

THESIS ABSTRACT

SOME ASPECTS OF URBANIZATION POLICIES IN DEVELOPING AREAS

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This thesis is concerned with problems in systematic formulation and evaluation of urban development policies in underdeveloped countries. In the introductory sections an argument is presented for a comprehensive policy on urban-rural development so that economic development plans and programs can be coordinated and evaluated. The remainder of the thesis approaches analysis of urban development and urbanization through formulation of development problems, relevant assumptions and objectives and their later application to components of the urban-rural environment (i.e., housing, industry, etc.) or to such characteristics of urbanization patterns as size of units, complexity of organization and relationship between urban and rural growth.

To assess the usefulness of this approach, a case study of India is undertaken in Part II. Major development problems postulated are over-population, lagging economic growth (particularly industrialization), and social disorganization. Key assumptions as to future development conditions are continued population growth and rural-urban migration, expanded economic control by government, and emphasis on labor-intensive aspects of industrial enterprise. Finally, a set of development criteria or objectives aimed at economic, socio-economic and sociological development targets are outlined.

Given this analytic framework, the latter sections of Part II examine aspects of social and economic overhead investment, particularly housing, as well as productive activities in urban development, particularly industrial expansion and employment opportunities. The objectives of this investigation are to determine (1) whether these development components do relate to development objectives; and (2) if so, whether it is also possible to analyze and compare more complex patterns of urbanization within a framework of development problems, assumptions and objectives.

The tentative substantive findings of this analysis are mainly that investments in social and economic overhead seem linked more to complexity of community structure than to urban size, and that unless sufficient employment opportunities are created (probably through small-scale enterprise and public spending on capital improvements), larger urban centers are likely to continue to attract rural-urban migrants entering trade, service and marginal retail activities.

In the summary and evaluation of both the case study and the approach in Part III, emphasis is placed on the difficulty of weighting components

or objectives and of reconciling the relationship of development objectives and individual policies towards urban components into a comprehensive policy formulation. A review is made of urgent research needs in which such areas as spatial factors influencing fertility, formation of an active entrepreneurial class and social and cultural changes in general are stressed. Finally evaluation is made of the likelihood of formulating or evaluating alternative urbanization patterns with a rigidly systematic or rationalized approach as has been sketched in the case study. Systematic examination of urban components and urbanization patterns appears to offer a valuable tool but not a comprehensive approach to assessing urban development problems, due principally to the complexity of urban structure, constant shifts in patterns of urban growth as well as elements of the analytic framework, and the difficulty of precisising the relationships among development objectives and urban components.

Thesis Advisor

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PART I : THE PROBLEM AND METHOD

CHAPTER A. The Value of a National Urban Development Policy

1. The Institutional Framework for National Planning Policies
2. The Functions of a National Development Policy
3. The Role of Physical or Spatial Development Factors
4. Understanding Locational Aspects of National Development Policies

CHAPTER B. Studying The Formulation of Urban Development Policy -- An Outline of Method and Emphasis

1. The Relevance of a Case Study
2. The Choice of India
3. Aspects of Policy Formulation To Be Considered
4. Outline of Method and Emphasis
5. A Note on the Purpose of the Case Study

CHAPTER A : THE VALUE OF A NATIONAL URBAN DEVELOPMENT POLICY

1. The Institutional Framework for National Planning Policies

The present concern with comprehensive direction or national planning of economic and social changes in developing countries is the product of a number of factors. The desire to accelerate and channel economic growth has acted as one strong impetus. Another is the growing governmental regulation of private enterprise as well as direct public participation in development projects. In former colonial areas centralized governmental controls have often superseded relatively weak local jurisdictions and substituted in the frequent absence of private entrepreneurial initiative.

In general, support for national planning has come from a growing concern with shaping overall economic and social development, coupled with expectations that the public sector should supervise and participate in critical socio-economic and physical changes.

2. The Functions of a National Development Policy

A national development policy that is consistent and comprehensive represents a commitment of government inter-

ventions and regulatory activities towards an agreed-upon program and set of goals.

What are the purposes of such a policy? In a rough division of its functions, a national development policy should both coordinate and direct the character of economic and social changes with consequent implications on physical or rural-urban development.

Coordination in national planning or development policies implies an integration and resolution of policy components, much as Five Year Plans are intended to link multiple aspects of development. Apart from this "housekeeping" function of a national development policy, continual analysis and agreement upon goals and objectives as well as policy implications are necessary if development is to be guided not only consistently, but to optimum advantage. Consequently evaluation and direction of socio-economic development are additional functions of national planning and policy formulation.

3. The Role Of Physical or Spatial Development Factors

How are physical or spatial criteria related to comprehensive policies for national development? Whether or not they are recognized, locational or spatial factors are implicit in any comprehensive policy for social and economic

development. For example, a policy for industrial expansion rests on some assumptions as to size and relationship of productive units, networks of services and communications, workplaces and transport facilities, and ultimately some given pattern of housing and community development.

Similarly, programming of housing or power expansion is equally dependent upon the particular pattern of community development assumed.¹

Consequently, if locational criteria related to economic and social development policies were clearly expressed in the formulation of policy, it should be possible to anticipate and evaluate prospective patterns of physical development more easily. To the extent that rural-urban patterns are variables in terms of socio-economic objectives they fulfill, regard to spatial implication of national development policies would be not only a valuable but a

¹The customary division of government planning into separate policy formulations for social, economic and physical planning may be an effective means of dealing with what are highly complicated development components, if these interacting policies are coordinated so that they do not run counter to each other and if locational aspects are recognized and related to the local planning scene. Possible remedies that have been suggested along these lines have been to modify the usual national planning structure by introducing coordinating instruments such as regional capital budgets and plans, a national planning agency with coordinating powers, national physical and socio-economic development plans, etc. See Charles Haar, Benjamin Higgins and Lloyd Rodwin, "Economic and Physical Planning: Coordination in Developing Areas," A.I.P. Journal, Vol. 24, No. 3, 1958.

necessary aspect of a comprehensive national planning approach.

In summary, systematic policy formulation includes not only coordination and consistency among proposals and programs but a steering mechanism for social change as well. This evaluation of development is particularly important in guiding comprehensive social and economic changes and should be extended to consideration of the locational or physical implications of national development planning.

4. Understanding The Locational Aspects of National Development Policies

Two basic and related assumptions expressed in this chapter have been that:

1. a consistent set of economic and social development policies is dependent on a given locational or rural-urban pattern;
2. locational or physical criteria can be considered variables affecting the direction and outcome of development policies and achievement of the socio-economic objectives which motivate them.

The focus of this thesis will be on the extent to which these relationships can be grasped and resolved through systematic investigation and analysis. The question, recurrent in the following sections, is how closely we can get through rigorous, systematic study and experimentation to understanding the relationship between physical criteria (particularly

patterns of urban growth and development) and complicated social, economic and cultural objectives of national development.

In examining this problem, the following chapters outline a possible systematic analysis of urban development. After this approach is applied within a particular development context, the concluding sections tentatively identify and appraise the role of research and systematic evaluation in formulating and evaluating national urban development policy.

CHAPTER B : STUDYING THE FORMULATION OF URBAN DEVELOPMENT
POLICY -- AN OUTLINE OF METHOD AND EMPHASIS

1. The Relevance of a Case Study

Despite the generalized reference to "developing" areas or to developing countries, as a group these units have little in common but low income per capita and more or less organized efforts to improve or ameliorate this situation. To generalize about a pattern of urban development or a development policy for these countries would be to ignore key differences in size, resources, population and cultural outlook, all of which are here assumed significant determinants of both socio-economic change and patterns of growth in the differing countries.

Consequently, so as to present a possible approach to integrating and resolving development aspects within an urban development policy, and to illustrate the dependence of problems and plans on their ecological context, the process of policy formulation outlined below has been referred to one particular national context -- the Indian pattern of urban and socio-economic development.

2. The Choice of India

Among the group of developing or industrializing countries, India epitomizes the case of a low-income country

with a large and rapidly growing population in relation to size, extent of developed resources and economic growth rate. If the goal of economic improvement is to be achieved at all, the speed of economic development versus pressure of population seems a particularly critical relationship.¹ In India, as in similar countries,² a consequent high importance attaches to the effectiveness of controlled or planned economic change as well as to the direction in which social and physical development is guided.

3. The Aspects of Policy Formulation To Be Considered

The process of development policy formulation can be viewed roughly within two kinds of approaches. One determines what is desired to be done; the second assesses what is likely to be or capable of being done. Both aspects, the "idealized" and the "realistic," are circumscribed by the historical dimension in which they are carried out -- the former, however, is relatively more liable to generalization and rationalized analysis.

¹See Benjamin H. Higgins, A Theory of Underdevelopment: Implications for Community Development, Cambridge, M.I.T. Center for International Studies, 1957.

²China is particularly in a parallel situation. See Wilfred Malenbaum's India and China: Contrasts in Development Performance, Cambridge, M.I.T. Center for International Studies, 1958.

Therefore it is primarily with this first approach -- the determination of a desirable direction for urban development -- that the following material will be concerned.

4. Outline of Method and Emphasis

The case study in the following chapter should indicate the opportunities and difficulties in determining what are desirable courses for national development. In addition, the choice of criteria and the investigations indicated are intended to illustrate possible relevant considerations in development analysis. Finally, the concluding sections examine the likelihood of an "optimum" pattern for development being arrived at within the analytic or systematic approach that is utilized in the case study.

In review of Indian development, the process of formulating a policy has been considered from two points of view:

1. The first aims at establishing a framework of development assumptions and objectives pertaining to the major problems and development goals of the country.
2. The second is concerned with relating strategic environmental factors and considerations to development objectives and to potential urban patterns.

While both investigations are interrelated and are assumed here of equal consequence in a systematic approach,

this case study has focussed on the second phase of development analysis -- that of identifying and relating physical factors (i.e., housing, community facilities or transportation) to the urban context and to development objectives. The first phase of the process, (setting development assumptions, etc.) will be dealt with more briefly. Formulation of a problem and goals framework is relatively recognized in any systematic research or policy outline. In addition, an assumption made here is that the methodological problems and limitations posed in articulating such a framework have elsewhere been well described and debated.¹

5. A Note on The Purpose of The Case Study

As an additional caution it seems appropriate to clarify here that what is attempted in this case study of India is neither to create an integrated policy for India's optimum urban development, nor to argue the pros and cons of alternate development philosophies or orientations. The chief concern of this study is removed from these decision-making aspects and is focussed instead on the role and quality of investigation and analysis that could shape and direct

¹See Seminar Series On Planning, Ann Arbor, University of Michigan, 1956; Benjamin Handler, "What is Planning Theory?" Journal of the American Institute of Planners, Vol. 23, No. 3, 1957; and Kevin Lynch and Lloyd Rodwin, "A Theory of Urban Form," Journal of the American Institute of Planners, Vol. 24, No. 4, 1958.

policy formulation. Principally, the India case study should uncover the usefulness as well as the limitations of a rationalized and systematic approach for orientation of comprehensive development planning.

PART II : FORMULATING AN URBAN DEVELOPMENT POLICY
FOR INDIA --- A CASE STUDY

CHAPTER A. Outlining a Development Framework

1. The Major Problems
2. Assumptions As To Likely Development Conditions
3. Defining Working Policy Objectives
4. Adequacy of The Development Framework

CHAPTER B. Examining The Rural-Urban Pattern

1. Characteristics
2. The Method of Analysis

CHAPTER C. Evaluation of Development Factors

1. Social and Economic Overhead Investments
 - a. overhead investments and development objectives
 - b. overhead investments and economic limitations
 - i capital scarcity
 - ii overhead investment to promote productivity
 - iii providing overhead needs with minimum capital outlay
 - c. relating overhead investment to urban development
 - d. summary
2. Productive Activities
 - a. economic development alternatives
 - b. economic policy and urban structure
 - c. summary

CHAPTER A : OUTLINING A DEVELOPMENT FRAMEWORK

This initial stage in the outline of a systematic approach to policy determination, examines the development of a framework of problems, objectives and development assumptions with which to assess present and potential planning proposals.

The measure of a development policy is in its ability to be implemented and in its reflection of agreed-upon development goals and objectives. Consequently the explicit statement of the aims and the kinds of problems at which policy is directed should aid in evaluation and comparison of policies to alternate courses of action.

Granted advantages of clarity and accountability in the explicit formulation of development assumptions and objectives, how can such a consistent framework for analysis and programming be arrived at?

The dilemma of goal formulation is a familiar one to the policy-maker who should phrase goals and objectives and to the physical planner who must recognize and work with them.¹ Priorities among problems and development goals,

¹ See John T. Howard, "The Planner in a Democratic Society -- A Credo," Journal of the American Institute of Planners, Vol. 21, Nos 2-3, 1955, pp. 62-65, particularly p. 64.

the relation of objectives to development proposals, consistency and flexibility among a set of goals -- all are difficult and elusive to identify or to agree upon. Systematic empirical investigation and study should aid goal formulation, but the essential determination and resolution of goals should come within the value judgments set by policy formulators to structure a specific programming context.

-- application to India --

With reference to India, a critical policy assumption underlining the orientation of this study has been that maximum economic growth within maintenance of democratic institutional forms and equal distribution of benefits will continue to be the dominant desired development goal of a comprehensive national policy.¹ Given this overriding goal, what constitutes a possible framework of problems and working objectives for Indian policy?

In developing such a framework, the following sections outline what appear to be India's chief problems, as well as reasonable assumptions as to development conditions and the major objectives related to them. The conclusions arrived at have been derived from surveys of development programs

¹See Government of India, Planning Commission, The First Five Year Plan, New Delhi, 1951, pp. 6-8.

and literature, major policy formulations (such as the Five Year Plans) and analyses of India's resources and socio-cultural milieu.

1. The Major Problems

If India wishes to bring the material benefits of the twentieth century to her people, future development must try to resolve severe problems related to overpopulation, economic development and social disorganization.

Overpopulation: India's average annual net rate of population growth (1.5 percent) is not high when compared with Mexico's 3.2 percent, and is slightly lower than the annual U.S. population increase of 1.7 percent.¹ However, in terms of absolute net growth and population density, annual population increase in India is rapid, and considering the slow decline of birth rates, the population outlook is alarming.² The continuous expansion of population

¹R.G. Gustavson, "Education & Tomorrow," Resources for the Future Annual, New York, Resources for the Future, Inc., 1958.

²Birth and death rates in India are still high. Whether population increase will be only 5,000,000 annually depends on the validity of assuming that India's death rate will not drop too drastically in the years ahead, or that some factor not now evident will work to reduce the birth rate at a more rapid pace. Neither assumption, according to demographers, is a very strong one. "The growth potential in India is high on two counts: first the base population is large and second, a reduction of death rate without a corresponding decline in birth rate is highly probable." A.K. Biswas and M.G. Mueller, Population Growth and Economic Development in India, Cambridge, M.I.T. Center for International Studies, 1954, p. 3.

"explains why no significant progress has taken place in India; her savings were used primarily to supply a greater number of people with a constant standard of living."¹

In a conservative estimate, average net population increase is expected to be 5,000,000 annually over the next two decades.² The problem is either to effect reductions in the birth rate or to provide for a disproportionate expansion of the economy so that gains in economic development are not absorbed by increased population, and so that a continual improvement in living standards and productivity can be accomplished.

Lagging economic development: Economic development, particularly modern industrial expansion, has been handicapped in India by lack of capital and the difficulties of capital formation common to many of the developing areas vis-a-vis already industrialized countries.³ As long as agriculture continues as the principal productive activity

¹Biswas and Mueller, op.cit., p. 9., London, 1957, p. 9.

²See ibid., p.5, or Wilfred Malenbaum, "Economic Growth in India," Cambridge, M.I.T. Center for International Studies India Project, 1955, p. 2, for relatively low population assumptions. In contrast, other population projections based on the period (1956-86) have assumed a low of 6,000,000 net growth annually and a high of 12,000,000 additional net population increase annually (the latter figure assumes a constant fertility). See J.N. Sinha, "Population Growth and Balance in Economic Development," Economic Growth and Cultural Change, Vol. VII, No. 3, Part 1, April, 1959, p.207.

³See Gunnar Myrdal, Economic Theory and Undeveloped Regions, London, G. Duckworth, 1957.

problems related to food production are particularly urgent.¹ A critical problem in economic development is the effective use of surplus manpower. Unemployment and under-employment are strikingly high through all levels of skilled and unskilled workers and include a relatively large proportion of the educated.² In addition to the loss of productivity, unemployment constitutes a danger to political and social stability and to the implementation of coordinated development programs.

Social disorganization: "To initiate and direct a process of integrated culture change aimed at transforming the social and economic life of the villages..."³ and of the urban areas as well, implies a large-scale transformation of many traditions, customs and religious and family institutions in India. India's present commitment to combine economic progress with development of democratic institutions has probably reduced the pace of her economic gains,

¹Periodic destruction from droughts or floods, halting inefficiency of crop techniques, lack of adequate financing and marketing of products, all link with the problems of village India -- disease, illiteracy, overpopulation, under-employment, inequitable patterns of land tenure and the clash of tradition and new values.

²See K.N. Raj, "Employment and Unemployment in the Indian Economy: Problems of Classification, Measurement and Policy," Economic Development and Cultural Change, Vol. VII, No. 3, Part 1, April, 1959, p. 269.

³These are part of the stated aims of the Community Development Movement in India, under the First Five Year Plan. See S.C. Dube, "India's Changing Villages," in Ekistics, No. 41, p. 242.

while also inducing a rising level of demand for social and economic benefits from an increasingly politically conscious and discontented population.¹ As old institutional forms of social control and cohesion weaken, strain is placed on the integrating capacities of the new governmental instruments, handicapped by a sluggish bureaucracy and serious shortage of administrative and local leadership.²

It is these general problems that have repeatedly been the subject of India's national plans and that account for the major emphases of studies and pilot projects undertaken. Assuming them as the central issues with which an urban-rural development policy must contend, what are other components of a basic framework for guiding development programming in India?

Additional criteria needed to enable analysis of development are assumptions as to likely future changes in social, economic, technological and political conditions and an agreed-upon and articulated set of working development objectives.

¹See Susanne H. Rudolph, "Preliminary Notes on The Problem of Representative Institutions in Underdeveloped Areas," Cambridge, M.I.T. Center for International Studies, 1954, especially pp. 8-9.

²Ibid., passim.

2. Assumptions As To Likely Development Conditions

Considering a twenty-year plan period, analysis of past trends and assessment of India's present and probable development directions support the following assumptions:

1. Population pressure and economic development both will reinforce rural-urban migration. Despite the increase in land area under cultivation (through irrigation, conservation, etc.), a more than reasonable assumption for India is that the maximum population capable of living from the land is already there.¹ Probably the capacity of the land has already been far exceeded, considering the extent of under- and unemployment in agriculture. This assumption implies that at least the entire population increment over the projection period, 5,000,000 annually for 20 years, or 100,000,000 people (at a low estimate), are likely to depend on non-agricultural activities. Whether population is distributed in large urban centers, small rural settlements or otherwise depends on related objectives and development criteria.²
2. The Indian Government will exert a dominant influence over both the private and public sectors of the economy. The inability of the private sector to fulfill its portion of past development programs,³ as well as the increasing realization of the complicated changes required to ensure an adequate economic growth rate, both support the assumption that government plans and interventions will be extending to more areas of national life over the plan period.

¹Wilfred Malenbaum, "Economic Growth in India, 1955/56-1960/61," op.cit., pp. 3-8.

²Ibid.

³See Wilfred Malenbaum, "India's Economic Progress Under The Plan," Economic Weekly, pp. 1-8, September, 1954.

3. With India's resources and development problems, it is likely that her pattern of economic growth, particularly industrialization, will differ substantially from the Western technological evolution that utilized capital in intensive forms and extensive mechanization of processes. Improvement and modernization are likely, but India's predominant pattern will display a continued high labor:capital ratio and probably an increased emphasis on the labor-intensive industrial activities.¹

In summary, the basic assumptions developed here as to probable socio-economic and technological changes in India over the next twenty-year period are that rural-urban migration will continue, decisions of the central government will figure strongly in directing both private and public sectors of the economy, agricultural production will be extended and techniques improved, and finally, that industrial development will be shaped by a limited technology and lack of capital.

In these last analyses, an effort has been made to identify relevant development problems and also assumptions

¹Both of India's Five Year Plans have stressed agricultural improvements via irrigation, flood control schemes and programs for conservation, and introduction of improved seeds or cultivation techniques, etc. A continued improvement of agricultural production has been sought through programs for more flexible financing and marketing, rural education, land reforms, encouragement of cooperatives and panchayats and other components of community improvement programs as they have operated in rural development. See Albert Mayer, Pilot Projects, India, University of California Press, Berkeley, 1958, also S.C. Dube, op.cit.

as to trends and changes likely to occur in India over the forecast period. Within this context of national growth and transfiguration, what are major objectives for a policy of rural-urban development?

3. Defining Working Policy Objectives

A possible set of criteria or development objectives is suggested in a study of Indian national programming by Wilbert E. Moore:

1. "On economic grounds those measures should be taken that (a) shift the factors of production to the most productive sectors of the economy; (b) are labor-intensive rather than capital-intensive; (c) offer the best prospects for capital accumulation; and (d) will have indirect beneficial effect on other sectors of the economy...
2. On socio-economic grounds those measures should be undertaken that (a) are educational, (b) secure obvious advantages in expanded consumption and material well-being, and (c) offer prospects for reducing size of families...
3. On sociological grounds, those measures should be undertaken that (a) secure the widest possible participation and sharing of plans, (b) serve to develop rational administrative organization and (c) loosen rather than confirm or tighten opportunities and channels for occupational mobility..."¹

¹Wilbert E. Moore, "Problems of Timing, Balance and Priorities in Development Measures," Economic Development and Cultural Change, Vol. 3, January, 1954.

Moore's criteria are in general accord with those set forth by other development advisors and are basic enough to have relevance for much of the decisions and alternatives in programming national physical development. For the purposes of the case study, it is assumed that these are fairly acceptable guides or objectives for evaluation of development and that they are formulated in sufficient detail to allow for discrimination between alternate development possibilities.

4. Adequacy of the Development Framework

The scope of this chapter has been to set forth a framework of problems, goals, development assumptions and objectives that are instrumental in assessing India's present and potential development patterns.

The validity of this framework could be questioned on several levels. In the realities of policy formulation certainly the following doubts and criticisms are likely to be raised:

1. Is there an internal consistency or relationship among the problems, goals, etc., that have been identified? For example, do the objectives cited coincide with the basic conditions assumed in regard to India's economic and technical changes, or do they ignore development limitations?
2. Can priorities be identified or agreed upon among the problems or objectives

outlined? In other words, can the components of this development framework be assigned weights in regard to their relative importance?

3. Is there a consensus as to the choice of problems, objectives, etc., that have been made? For example, the fundamental premise of this analysis has been that India's chief goal is economic development via democratic institutions. However, if no substantial improvements in living conditions are achieved within the near future, support might well appear for an alternative general goal such as speedier economic growth at a reduction of individual freedoms and greater social control.
4. Finally (and most critical in terms of the approach that is being outlined here), can the framework evolved in this analysis aid in evaluating past and present physical development patterns? This relationship between the set of problems, objectives and assumptions and factors in socio-economic and physical changes will be examined and evaluated in the chapters ahead.

CHAPTER B : EXAMINING THE RURAL-URBAN PATTERN

In a sense, the distinction that has been made between goal or objective setting and evaluation of development is an arbitrary one, since in reality, the one analysis presupposes awareness of the other. The two processes have been separated here, however, so as to clarify the kinds of considerations involved in both aspects of policy determination.

Assuming the set or framework of development criteria that have been worked out above, what are the aspects of the rural-urban pattern that need survey so as to guide policy determination?

1. Certainly development characteristics and trends should be outlined and analyzed. For example, what are the emerging patterns and pace of urbanization? What functions do India's cities perform? What are likely future development patterns? Should present trends be projected and assumptions made as to probable technical and socio-economic changes?
2. To assess the operational value of the framework set in Part I, rural-urban components should also be evaluated in terms of the objectives they advance or retard.

The sections that follow are organized along several lines of investigation. First, characteristics of the Indian

rural-urban environment will be outlined. Then, against this sketch of urban growth component factors influencing urbanization patterns will be analyzed in terms of the development objectives assumed above. Finally, attention will be focussed on the possibility of relating total urbanization patterns back to the development framework assumed for India.

1. Characteristics of the Rural-Urban Pattern

Despite her predominantly rural population, India is urbanizing rapidly. Increases are at highest rates in the larger urban areas. Nine cities have populations of over 500,000 population; seventy-three cities already have over 100,000 persons each.¹

India's large cities are generally heavily congested and in deteriorating conditions. Poor housing, inadequate transport utilities and services, land speculation, squatting and ineffectual public control on development are representative problems.² In spite of congested and unhealthy

¹See Appendix A, Tables 1 and 2 for India's major metropolitan centers and relative rural-urban population increases over the past twenty-year period.

²Commenting on conditions in India's metropolitan centers, S. Shafi of New Delhi's Town Planning Organization wrote: "Take for instance, water supply and sanitation: Gorakhpur in UP (Uttar Pradesh) graduated in 1951 to 'one lakh class' (over 100,000 population), is reported to be having less than one-third of its urban area served by the municipal water

conditions, however, India's larger cities offer greater technical and administrative services as well as economic incentives. Consequently, large cities have advantages over smaller settlements and rural areas in attracting industrial and commercial enterprise. It is to these "primate cities"¹ that the unemployed also migrate in hopes of work.

In the hinterlands and rural areas of India, poor communication systems, lack of good roads or transport facilities, low levels of service (i.e., utilities, power, water supply), and the general absence of a developed business community have handicapped the prospect of industrial or related developments and consequent urban growth in the small towns and new settlements.²

In general, the pattern of urbanization emerging in India is one in which a network of thousands of small rural

supply. This is true even of large cities like Bombay, Calcutta and Delhi, there is considerable population even in urban areas without proper water supply and sanitation, and quite close to their urban cores, there are residential bastis (houses constructed of thatched roofs and flimsy wood, tin, straw, etc.) which have no water supply, sanitation and people depend upon almost entirely on wells and handpumps. In most parts of these areas there are inadequate arrangements for the disposal of sewage and refuse. In such conditions, street lighting is but a dream." Sayed S. Shafi, Location of Industries in Metropolitan Regions, T.P.O., Ministry of Health, New Delhi, 1958.

¹See Norman Ginsburg, "The Primate City," American Journal of Sociology, March, 1955.

²See Sayed S. Shafi, op.cit., passim.

service centers and towns of from 5 to 20 thousand population that are densely located in the fertile Ganges and Madras Regions and more dispersed in less cultivated areas in northern and central India, are in marked and growing contrast to another system of few mammoth urban centers or million cities, generally seacoast-oriented. The former system, in general, has rudimentary urban services and low development potential; the latter dominates in transport foci and in high concentrations of economic, political and cultural activities and innovations.

How have government development policies operated in regard to urban growth and the character of development? Community projects, sponsored under the national Five Year Plans, have primarily been directed at the improvement of agricultural production and aspects of village life. Some encouragement has been given to handicrafts, cottage and small-scale industries via a Small Industries Board, nationally administered. However, government emphasis in this direction has been weak and without much effect. New towns generally founded in connection with industrial development projects (i.e., new mining, steel centers, etc.) are not growing at particularly high rates.

In summary, industrial and auxiliary economic and administrative functions have not tended to decentralize or to

be siphoned off from big city growth to the small and medium-sized urban centers. Major national governmental programs involving highway and railroad location and improvements, allocation of new electric potential, or location of political and administrative functions have generally reinforced the present pattern of metropolitan dominance.

2. The Method of Analysis

Catherine Bauer, in a draft paper entitled "Economic Development and Urban Living Conditions,"¹ has assembled a heavily documented review of factors in the urban environment that she considers most critical and likely to vary with patterns of urban development.² The following analysis of urban components and functions is based considerably on the observations of the Bauer draft, particularly with reference to the role of housing.

¹Catherine Bauer, "Economic Development and Urban Living Conditions," Berkeley, 1955. This draft was written for the Housing and Town Planning Section of the United Nations by Miss Bauer in May, 1955. It was intended as support for Miss Bauer's thesis that decentralization of development, i.e., encouragement of regional development and small-scale urban and industrial growth could enable the developing countries to satisfy many of their major objectives, particularly those relating to improved living conditions and encouragement of desired socio-cultural changes.

²By pattern, the following analysis refers to the relation of cities and other communities to each other in such terms as relative size, densities, functions, etc., as well as the interrelationship of rural and urban environments.

For analytical purposes, evaluation of development factors below is divided into two aspects of urban or community structure, social and economic overhead and productive activities. First, the provision of services and utilities such as housing, schools, electric power, water, communications, etc., will be reviewed. Once these social and economic overhead investments have been related to development objectives and to implications for spatial or community organization, the productive functions of the urban environment (in particular industrial activities) will be discussed, and again, spatial implications assessed.

Since this thesis is principally concerned with the procedural or instrumental value of a development framework and the general rationalized approach outlined here, substantive discussion will be directed at such questions as (1) whether development components can be studied in terms of assumed objectives; i.e., can a hierarchy of alternatives among different components be based on their relationship to development objectives?. and (2) if urban components and development objectives do relate clearly, can more complex patterns of urbanization also be analyzed and compared within a framework of development problems, assumptions and objectives?

CHAPTER C : EVALUATION OF DEVELOPMENT FACTORS

1. Social and Economic Overhead Investments

As they are used here, social and economic overhead investments refer to the whole range of public or quasi-public capital improvements that structure the community. Social overheads include community improvements such as schools, education, housing, institutional or welfare expenditures, etc. By economic overhead is meant those investments more directly geared to productive activities such as irrigation or power projects, provision of roads, utilities or communication facilities, etc.

"Housing, together with education and health, belongs to the category of 'social overhead' projects. They are considered basic to economic development. In this respect, they can be compared to the 'economic overhead' projects such as transport, communications and power, which are generally considered to be requisite for effective economic development. These overhead projects provide little or no yield in foreign exchange. They usually furnish low yields in the short run and take a considerable time to realize any yields in financial terms. Their benefits, however, are derived from the more balanced development of economic activities which utilize them."¹

In relating social and economic overhead investment to

¹United Nations, ECOSOC, Financing of Housing and Community Improvement, New York, 1955, p. 11.

a comprehensive development view, the following are problems that will be examined.

- a. Are social and economic overhead investments likely to further development objectives? In what respects?
- b. Are social and economic overhead investments feasible and desirable within India's stringent economic limitations?
- c. What are the effects of overhead investment on economic productivity?
- d. Are social or economic investment patterns linked to alternate courses for urban growth and structure?

In exploring social and economic overhead development factors below, emphasis has been placed mainly on housing to illustrate social overhead aspects, and on roads and power supply as principal factors in economic overhead investment.

a. overhead investments and development objectives

If by social overhead costs we consider housing and general community services, then, according to Moore's development criteria, good housing and living conditions would probably advance the socio-economic objective of securing "obvious advantages in expanded consumption and material well-being,"¹ by improving health and welfare standards. In addition, housing improvement and the bettering

¹See p. 21 above.

of living conditions might well further some education objectives. Depending on the housing policies pursued, housing improvement could also conceivably "loosen rather than confirm or tighten opportunities and channels for occupational mobility"¹ (and geographic mobility) and have "beneficial effects on other sectors of the economy."²

Correlations of improved housing and living conditions with these development objectives are continually substantiated in the Bauer draft report.

Apparently good housing and other social overhead investments would seem to agree with many of the stated development objectives.

On the other hand, investment in economic overhead such as improvement of roads or means of distribution or communication seem tied to full achievement of development objectives as well. It is likely that improvement of India's road and communication network would serve to "develop rational administrative organization," yield "indirect beneficial effects on other sectors of the economy," facilitate increased consumption and wellbeing and also enable "the shift (of) factors of production to the most productive sectors of the economy,"³

¹See p. 21 above.

²Ibid.

³Ibid.

b. overhead investment and economic limitations

i. capital scarcity

Although they appear in the interest of many of the development objectives, in terms of overall investment policy, India seems to have comparatively little to spare on improvements for either social capital or economic developments not directly keyed into raising productivity. Comparisons of per capita housing expenditures in India and the United States, for example, reveal an even sharper disparity in the relative funds available in the two countries than might normally be anticipated:¹

"In 1952, 15% of U.S. production went into capital investment compared with 6% in India, or \$330 per person against \$3.00. Of this amount, the U.S. invested 25% in housing and if India could afford the same proportion, this would only mean around \$.70 per person per year."

Therefore any projected increase in social overhead costs, for example, should be affected by two factors -- India's critical shortage of capital and the means by which this scarce capital supply can most effectively serve objectives of economic growth and development.

While the need for economic overhead investments directly related to productive potential is relatively

¹Catherine Bauer, op.cit., p. 26., in which she paraphrases an article by Max Millikan, "The Economist's View of The Role of Housing."

understood, many economists have questioned if a country like India can afford to spend even the small amount estimated for housing investment above. They argue that in order to initiate and accelerate economic growth, greater percentages of investment should be allocated to productive rather than consumer investments like housing, schools or community services. Apart from this economic argument, in terms of other social welfare objectives, overhead investments like housing and community services do evidently take a secondary position in relation to priorities in public health or famine control.

What case can be made then (considering economic development objectives) for programs specifically aimed at extending economic and particularly social overhead investment? Two questions should be answered: First, would community improvement, better housing and living conditions, or improved transport, communication and distribution networks contribute substantially to increased productivity? (Or, conversely, are present conditions in which social and economic overhead investments lag, hindering efforts at higher economic productivity?) Second, are there avenues or techniques for filling social and economic overhead needs which place little demand on scarce capital?

ii. overhead investment to promote productivity

In Economic Development and Urban Living Conditions, Catherine Bauer has leveled considerable criticism at economists for ignoring social and economic overhead costs in their estimates of investment needs for economic development. Citing linkages between good housing and increased productivity, for example, Miss Bauer stressed (1) the possibility of luring otherwise unavailable savings into housing programs, --- "...Some people will save for housing who would not save otherwise, and to discourage this might reduce the slim margin of saving...",¹ (2) the relations between good housing, worker morale and constructive social changes, --- "...studies place great emphasis on the need to promote cooperation, solidarity, a sense of responsible participation, and the development of new roles and relationships to replace the traditional rules of social order, if industrial productivity is to be effectively increased..."² and (3) the need to consider housing and community investment in pioneer development projects such as new industrial or mining centers or agriculture and flood control programs, --- "...Since the several aspects of human life -- economic,

¹Catherine Bauer, op.cit., p. 94. Quoted from the United Nations, Financing of Housing, New York, p. 23.

²Ibid., p. 95.

familial, educational, nutritional, etc. -- are not segregated and specialized in less-developed communities but are closely interdependent, action or inaction in one field will deeply affect inaction or action in another field..."¹

Similarly, productive capacity can be seriously set back when economic overhead investments such as commuting facilities, utilities or lack of road or rail connections shut off communication between industrial centers or market areas.²

- iii. providing overhead needs with minimum capital outlay

How can overhead requirements be met most effectively within India's financial limitations? Possibly investment might be concentrated in key geographic areas or relief programs -- in multi-aspect village or community development projects or in renewal of urban slums in metropolitan areas or in construction of New Towns to open relatively undeveloped areas.

However, in terms of housing, analysis would seem to support as far-reaching a program of housing and environ-

¹Catherine Bauer, op.cit., p. 111. Quoted from ECOSOC, Social Commission, Programme of Concerted Practical Action in The Social Field of The United Nations and Specialized Agencies, United Nations, New York, 2 March, 1953, pp.16-10.

²This aspect will be explored further as productive activities and urban development are discussed below.

mental improvement as possible. To enable most widespread effects within stringent capital limitations, the following seem particularly relevant:¹

"A set of 'minimum standards' which would mean slums under congested conditions but would represent bona fide progress at modest cost in a great many countries, if built at low density, was outlined by Jacob L. Crane representing the U.S. Housing and Home Finance Agency at a West Indian Conference.

- '1. A sanitary hard surfaced floor which is dry in all seasons and easy to maintain and clean.
2. Relatively water-tight and vermin-proof walls and roofs.
3. Good light and ventilation.
4. Potable water supply within easy walking distance.
5. Provision of at least sanitary methods for disposal of human wastes."

These minimum standards which are still not met universally in India's current urban and rural housing conditions do suggest that adequate housing may not involve heavy capital investment.

The use of simple available materials and easy building techniques and the possibility of self-help labor for housing construction have all been cited as elements that would

¹Catherine Bauer, op.cit., p. 77.

enable substantial housing improvements within financial limitations.

Self-help labor and use of under-employed (particularly in rural areas) have also been suggested to cut down costs and enable construction of other capital improvements such as roads, schools or drainage systems.

c. relating overhead investment to urban development

Would extensive and effective provision of social and overhead requirements (recognizing India's capital limitations) influence urban structure or the pattern of urbanization?

In achieving low housing costs and producing adequate housing stock, Crane's standards and Miss Bauer's arguments assume the feasibility of using self-help labor, low housing densities and generally single-family housing types. These are critical assumptions in terms of urban structure and function. In an article on limitations of self-help housing, G.E. Atkinson has written:¹

"If added self-help schemes are to be practical building must be simple and some of the standards must be relaxed. This probably means that less fire resistant and durable materials might be permitted, sanitation should be simpler..."

¹G.E. Atkinson, "Housing in The Tropics," quoted by Catherine Bauer, op.cit., pp. 77-78.

"...It is necessary to increase the space between buildings and to strengthen public health and building inspection. The layout of aided self-help housing in towns creates special problems, because the density of such housing needs to be appreciably less than, for example, urban rental housing built in terraces by a public authority. Except in a few special cases, this type of housing has to be detached because of the lower building standards..."

Apparently a strong argument can be made from this for relatively low density housing in India (the existing extreme high housing density is reached in Bombay, where slum population reaches over 1,000 persons per acre).¹ If Crane's standards alone are considered, then the preceding warning against high densities or multiple dwellings should be a valid one. Catherine Bauer (in Economic Development and Urban Living Conditions) concluded from these recommendations that large urban or metropolitan concentrations were probably unsuited for low-cost but low-density and self-help kinds of housing. However, in a further definition of

¹Central Bombay probably has the highest population density of any urban area in India. With high structural densities, in some sections, congestion exceeds 1,000 persons per acre. Old Delhi, on the other hand, where there is high coverage and dwelling unit overcrowding but relatively low building heights (and which is more characteristic of other Indian cities and metropolises), has an average density of "only" 260 persons per acre. See Sayed S. Shafi, op.cit., p. 8.

housing density when simplified self-help techniques are utilized, Atkinson qualified his injunction against high densities as follows:¹

"The over-all density (including roads and areas reserved for communal facilities) should not be more than sixteen to eighteen houses to an acre, and might preferably be less... On the other hand, where public services are provided, and slightly more advanced building methods, terrace houses (rows) are the most economical form. But these require fairly low densities also."

Therefore, while higher densities of 200 or more persons per acre may be more costly in terms of housing construction or utility provision, this analysis implies that if aided self-help housing were feasible, then such methods could also be applicable to a range of what are clearly urban densities, for town and even larger city development.

In terms of strict housing costs, then, there seems to be no particular optimum size of community although housing types might be fairly prescribed. On the other hand, need for other overhead investments in roads, or utility supply, might be lessened through compact organization if housing densities were to be higher than those suggested.

Organization of labor to "build one's home or community facilities," would seem more feasible within a small com-

¹Catherine Bauer, op.cit., p. 78.

munity rather than in a metropolitan complex. However, to assess the value of using unskilled labor to supplement a backward building industry probably needs more experimentation than has been done with self-help methods applied in both urban and rural areas.¹

d. summary

In conclusion, provision of social and economic overhead investment seems to relate not necessarily to urban size but to the complexity of urban organization. Small communities or towns may ultimately require a complicated network of roads, communications and administration to enable effective control and distribution of production. On the other hand, unchecked municipal expansion can reach stages where heavy capital improvements are needed to provide sufficient ease of accessibility throughout the urban area.

¹The preceding discussion has assumed the efficacy of self-help methods in meeting social and economic overheads in such forms as capital improvement construction. Such an assumption, however, rests on whether the cost of labor is a significant factor in construction. Also in question are whether the use of less costly or indigenous materials and simple construction techniques are always possible or desirable. Finally the value of utilizing unemployed or underemployed in housing construction or self-help projects must depend on whether these unskilled building workers can alternately be utilized more effectively outside of housing and capital improvement works.

In terms of social and economic overhead requirements, metropolitan communities organized on a basis of relatively self-contained sub-units seem to be as feasible as an urbanization pattern in which a system of small self-contained urban centers are more or less evenly distributed.

While the complexity of urban structure can be correlated to overhead requirements, it is equally related to economic activities and the stage of economic development expressed in rural-urban forms. To understand the function of India's urbanization pattern more clearly, this second aspect of urban organization, production and economic activity, should also be related to development objectives and spatial implications.

2. Productive Activities

a. economic development alternatives

Governmental policy in India has already been exploring two possible approaches to increase of productivity and economic growth. Initial emphases on the improvement of agriculture (through extension of land for cultivation, changes in land tenure patterns, projects for flood control and irrigation, etc.) were also accompanied by efforts to set a basis for heavy industry. Economic development plans have called for support to mining, construction of steel

plants, and manufacture of machine and machine parts, airplanes, rail equipment, and other capital goods. The latter investments absorb heavy proportions of capital but have offered long-range economic benefits.

While economic targets have been directed at basic industry and agricultural improvements, private investment and much of the economy have been active in the past years in less-capital intensive and more labor-intensive non-agricultural activities, particularly small enterprise and cottage industries which include manufacture of consumer as well as capital goods.

The encouragement of small-scale industries and handicrafts offers good chances to utilize unemployed and to substitute man-hours for capital investment in productive output. Economists have suggested that small industries and cottage industry encouragement can also afford a transition stage or stepping stone from India's handicraft production to a fully industrialized economy.¹ Major

¹"...there may be support for the belief that at least in a heavily populated agricultural economy like India's, capital-output ratios tend to be favorable, initially at any rate, in the rural and small-scale enterprise sectorsHowever, increases in income, primarily through initial emphasis on the smaller-scale enterprises, which now dominate economic output, may well be followed by possibilities for accelerated growth of modern industry." Wilfred Malenbaum, "India's Economic Progress Under The Plan," op.cit., pp. 6-7.

industrial efforts at steel production, for example, demand a high degree of industrial know-how and investment in capital equipment in return for long-range gains. On the other hand, light and medium industrial activities, to a large extent, can adjust and function more easily within limitations such as second-hand or outdated tools or machinery, and improvised techniques of production. In this sense, supporting small-scale industrial activities may aid such development objectives as furthering "labor-intensive rather than capital-intensive" measures; having "indirect beneficial effect on other sectors of the economy;" "securing the widest possible participation and sharing of plans;" and offer "opportunities and channels for occupational mobility."¹

On the other hand, promotion of small-scale industries lacks the obvious spectacular and broad-scale appeal of multi-aspect projects involving dam construction, irrigation projects, and power and water control or the building of steel mills. In addition, to maximize benefits from production in light and medium industry or cottage and hand industries, would require considerable government administration and organization to guide production, select high

¹See p. 21 above.

growth-potential enterprises, supply research and information on production and distribution techniques, finance or arrange for finance of small-scale efforts, and finally, to assure easy channels for marketing of raw materials and finished products.

In assessing the possible contribution of small enterprise and labor-intensive policies, a critical factor seems to be whether encouragement of this sector competes with or otherwise inhibits the growth of a modern industrial sector which is regarded as offering higher productivity and sustained gains in economic development.

"From an economic point of view, under-utilization of available labor would appear to constitute at least a temporary loss of resources that might be used for economic growth. On the other hand, employment as an objective in itself may well be self-defeating in the pursuit of accelerated income growth... It may well be that a larger increase in domestic product can be achieved by the application of available capital, say, with only a limited part of the unutilized labor...."¹

How then can a mix of basic industry, small enterprise (both modernized and labor-intensive), cottage industry and rural non-agricultural activity be accomplished most effectively, taking cognizance of social and political needs to

¹Wilfred Malenbaum, "Economic Growth in India," op.cit., p. 9.

provide employment and of the ultimate economic objective of increased productivity and per capita income?

b. economic policy and urban structure

Increasingly, the merits and effects of alternate economic policies have been viewed through their implications for urbanization and urban structure while, reciprocally, urban growth and development have been analyzed in terms of economic activities of both the public and private sector.

In evaluating India's progress under the two Five Year Plans, Wilfred Malenbaum, of the Center for International Studies at M.I.T., concluded:¹

"(As for) estimated increases in...small enterprise and construction...it is really assumed that, through a large organization effort, output from small enterprises can be extended significantly. Moreover, such expansion offers the only possibilities, in India's present economic situation, for increasing total product to the desired levels. Expansion here will be relatively labor-intensive: it is essential both to provide employment opportunities and to begin to provide a broader and deeper market in India for the products of industry."

In the same article, Malenbaum outlined implications of such a program for urban and rural growth and interaction:²

¹Wilfred Malenbaum, "Economic Growth in India," op.cit., p. 29.
²Ibid., pp. 29-31.

"Growth in small enterprises will be in the urban areas, largely to complement large industries through the production of components, perhaps through sub-contracts. Growth will be even more marked in rural areas, especially where non-monetary transactions are still important. Here they will produce consumer and simple producer goods for local consumption.

..In principle, there should be no attempt to limit activity of the large lower-cost sector, either with respect to its present markets or those which it can develop. The goal here is to reach needs not now being met by the organized sector, needs that will not be met, given the limited real incomes and the low growth potential in many rural areas under present conditions.³

...Ideally, the expanded output from the small (enterprise) sector should be considered transitional to a period when the organized sector is better able to fill India's need for industrial product. In the Third Plan, for example, there might thus be scope for a much greater relative increase in output and employment opportunities in modern industries..."

According to this analysis, a desirable policy for economic development in India would initially work to create substantial economic self-sufficiency and improved conditions in rural India by stimulating labor-intensive non-

¹Examples given are "...where there are unfilled needs -- for shoes, clothing, housing, furniture, pots and pans, etc., or for wagons and carts, simple agricultural tools, village roads, more schools, and the like; and where there are local under-utilized resources -- men, work space, local raw materials -- there incentives, organization and an essential increment of capital goods and raw materials can expand output that will be absorbed." Wilfred Malenbaum, "Economic Growth in India," op.cit., p. 30.

agricultural activities having low capital:output ratios. Concurrently, encouragement of small enterprise in urban areas would provide a means both to utilize urban unemployed and to assist large industry without necessarily requiring large capital investment.

A similar argument for a dual approach (urban and rural) towards economic development has been suggested by an Indian town planner, Sayed Shafi, after studying the problem of industrial and economic development from the point of view of the urban and rural structure.¹ Citing the trend towards rapid growth in the largest urban centers and the past and growing inability of the large cities to provide the most elementary of health and welfare services, Shafi concluded that future development should be planned so as to deter cityward migration by maximizing employment potential through encouragement of small enterprise and increases in construction, trade, government and other services in rural areas, and by decentralization of new major industrial efforts throughout the metropolitan region.

If such a policy offered attractive development benefits, could sufficient employment be opened in rural areas to cut down the tide of rural-urban migration appreciably?

¹See Sayed S. Shafi, op.cit.

Malenbaum has estimated that if employment patterns were to follow the lines of the Second Five Year Plan (which already leans towards rural development), there would be a need to increase rural non-agricultural development by more than 70 percent (over the five-year period 1955-1960 that he is concerned with) to which he gloomily adds a large portion of the present 35 percent of non-agricultural jobs in cottage and handicraft enterprises that are currently "fighting a somewhat uncertain battle for existence."¹ Indications are therefore that only part of the rural-urban migration might be stopped by encouragement of non-agricultural rural activities. More likely than heavy increases in rural employment is that more of the rural migration can be siphoned into smaller communities of 20-50,000 rather than heading to the largest communities in the class 100,000 and over and particularly to the "million" cities.

But are chances for labor utilization and increases in productivity equal in the smaller urban centers to those in the dozen or so metropolitan complexes? Much of the observation by economists, sociologists and planners has touched on but ignored implications of the imbalance between industrial and tertiary development in India. As peasants are

¹Wilfred Malenbaum, "Economic Growth In India," op.cit., pp. 6-7.

pushed off already crowded agricultural land and as the cities to which they come lack sufficient industrial employment, the alternative course for earning some income has been to enter trade, service or marginal retail activities which account overwhelmingly for the greatest portion of employment in India's urban areas.¹ The largest cities, in this instance, offer the best chances to eke out some livelihood. (Paradoxically a survey of slums in Delhi revealed that two major factors kept people living in slum conditions: (1) that they could not afford rent elsewhere and (2) that living in the slums kept them close to places of actual or potential work or incomes; "traders, artisans, vendors, cobblers, etc., are close to the markets from where they earn their living."² Therefore, if the chances for providing work for the 21 million new persons entering the workforce (over the period 1956-1961) plus the 15 million existing unemployed should be only partially fulfilled, the implications for rural-urban growth would then be that migration would continue to be heavy into the larger urban areas, in spite of very poor living conditions, as workers and families sought a subsistence living in marginal retail

¹Sayed S. Shafi, op.cit., pp. 8-10.

²Ibid., p. 9.

and service activities. Malenbaum has pointed out that, should a government policy of heavy deficit spending be followed in urban areas, "...there would undoubtedly be tremendous employment opportunities in housing and in such social overhead fields as the supply of transportation, water, sanitation facilities, etc.,"¹ which could brighten the urban picture both through increased job incomes and through improvement in urban living conditions.

c. summary

In conclusion, variations in India's urban structure and urbanization patterns seem likely to affect the degree to which individual development objectives can be satisfied. The following are some general conclusions suggested by the data and analysis presented above:

1) Encouragement of small enterprises in rural areas seems indicated, to improve living conditions, initiate a basis for rural economic development, and to utilize present and future surplus labor in rural areas. Such enterprise is preferably labor-intensive, with low capital needs, and should be directed at serving rural consumer and producer needs. This would require some government direction and

¹Wilfred Malenbaum, "Economic Growth in India," op.cit., p. 5.

participation to assure improved communication and transport systems, and improved production and distribution processes in the rural areas.

2) Small enterprise in urban areas could be utilized to assist the modern industrial sector and to absorb some degree of urban unemployment.

3) Unless employment opportunities can be appreciably expanded in the industrial and non-agricultural sector within the near future, trade and service activities would continue to occupy a large share of India's economy with consequent implications for urban growth, particularly in the larger centers.

4) Possible employment expansion could result from government investment in capital improvement programs, i.e., roadbuilding, housing, sanitation, water supply systems, etc.

5) While existing housing and living conditions are generally at their worst in the large urban areas, construction costs for new housing and community facilities are comparable in large and smaller urban centers, if densities are kept relatively low (probably below 30 dwelling units per acre).

6) Problems of slum clearance or redevelopment in the present

urban slums will have to be approached as much in terms of providing alternate livelihood for slum dwellers as in providing improved living conditions.

PART III : SUMMARY AND EVALUATION

CHAPTER A. Conclusions of the Case Study

CHAPTER B. Evaluation of Approach

1. Limitations of Knowledge --
Areas for Further Research
2. Limitations of Method --
Alternative Approaches

CHAPTER A : CONCLUSIONS OF THE CASE STUDY

The initial aim in investigating social and economic overhead investments and productive activities was to identify whether development components of either were likely to relate directly to achievement of the development objectives assumed for India. A second aim in review of these aspects of India's development was to determine whether development objectives were useful means of evaluating alternative patterns of urbanization as well as individual development policies in regard to urban components.

This analysis was not meant to provide a framework for urban policy formulation in India. To attempt such a task would have meant identification and exploration of all key urban components as well as alternative urban structures and patterns of urbanization. Instead, what has been done is selection of urban components (such as housing and provision of roads and utilities) and analysis of these as well as aspects of total urban development policy (i.e., economic development alternatives in rural, urban, and metropolitan contexts) and to evaluate these elements against relevant development objectives.

Even this sketchy review of only a few development factors has underlined the complexity of urbanization and

economic development processes in India. In many instances analysis indicates that possible policies towards certain urban components would have conflicting effects, i.e., satisfying some development objectives while hindering others. Similarly alternate approaches to urban structure or urbanization may simultaneously advance and hinder different development objectives.

For example, it was found in analysis of social and economic overhead that improvements in housing and living conditions were consonant with such objectives as increase in material well-being, provision of channels for economic and social mobility, advancement of educational objectives, etc., but that costly investment in housing might divert factors of production from their most effective use.

The interrelation of economic development aspects with urban-rural relationships and the growth of large and small communities seems to be even more complex and contradictory than analysis of social and economic overhead factors according to size and function of communities. Development objectives relating to economic mobility, material benefits, and labor-intensive activities seem to be best satisfied in programs supporting small-scale enterprise, cottage industries, etc., but on the other hand such programs may run

counter to such objectives as increased productivity, capital accumulation, and finally, sustained and rapid improvement in India's economy.

To the extent that it has been carried here, the case study highlights some basic implications of alternate approaches to Indian development policy. One important conclusion already apparent at this stage of analysis is that, while some urban components appear to relate to development objectives, this in turn raises the difficult problem of how to weigh or reconcile these relationships into a comprehensive policy formulation.

The following chapter will refer again to this problem as gaps in knowledge and data about urban and rural character and functions are explored, and as the method outlined and applied in this thesis is assessed.

CHAPTER B : EVALUATION OF APPROACH

1. Limitations of Knowledge -- Areas for Further Research

Many of the conclusions arrived at regarding provision of social and economic overhead and economic investment above were general or equivocal due to lack of empirical study and sufficient analysis of the factors under discussion.

For example, while the effects on urban structure of alternate programs for economic development can be anticipated to some extent, there is presently no really clear way to pin down the merits of alternate approaches to economic investment. In discussing alternate stresses on agriculture, heavy industry, etc., Malenbaum, in the concluding portion of his analysis of India's economic growth, has written:¹

"There would appear to be little body of agreed thought and experience on the difficult problem of 'how much investment for how much income.'"

In a very real sense, the experts are not far ahead of the men in the field in assessing the consequences of a given action. In the case of such factors as investment returns,

¹Wilfred Malenbaum, "Economic Growth in India," op.cit., p. 39.

or the feasibility of marshaling unemployed or underemployed into substantial self-help efforts, the answers would seem to be available eventually, either from experimentation or from more rigorous analysis of these components.

In addition to these areas where more precise knowledge is needed than now available, for certain other basic factors at the present stage of knowledge, there is only a vague and tenuous understanding of their relationships to physical factors or urban forms. In the analysis in Part II, these factors were deliberately ignored since a review of them offered no clear conclusions about urban growth.

A major question of this nature is how present or potential environmental conditions and organization can encourage a drop in India's birth rate so that population growth ceases to threaten annual economic increments.

When data on urbanization and changing birth rates are first examined, it appears evident that there is a direct relationship between urbanization and a decline in fertility and, furthermore, that it is in the largest cities that birth rates drop the lowest.

"The faster the rate of modernization, other things being equal, the quicker will be the response of fertility, the earlier the end of population growth,

the smaller the ultimate population reached,
and the higher the eventual level of living."¹

"In general, it has been found that the
larger the town, the lower its fertility,²
but more study is needed on this factor."

However, Catherine Bauer, in Economic Development and Urban Living Conditions, has stepped behind the catchall of "urbanization" to examine what she considers relevant components; "positive" factors such as education, higher income, economic mobility, social adjustment, and "negative" factors such as overcrowding, family disruption and general insecurity which may all work to reduce the birth rate and help to explain fertility statistics. Her conclusions (which counter arguments of other experts, sociologists and demographers), are that it has chiefly been the negative factors that have effected fertility decreases in the large urban centers, but with accompanying social and psychological costs and upheavals.

While the Bauer argument contains several plausible assumptions, the question is still unanswered as to what elements in the urban and rural environment could work most

¹Catherine Bauer, op.cit., p. 91, quoted from Kingsley Davis "Population and the Further Spread of Industrial Society," p. 18.

²Ibid., p. 91, quoted from United Nations, Determinants and Consequences of Population Trends, p. 85.

effectively to reduce the birth rate while promoting desired social changes and operating within economic development objectives.

Another factor whose relationship to urban structure and urbanization rates and patterns is presently unclear but also probably of high significance, is the development of new social values leading to growth of a vigorous entrepreneurial class and active business community in India. As long as India assumes democratic processes and substantial private economic enterprise as basic elements in a program of national development, she will continue a heavy dependence on investment and compliance with economic plan proposals by the private sector of the economy. To assure this investment pattern, new investment outlooks by India's entrepreneurs must be established and reinforced.¹ Probably this transformation, like changing attitudes to family size and fertility, will depend on the complex processes of social and cultural change which social scientists have linked with urbanization and urban structure.

In summary, an outline of key areas for research should certainly include how urban or spatial factors influence

¹Helen Lamb has written an interesting monograph on the Indian Business Community in which she traces the development of a more integrated and modern entrepreneurial class from India's traditional business families. See Helen Lamb, "The Role of Business Communities in the Evolution of an Indian Industrialist Class, Pacific Affairs, June, 1955.

birth statistics, or the formation of an active entrepreneurial class, as well as social and cultural changes in general. All need further detailed identification if a more comprehensive evaluation of directions for urban growth is to be at all possible.

For these problems or for other challenges such as, when do social or cultural changes constitute "social upheaval or disruption" and when "social transfiguration or constructive social adjustment?", our stage of knowledge is presently at the point where the two possibilities are recognized to stem from rapid or substantial changes in the physical structure of communities, but an evaluation of which kind of social change is or will occur has still not been furnished by the social science researcher to either physical planner or policy-maker.

2. Limitations of Method -- Alternate Approaches

In the first chapter of this thesis an argument was presented for a comprehensive national policy on urban-rural development so that economic development plans and programs could be coordinated and their direction evaluated. The concern of the remainder of this thesis has been with arriving at an urban development or urbanization policy through the systematic formulation of development problems,

relevant assumptions and objectives and their later application to components of the urban-rural environment or to such characteristics of urbanization patterns as size of communities, complexity of organization and the development relationships between urban and rural areas.

In the application of this approach to the case study of India, several methodological problems and criticisms should have been apparent:

1. In what ways can we assure the validity or consistency of the development framework such as the one that was assumed for India in Part II, Chapter A?
2. How can a hierarchy among development goals or objectives be arrived at systematically? (The need for this is underlined when the satisfaction of one objective apparently runs counter to another objective.) Unless the relative priorities of objectives are clear, how can the best course of action be determined?
3. Is the complex phenomenon of urban growth and structure actually amenable to systematic dissection and analysis? Can all the components of urban structure be singled out, related to the development framework and the interaction or interdependence of urban components identified?
4. If identification and analysis of components as this approach has attempted were a theoretical possibility, for all components of urban structure or urbanization, what actual likelihood would there be of achieving this in the real setting of national urban development policy-making? In the practical application of this

approach, to what extent would limitations of time and resources available for research and analysis limit its value? Therefore, is a comprehensive systematic approach a practical possibility in policy formulation or evaluation?

5. The development picture is not a static one. Can comprehensive analysis cope with constant changes in environmental components (i.e., new building techniques or materials, etc.) or in elements of the development framework (i.e., major shift in objectives, etc.) over time?

These kinds of problems suggest real limitations on the eventual likelihood of formulating or evaluating alternative urbanization patterns on a rigidly systematic or rationalized basis. A definite weakness in attempting to assess individual components or the composite urban structure is the lack of a means by which to measure or weight the importance of a given variable or course of action. For example, when development objectives and such urban components as housing forms or aspects of economic activity were examined, rough correlations seemed possible, but without some method of further precisising relationships, evaluation of a total physical or functional pattern cannot be made.

In the preceeding section, areas for further study and research were outlined. Particularly stressed was the

present lack of knowledge about the eventual beneficial or adverse effects of social and cultural changes taking place in the developing countries as well as the actual impact of spatial patterns, organization and rates of change on social and cultural variables. It is very likely that the social sciences will be long in answering these questions if critical analysis and a more precise identification of the nature of these relationships is at all possible.

What would these and other limitations imply in terms of possible systematic or rationalized interpretation of patterns and policies for urban growth and structure? Probably the systematic examination of urban components and urbanization patterns offers not a comprehensive nor complete approach to assessing urban development problems, but instead may be a valuable tool for critical understanding. Assuming a constant collection and sifting of empirical data and continued inquiry, the effective support of systematic analysis as a tool should be enlarged considerably.

What are additional or alternative approaches to policy formulation and evaluation? The emphasis outlined in the introductory section of this thesis was primarily directed to the "idealized" aspects of policy formulation, i.e., determination of what is desirable to do, rather than a

focus on what is likely to be or capable of being done.¹

For methodological clarity the interplay between "ideal" and "realistic" elements in policy formulation has been deliberately underplayed throughout the outline of the approach and its application.

Possibly, however, in the synthetic rather than analytical nature of this interaction of theoretical and applied considerations, there is provided a means for working out and evaluating development policies. A pragmatic approach concerned with shaping future development as an outgrowth of present functions and organization, offers a more concrete directive for action than abstract formulation and analysis of idealized alternatives. In conclusion, the use of analytical or systematic analysis to the extent that it can yield fruitful insights and the merger of these rationalized aspects into the decision-making process and the mechanics of implementation, should offer the physical planner and the policy-maker a means of formulating and sustaining a comprehensive urban development policy.

¹See page 8 above, "The Aspects of Policy Formulation To Be Considered."

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TABLE 1

RATE OF URBANIZATION : 1901-1951

Year	Total Population (millions)	Urban Population (millions)	Urban Popu- lation as % of Total Population	Percentage Increase in Column 4	Cities 100,000 and over (millions)	City Population as % of Total Population	Percentage Increase in Column 7	
1	2	3	4	5	6	7	8	9
1921	251.4	28.2	11.2	--	28	8.0	3.2	--
1931	279.1	33.4	12.0	7.14	31	9.6	3.4	6.2
1941	316.8	43.8	13.8	15.0	46	15.8	5.0	47.0
1951	361.3	61.9	17.3	23.9	71	25.8	7.2	42.0
1961 (est.)	412.6	87.1	21.2	23.3	No estimate	39.6*	9.5	33.8*
1971 (est.)	470.7	120.2	25.5	20.8	" "	57.2*	12.1	27.4*

* = Figures here pertain to projections and proportions of 71 cities with populations of 100,000 and over counted in Census of India, 1951.

SOURCE : Sayed S. Shafi, "Location of Industries in Metropolitan Regions,"
Town Planning Organization, New Delhi, 1958, p. 15, Table 1.

TABLE 2

GROWTH OF CITIES BY SIZES : 1921-1951
(population figures in millions)

Year	'One Million' Cities				Cities: 500,000-1,000,000				Cities: 100,000-500,000			
	No.	% Increase in No.	Popula- tion in Millions	% Increase in Popu- lation	No.	% Increase in No.	Popula- tion in Millions	% Increase in Popu- lation	No.	% Increase in No.	Popula- tion in Millions	% Increase in Popu- lation
1	2	3	4	5	6	7	8	9	10	11	12	13
1921	2	-	3.1	-	1	-	0.5	-	25	-	4.3	-
1931	2	Nil	3.4	9.6	1	Nil	0.6	20.0	28	12.0	5.5	27.9
1941	2	Nil	5.2	52.9	4	300.0	2.8	366.6	40	30.0	7.7	40.0
1951	5	150.0	11.3	117.3	4	Nil	2.9	3.5	62	50.0	11.6	50.6

SOURCE: Sayed S. Shafi, "Location of Industries in Metropolitan Regions,"
Town Planning Organization, New Delhi, 1958, p. 16, Table 2.