nigeria", (in) Kuklinski A., (ed.),
Regional Policies in Nigeria, India and Brazil,
 Mouton Publishers, The Hague, Paris, New York, p. 6.
- Mc Crone G., (1969)
Regional Policy in Britain,
 George Allen & Unwin, London, p. 72.
- Misra R.P., and Sundram, (1978)
 "Growth Foci as Instrument of Modernization in India",
 (in) Kuklinski, (ed.),
Regional Policies in Nigeria, India and Brazil,
 Mouton Publishers, The Hague, Paris, New York, p. 135.
- Misra R.P., Sundaram V.K., and Rao P.L.S., (1974)
Regional Development Planning in India:
 A new strategy,
 Viking Publication, Delhi, p. 42.
- Morawetz David, (1975)
Twenty Five Years of Economic Development: 1950-1975,
 World Bank, Washington D.C., p. 8.
- Myron Weiner, (1979)
 "Political Evolution Party Bureaucracy and
 Institutions", (in) John Mellor, (ed.),
India: A Rising Middle Power,
 Westview Press, Boulder, Colorado, pp. 15-40.
- Moson Edward S., (1980)
The Economic and Social Modernization
 of the Republic of Korea,
 Harvard University Press, Cambridge, pp. 18-25
- Morris David, (1982)
Measuring Condition of the World's Poor
 Physical Quality of Life
 American University, Washington D.C., pp. 15-19
- Mahalanobis P.C., (1955),
 "Approach of operational research to planning in
 India", Sankhya, Vol.16, pp.5-26, reprinted (in)
 Rao C.R., et al., (ed.), (1965), Essays on Economics
 and Planning.

Marwah Onkar, (1978)

"Military Powers and Policy in India",
(in) Marwah O., and Pollack J., (eds.),
Asia's Major Powers,
Westview Press, Boulder Colorado, pp. 45-48.

Mellor John W., and Gunvant M., Desai, (ed.), (1985)

Agricultural Change and Rural Poverty,
The Johns Hopkins University Press,
Baltimore and London, pp. 59-68.

Mellor John W., (1978)

"Food Price Policy and Income Distribution in
Low-Income Countries",
Economic Development and Cultural Change,
Vol. 27, pp. 1-26 .

Mellor John, (1976

New Economics of Growth,
Cornell University Press, Ithaca, pp. 12-15.

Mellor John, (1979)

India: A Rising Middle Power,
Westview Press, Boulder, Colorado, pp. 1-9.

Nichols V., ((1969).

"Growth Poles: An Evaluation of the Propulsive Effects",
Environment and Planning,
Vol. I, pp. 193-208.

Nayudamma Y., and Nayar B.K., (1977)

"Gearing Science and Technology for Rural Uplift",
Invention Intelligence,
Vol. 12, No. 1 & 2, pp. 35-40.

Narain Dharam, (1965)

The Impact of Price Movements on Areas Under
Selected Crops in India,
Cambridge University Press, Cambridge, pp. 43-46.

Narain Dharam, (1977)

"Growth of Productivity in Indian Agriculture",
Indian Journal of Agricultural Economies,
Vol. 32, pp. 153-165.

Narain Dharam, (1961)

Distribution of the Marked Surplus of Agricultural Produce by Size-Level of Holding in India,
Asia Publishing House, New Delhi, pp. 12-16.

Narain Dharam, (1972)

"Growth and Imbalances in Indian Agriculture",
Economic and Political Weekly, Vol.VII, pp. 2143-56.

Naidu I.J., (1975)

All India Report on Agricultural Censes (1970-71),
Ministry of Agriculture and Irrigation Publication,
New Delhi, pp. 42-57.

Nicholson Norman K., (1982)

"Landholdings, Agricultural Modernization &
Local institutions in India",
Economic Development and Cultural Change,
Vol. 32, pp. 569-592.

Owens Edgar, and Shaw Robert, (1972)

Deveelopment Reconsidered: Bridqing the Gap Between Government and the People,

Percival Spear, (1976)

India, Pakistan and The World,
Oxford University Press, New York, pp. 2-9.

Perkins Dwight H., (1980)

"The Central Features of China's Economic Development",
(in) Robert F., Dernberger, (ed.),
China's Development Experiences in Comparative Perspective,
Harward University Press, Cambridge, pp. 120-150.

Roa V.K.R.V. (1965)

"India", (in) Cranley Onslow, (ed.),
Asian Economic Development,
Weidenfeld and Nicolson, London, pp. 67-92.

Roa V.K.R.V., (1971)

Values and Economic Development:
The Indian Challenge,
Vikas Publications, New Delhi, pp. 58-61.

- Rosenstein - Roalan P.N., (1943)
 "Problems of Industrialization of Eastern and Southern Europe",
Economic Journal, Vol. 58, pp. 202-211.
- Rostow W.W., (1960)
The Stages of Economic Growth
 A non communist manifesto,
 Cambridge University Press, New York, pp. 62-65.
 (Second Edition Published in 1977)
- Richardson H.W., and Richardson M., (1974)
 "The Relevance of Growth Centre Strategies to Latin America",
Economic Geography, Vol. 51, pp. 163-78.
- Ray Susanta K, Cummings Ralph W., and Herdt Robert W., (1979)
Policy Planning For Agricultural Development,
 Tata Mc Graw Hill Publishing Co., New Delhi, p. 43.
- Raj Krishna, (1986)
 "Economic Outlook for India",
 (in) Tames Koach, (ed.),
India: 2000: The next fifteen years,
 Allied Publishers Pvt. Ltd., New Delhi, pp. 170-178.
- Reidinger R.B., (1980)
 "Water management by Administrative Procedures in an Indian Irrigation System",
 (in) E., Walter Coward, (ed),
Irrigation in Agricultutral Development in Asia,
 Cornell University Press, Ithaca, p. 265.
- Richardson H.W., (1979)
 "Aggregate Efficiency and Interregional Equity",
 (in) Folmer H., and Oosterhaven J., (eds.),
Spatial Inequalities and Regional Development,
 Nijhoff, Leiden, p. 81.
- Roy Chaudhury P.C., (1972)
Gandhi and His Contemporaries,
 Sterling Publishers Pvt. Ltd., New Delhi, pp. 5-13.

- Singer H.W., (1970)
Perspectives of Economic Development,
 Houghton, Mifflin Company, Boston, pp. 45-52.
- Singer H.W., (1949)
 "Economic Progress in Underdeveloped Countries",
Social Research, Vol.II, pp. 1-11.
- Sethi J.D., (1979)
Gandhi Today,
 Carolina Academic Press, Durham,
 North Carolina, pp. 1-27.
- Sidhu, N., (1974), "Economics of technical change in
 wheat production in India Punjab", Americal Journal
 of Agricultural Economics, Vol. XXVII, No. 4,
 pp. 210-214.
- Sinha Arun, (1978)
 "Legal Loopholes to landlords' Rescue",
Economic and Political Weekly,
 Vol. XIII, No. 41, pp. 1758-1760.
- Sukhuwal B.L., (1971)
India: A Political Geography,
 Allied Publishing, Bombay, pp. 56-60.
- Theodore W., Schultz, (1951)
 "A Frame Work for Land Economies: The Longview",
Journal of Farm Economics, Vol. XXIII, pp. 204-209.
- Tilman Robert O., (1969)
Man, State and Society in Contemporary
 South East Asia,
 Praeger Publishers, New York, pp. 93-98.
- Tinbergen J. et.al., (1976)
Reshaping the International Order
 A Report to the Club of Rome, E.P.Dutton, New York.
- Winslow C.E.A., (1957)
The Cost of Sickness and The Price of Health,
 Monograph Series No. 7, Geneva, pp. 19-22.

✓
Wallerstein Immanuel, (1974)

"The Rise and Future Demise of the World
Capitalist System: Concepts for Comparative Analysis",
Comparative Studies in Society and History,
September 1974, pp. 391-398.

Ward Morehouse, (1971)

Science in India,
Popular Prakashan, Bombay, pp. 13-22.

Weber Max, (1958)

The Religion of India,
The Free Press, Glencoe, Illinois, p. 152.

Westley John R., (1986)

Agriculture and Equitable Growth: The case of
Punjab - Haryana,
Westview Press, Boulder & London, pp. 19-35.

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