

**URBAN POVERTY AND SUSTAINABLE
DEVELOPMENT IN SOUTH ASIA:
A CASE STUDY OF A 'MILLION' CITY**

*Dissertation submitted to Jawaharlal Nehru University
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for the Award of the Degree of
MASTER OF PHILOSOPHY*

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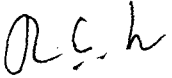
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C E R T I F I C A T E

Certified that the dissertation entitled "Urban Poverty and Sustainable Development in South Asia : A Case Study of a 'Million' City" submitted by Vinod Singh in partial fulfilment of the requirements for the award of the degree of Master of Philosophy of this University, is his bonafide work and may be placed before the examiners for evaluation. This dissertation has not been submitted for the award of any degree of this University or of any other University to the best of my knowledge.


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PREFACE

The growing number of the urban poor in metropolitan cities of South Asia presents a serious challenge to the planners. At least one-third of the population of these cities is believed to spend their lives in absolute deprivation. Even the basic needs of life are not available to them. The ranks of the urban poor are, to a considerable level, swelled by the migration of rural landless and socio-economically depressed people. These unskilled migrants are unable to compete successfully in the job market. So, they are forced to settle down in petty jobs which enhances the growth of informal sector. This sector is characterized by low incomes and remunerations. A vicious circle of causation sets in due to low income levels. Low levels of savings, low purchasing power and investments means these people don't have access to ever decreasing land and housing markets and other necessities of life. This is further complicated by the increasing pollution of air and water which increases possibilities of diseases among the poor. Though all are equally affected by the pollution, the poor are hurt more due to their economically distressed position. Urban poverty, increased pressure on urban land and pollution call for an urban development policy which can provide a sustained livelihood and living environment. This Problematique is the focus of this appraisal of ours.

In the first chapter, we take a look at a couple of theories attempting to explain poverty and underdevelopment. It is followed by a conceptual framework to study the urban poverty and sustainable urban development in South Asian metropolises. Various definitions of urban poverty, different measures and estimates of urban poverty in India and South Asia and a literature survey on the topic follow.

The second chapter starts with a discussion of various schools of thought explaining the phenomenon of urbanization and metropolitanization. This is followed by patterns and processes of urbanization and metropolitanization in the Third World and South Asia. A discussion of urbanization patterns and processes in individual countries of South Asia with a focus on India is also included.

The third chapter discusses various physical, environmental, poverty and management related, socio-economic and political problems of South Asian million-cities and urban areas.

In the fourth, the factors and processes of growth and development of the Kanpur metropolis have been outlined. Any habitat is an outcome of the cumulative historical causes and processes. This aspect has been kept in view throughout the chapter.

The fifth chapter analyses various problems of Kanpur metropolis like pollution, housing crisis, unemployment and underemployment, the extent of informal sector, and access to amenities and public services. Main focus has been kept on urban poverty and its manifestations like slums, morbidity and informal sector.

The last chapter deals with the urban land and housing policies in India as also the various urban development strategies followed till now. The focus is on the land, housing and employment for the urban poor in the metropolitan cities. The chapter concludes with some considerations for land and housing policies in the urban areas.

Finally, we draw conclusions of the study and end with policy imperatives for a sustainable development of Kanpur metropolitan area.

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Vinod Singh
(VINOD SINGH)

CHAPTER - I

CONCEPTUAL FRAMEWORK AND LITERATURE SURVEY

1. INTRODUCTION

There have always been poor people in the urban areas. But the massive concentration of the modern times is simply unprecedented. This has to do with the developments in the past one and a half century or so. This period has been marked by rather large and rapid developments in science, polity, economy and demography. Scientific inventions have brought down mortality rates, which means population can now grow in a more unhindered manner than in the past. This is particularly applicable to the developing countries, where the fertility rates are still high. This demographic phenomenon in the developing countries has been termed 'Population Explosion'. It is characterized by growth of population over and above the growth in land productivity and the absorptive capacity of the economic system. The aforementioned period marked the arrival of Industrial Revolution in Europe. To ensure a continued supply of raw materials, and a permanent market for the goods produced in their industries, the European countries like Britain, France, Germany, Netherland gradually established colonies in the 'developing' countries. The settlements, transport and infrastructure that grew in response to colonialist policies were, in fact, a manifestation of the exploitative mechanism

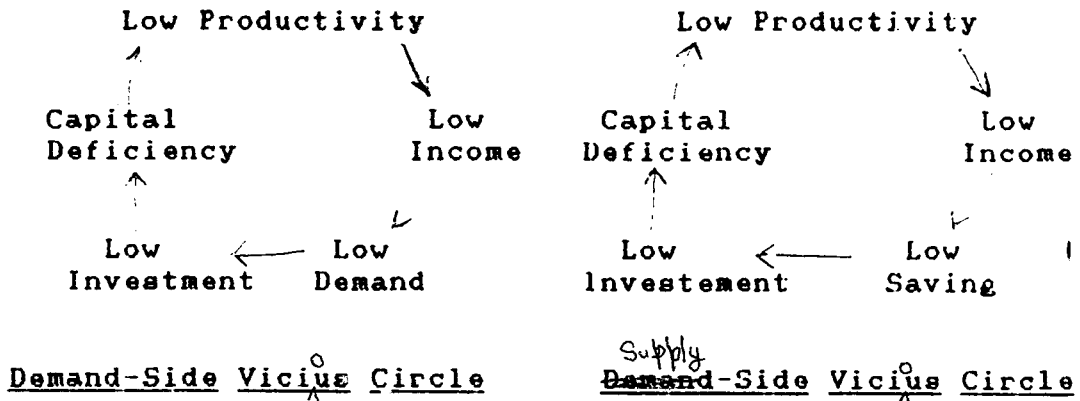
operating in these countries. This mechanism operated to siphon-off the resources of the colony. Consequently, the towns and cities that came up were situated on the transport routes or the coasts, via which the agricultural, mineral or forest wealth was 'carried' to the colonial powers. In this sense, the colonial cities can be called 'parasitic' as they hardly contributed to the economy of the country. The tertiary activities that grew in those cities, survived on their association with the colonial powers and indirectly perpetuated the exploitation of hinterlands. The impoverished people of the hinterlands migrated to these cities as they perceived that there were slightly better chances of survival for them. Since independence much investemnt has taken place in urban areas and metropolitan cities¹, but industrialization remains at low level. Streams of distressed rural migrants end in metropolitan cities², but low-income tertiary sector can't accomodate all. So, an 'inflated' tertiary sector grows apace, as does urban poverty³.

Before proceeding further, we take a look, first at two theories of poverty and underdevelopment, and then on a framework to understand the conceptual linkages between various aspect of the problem under study.

2. THEORIES OF POVERTY AND UNDERDEVELOPMENT : A REVIEW :

(i) Nurkse gave the concept of 'the vicious circles of poverty' which tend to perpetuate the underdevelopment and poverty in the developing countries⁴. This implies that 'a country is poor because it is poor'. The vicious circles arise due to low productivity, low capital formation, overall economic backwardness and underdevelopment.

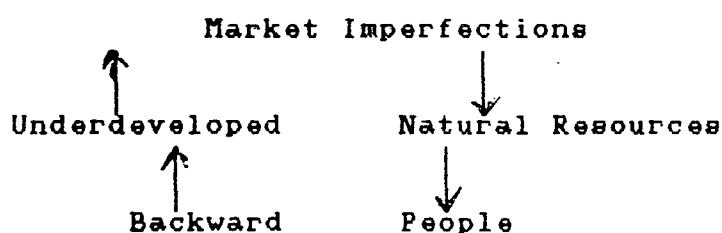
The vicious circles operate both on the demand and the supply side. The demand side of the vicious circle shows that low level of real income causes low level of demand. This leads to low rate of investment and a deficient capital formation, low productivity and then back to low incomes.



On the supply side of the vicious circle, low productivity produces lower real incomes which cause low

saving rates. Due to lower levels of saving, investment is proportionately low which leads back to a deficient capital formation and, finally, to a low productivity. Thus, in both the cycles, a low scale of monetary circulation exists which depresses the demand and saving functions causing low investment, productivity and incomes.

The third vicious circle relates to underdeveloped natural and human resources. Development of natural resources occurs due to the productive capacity of the people of the country. If they are deficient in education, knowledge, skills and entrepreneurship, the natural resources will remain unutilized, underutilized or even misutilized. On the other hand, underdeveloped natural resources may enforce people to remain backward.



Vicious Circle of Underdeveloped Natural and Human Resources

Nurkse, thus, means that poverty and underdevelopment are the same thing. A country is underdeveloped because it is poor. It is poor because of its underdevelopment.

Poverty is a bad thing because it is self-perpetuating and produces snow-balling effects.

- (ii) Andre Gúnder Frank criticized the 'dualistic' theory which says that some areas are underdeveloped due to their traditionalism and isolation. As soon as modernism reaches those areas, they are opened to the influences of development. Frank, however, believed that poverty and underdevelopment have been caused by the exploitation of capitalist powers, which integrates the underdeveloped countries into the world capitalist system².

He proposes a systematic chain of exploitation starting with the 'world metropolis' in the capitalist country to the satellites in the underdeveloped countries. This satellite at the world level itself acts as a regional metropolis for the surrounding satellites, the latter, in turn, is the metropolis at the local level for the rural hinterland. Each satellite in this hierarchy is exploited by its metropolis and its economic surplus is transferred through the hierarchy to the world metropolis. Thus, underdevelopment of a country or a social group provides for growth of another country or social group through transfer of resources up the hierarchy⁶. This one-way flow of resources causes inequities in space and society. While the

prosperity increases up along the hierarchy, the poverty grows as we move down to the base. So, the greatest disparity in incomes and development will be found between the 'world metropolis' of a developed country and the rural hinterland of a developing country.

According to Frank, therefore, development and underdevelopment are two aspects of the same process.

3. THE CONCEPTUAL FRAMEWORK

Although the above two theories provide an account of the origin and/or continuation of poverty and underdevelopment at national and inter-city levels, these don't provide any account of the intra-urban manifestations of the various aspects of urban poverty.

The metropolitan cities of the third world are growing more rapidly than other towns and cities. It is estimated that between 35-40 percent of metropolitan growth is accounted for by the reclassification and rural and urban migration component'. The migration occurs because population growth in rural areas has caused high pressure on limited arable land. These areas are characterized by underutilization and underemployment of manpower. In some areas, mechanization of agriculture has also relieved labour from this sector. Most of the rural migrants are

landless labourers or small farmers whose lands can't sustain the growing families.

The in-migrants to metropolitan cities are not highly skilled^o and unable to compete successfully in the metropolitan job market. So, they are marginalized, economically, right from the time they step into the metropolis. The circumstances force them to settle down in less attractive jobs. Some of them work as unskilled or semi-skilled industrial workers, but a majority of them are found on the margins of the urban economy of the metropolis. This marginalised sector has been called informal sector. It is characterized by unregistered, unrecognized and self-employed petty businessmen, street vendors, rickshaw pullers, daily wagers, etc. The garbage-pickers, beggars and others working in degrading and hazardous conditions form the lowest strata of the informal sector. Most of these streetworking activities are acutally 'survivial strategies'.

High population pressure on the limited urban land in metropolises has raised the price of urban land. The urban poor, majority of them in informal sector, are 'priced out' of the urban land market. Owning a house becomes a distant dream for them. So they rent in poor quality slum-housing or simply squat on the public land. Growth of slums is a phenomenon which is commensurate with in-migration of economically distressed

people and growth of informal sector. Lack of basic facilities, essential public services and health-care in the slums has turned them into areas of epidemics and mire. Widespread poverty, absence of facilities, poor living environment and quality of life many times encourage evils of crime, prostitution and anti-social activities in the slums. Lack of own housing and poor quality of life is also found in lower and lower-middle classes of these cities.

This is not to say that immigrants from the rural areas are in worse condition than they were back at home. Generally, they earn more in a metropolis than they would in their villages. Thus in their own small manner, they redistribute the incomes from urban areas to the rural and help to reduce spatial and social inequality between the metropolises and their rural hinterlands. These inequities were colonial legacies, but have been perpetuated since by the urban-biased development policies.

Besides the issues of urban poverty, informal sector, slums, shelter and access to infrastructure, the question of progressively deteriorating urban environment has gained prominence. Growing industries and vehicles in the metropolises is causing pollution of atmosphere, river and ground-water. This is reflected in increasing cases of various diseases caused by bad environment. Human wastes, garbage and sewage are also chief factors in the pollution of metropolitan environment.

Thus the urban ecological crises arises from three main factors. Firstly, the poverty-engendered poor environment of the slums. Secondly, the environmental pollution caused by industrialization, motorization and by city wastes. And finally, the stress on the limited urban resources of land and water.

A sustainable urban development requires a policy framework which emphasizes a pollution-free environment, conservation of resources, a growing urban economy, and an equitable development of all the sections of society. The growth of urban economy won't be based on the blind exploitation of the environment and limited resources. All these steps are necessary so that the future generations can also enjoy at least the same quality of life as we do, if not better.

4. URBAN POVERTY : DEFINITION AND MEASUREMENT

Though there is no commonly agreed definition of urban poverty, many feel that for the developing countries it may be considered as the incapacity of a person to provide for his basic minimum needs.

In fact, the concept of urban poverty varies with the socio-economic conditions of different societies. In the lesser developed countries, the basic problem being the provision of bare necessities of life, urban poverty has been defined as the

capacity to provide for them. This is known as an absolute definition of urban poverty.

In the developed countries, though, most of the population will have access to the bare necessities of life. However, inequities in incomes and quality of life are to be found there too. So, urban poverty in these countries is defined in relative terms.

The absolute and relative definitions of urban poverty are called Economic or Statistical Measures of poverty. In the absolute definition, the poor are demarcated by determining a particular level of income. Those falling below this poverty threshold or poverty line are defined as poor, while the remaining become non-poor.

The Relative definition/measure of poverty may define the poor as those who have only a given proportion, say fifty percent, of the median income of the country. Another purely relative measure is to include the lowest category, for e.g. twenty percent of population, as poor regardless of their actual income levels¹⁰.

The Culture of Poverty concept of Oscar Lewis defines poverty in a broader perspective than economic or statistical definition. This emphasizes the role of cultural factors in the

origin and continuance of urban poverty. The psychological view of urban poverty is more of an explanation than a definition. It highlights the role of personal, behavioural traits in explaining poverty.

Structural Perspective on urban poverty is a political-economic view of the phenomenon¹¹. It takes account of the relationship of poverty with social, political and economic systems and traces a historical evolution of society through a continuous class-struggle between the rich and powerful, and the weak and poor classes.

In India, most of the attempts have been to measure the 'absolute' urban poverty. The first attempt to determine the poverty line was done by the Working Group set up by Planning Commission in 1962. The poverty line, approximated the 'minimum monthly consumer expenditure' required for a minimum nutritious diet and, perhaps other necessary expenditure. The cost in monetary terms for the whole of urban India was calculated at Rs. twenty per capita per month at 1960-61 prices.

Dandekar and Rath (1971)¹² fixed poverty line, on the basis of minimum per capita average food intake of 2250 calories per day in the urban areas. Money equivalent of this calorie intake was calculated at Rs. 22.6 in 1960-61. They found that

fifty percent of urban population was living below this poverty line.

But calculation of absolute urban poverty on the basis of calorie requirement has been controversial. Madalgi¹³ said that Dandekar and Rath overestimated per capita foodgrain requirement for urban India at 490 gms per day, instead of the actual requirement of 429 gms only. V.K.R.V. Rao argues for a range¹⁴ of calorie requirement and not a single fixed figure -- the lower limit of which should be taken as the threshold of undernourishment. This lower threshold is estimated at 2300 calories for India.

The official estimates of urban poverty¹⁵, however, are based on household consumption expenditure data of National Statistical Service as adjusted by the National Accounts Statistics, and the all-India poverty threshold of 2100 calories per capita per day (pcpd). The monetary equivalent of this threshold at 1973-74 prices was Rs.56.64. The monetary equivalent of this poverty-threshold for the present is calculated by making suitable adjustments for price changes. The official estimates are criticized for not being flexible enough to include regional consumption patterns and prevailing price-levels there.

Minhas, Jain and Tendulkar (1991)¹⁷ have established urban poverty by constructing cost-of-living indices for different states, which also take account of varying consumption patterns and price-levels in different states. They argue that massive decline in urban poverty from 28.1 to 20.1 percent between 1983-84 and 1987-88 is due to mindless tinkering with NSS data by the planning commission. Urban Poverty calculated by them amounts to 37.8 percent for 1987-88.

Radhakrishna and others (1988) calculated urban poverty in Hyderabad district at 20 percent. The survey of National Centre for Human Settlements and Environment (NCHSE, 1987) ¹⁸ found that about 73 percent of slum-dwellers in Bangalore, 89 percent in Calcutta and 68 percent in Indore were lying below the official poverty line of Rs. 152.13/- in 1987-88. Operation Research Group established poor in the slum population of Madras Metropolitan Area at 62 percent in 1986.¹⁹ In Greater Bombay about 90 percent of the households in slums were living below the poverty line in 1976.²⁰

5. LITERATURE SURVEY

Among the earliest studies of poverty in India was one by Dadabhai Naoroji²¹ in the last century (Dadabhai Naoroji: 1990, Reprint). But the work of Dandekar and Rath in 1971

started a chain of studies in this field²². They alluded to urban poverty at all-India and levels (V.M.Dandekar and Nilakanth Rath: 1971). Punit²³ has provided a good account of the studies done in urban poverty by different scholars including the study of poor in slums (A.E.Punit: 1982). Many others have discussed the technicalities behind construction of poverty line and various measures and models of poverty in India (T.L.Jain: 1987;²⁴ Tarlok Singh (ed): 1990²⁵; G.V.S.N.Murthy and G.K.Kadekodi: 1992²⁶). A social-psychological interpretation of poverty in urban and rural setting is carried by Khan and Husain (S.R.Khan and M.G.Husain: 1989)²⁷. According to them poverty and ecological setting interact to cause behavioural changes. A discussion of urban poor in the slums and other areas of metropolitan cities of India has been discussed by Alam and Alikhan (S.M.Alam and F.Alikhan: 1986)²⁸. Michael Lipton analysis the factor of 'urban bias' in perpetuating poverty. (Michael Lipton in Jasef Gugler (ed): 1988)²⁹. A sociological study of slum people in Delhi was done by Majumdar (Dr.T.K.Majumdar: 1983)³⁰. Jain in his 'seminal' work discusses poverty in Nepal as well as various alleviation programmes (S.C.Jain: 1981)³¹. A decade long study of the poor in-migrants of Pune was done by Bapat and Crook³². They discuss its results in their article in length (Meera Bapat and Nigel Crook: 1992).

International organisations are a good source of information about underdevelopment and poverty in third world countries. Quite a few studies have been done in South Asia also. Poverty, Income, Unemployment and underemployment are covered in many such studies (R. Islam et al: 1982³³, and U.N. 1990,³⁴ for Nepal; Economic and Social Commission for Asia and Pacific (ESCAP):1981³⁵, R. Islam & M. Muqtada : 1986³⁶, for Bangladesh; and ESCAP: 1976 for Srilanka³⁷). Mathur provides an overview of India's urban poverty in the light of recent liberalization and economic reforms (Om Prakash Mathur: 1983³⁸).

Informal sector is closely related to the urban poverty. But all of those in informal sector are not poor. Demarcation of informal sector is also quite a problem. Much work has been done in recent years on the definition, measurement and linkages of informal sector. Sethuramans's article is significant from this perspective (S.V. Sethuraman : 1976)³⁹. In Indian context, such studies have been done by various scholars (Heather Joshi: 1980⁴⁰; K.C. Samal: 1990⁴¹; T.S. Papola: 1980⁴²; Meera Mehta: 1985⁴³). Romalet has surveyed the informal sector in slums of Calcutta and assessed its importance in the city's economy (Emmanuel Romatet: 1983⁴⁴).

Housing sector is an important sector of enquiry. Population pressure has put land under premium. A growing number

of studies is evident in this field. Vijaya has worked on the patterns and processes in the housing market of Hyderabad (Vijaya Bhole: 1988)⁴⁵; while Mehta and Mehta provide account of the growth of commercialization and black-marketing in housing market of Ahmedabad (Meera Mehta and Dinesh Mehta: 1989)⁴⁶. Pugh has had a sharper focus in his study of World Bank assisted housing for the low income groups in Indian mega-cities (Cedric Pugh: 1990)⁴⁷. Sundaram provides an overview of various housing programmes adopted in India since independence (P.S.A. Sundaram in Seong-Kyu Ha(ed.): 1987)⁴⁸. The housing scene in Karachi, including that for lower classes and poor, is discussed by Gurel etc. alongwith various programmes adopted till now (S. Gurel et.al. (eds.) 1991)⁴⁹. Low income group housing schemes and different types of problems faced therein are discussed for Bangladesh by Choguill (C.L. Choguill: 1988)⁵⁰. Housing crisis is very severe in Bombay metropolis. An account of different housing problems can be had from, Reddy's article (I.U.B. Reddy: 1990)⁵¹. Involvement of Non-Governmental Organizations (NGOs) in housing development for poor has been gaining ground. Its potential in this sector has been projected by Dewit. (Michael Dewit in Michael Dewit and Hans Schenk: 1989)⁵².

For raising the quality of life, provision of facilities and services comes next in importance to housing.

Much work is being done nowadays to assess the availability and access of common man to these provisions. Mohanty brings together a collection of contributions on this aspect in the context of India, Srilanka and Pakistan. (Bidyut Mohanty (ed.): 1983)²³; while Sivaramakrishnan et. al. provide an outline of water and sanitation services in India (K.C. Sivaramakrishnan et. al. 1998)²⁴, Kundu gives an account of the access of urban poor to basic amenities and housing at state level. Various policies for housing and its financing aspect have also been analysed by him. (Amitabh Kundu: 1993)²⁵. Umashankar and Misra deal with health services for urban areas, urban poor and various health hazards faced by them (P.K. Umashankar and G.K. Misra: 1993)²⁶.

Growth of slums is a manifestation of urban poverty. A penetrative account of the social, economic and political aspects of slum and pavement dwellers of Bombay is brought by Seabrook (Jeremy Seabrook: 1987)²⁷. Health levels, amenities and crime in slums of Delhi is the objective of a recent report on the prevalent 'dualism' in Delhi (V.H.A.I. : 1993)²⁸. A comparative study of origin and growth of slums and squatters, socio-economic aspects of life of slum dwellers, and possible strategies are given in United Nations Report based on surveys (UNCHS: 1982)²⁹. A discussion of slumification of Lahore came out some time ago (Farhat Gulzarin C.S. Yadav (ed.): 1987)³⁰. Shakur and Madden

give a comprehensive coverage of the socio-economic life in resettlement camps of Dhaka (T. Shakur and M. Madden: 1991)⁶¹, while Ali gives such account for Delhi (Sabir Ali: 1990)⁶². Wiebe earlier found a wide prevalence of petty jobs among Madras' slum-dwellers (Paul D. Wiebe: 1977)⁶³. Singh comprehensively deals with slum and pavement dwellers of metropolises (Andrea Menfee Singh: 1978)⁶⁴.

Restricted supply of land is a major factor in urban crisis. Bhargava comprehensively treats Urban Land (Ceiling & Regulation) Act of 1976, and its affects on housing, industry and urban vacant land (Gopal Bhargava: 1983)⁶⁵. Issues of urban land policies, urban land-use control, land management and finance for housing are widely covered in Sharma (Prof. R.C. Sharma (ed.): 1988)⁶⁶. Politics related to ULCA, 1976 due to loopholes in the Act are treated by Srinivas (Lakshmi Srinivas : 1991)⁶⁷.

Reviving 'overurbanization' debate, Gugler defines it in terms of misallocation of labour between rural and urban, and cost overruns in over large cities (Josef Gugler in Josef Gugler (ed.): 1988)⁶⁸. Problems of Ganga pollution and slums growth is the subject matter of Singh, Kumra, etc. (Harihar Singh and V.K. Kumra : 1986)⁶⁹. IN his thoughtful article, Maitra believes that population growth is used as scapegoat for the failure of economic system, in order to explain away the problems of poverty

and pollution (P. Maitra: 1974)⁷⁰. Dube and Singh take up the issue of deteriorating urban environment like pollution, slums growth and possible steps to cope with them (K.K. Dube and A.K. Singh : 1988)⁷¹. An all-containing account of the million-cities of India is to be found in the well-written, comprehensive, though slightly older book by Misra (R.P. Misra (ed.): 1978)⁷². An informative and well presented book on urban future of Calcutta is eminently readable (B. Dasgupta et. al. : 1991)⁷³.

Recommendations of National Commission on Urbanization have come under attack for inherent contradictions vis-a-vis welfare of urban poor (Amitabh Kundu: 1989)⁷⁴, and also for suggesting irrelevant, unexplicit programmes or for not addressing vital questions (Meera Mehta & Dinesh Mehta : 1989)⁷⁵. Housing provision under urban development policies, and economics behind demand and supply of housing is subject matter of Grimes'. (Orville F. Grimes, Jr. : 1976)⁷⁶. Basic needs and priorities of urban poor are discussed for mega-cities by Ribeiro (E.F.N. Ribeiro: 1982)⁷⁷. Relationship amongst 'industrialization', employment and urbanization; 'overurbanization' and its linkages with economic growth are some of the conceptual issues raised in Ghosh's. (Pradip K. Ghosh: 1984)⁷⁸. Timberlake writes on world division of labour and origin of informal sector from a world-systems perspective (M. Timberlake: 1985)⁷⁹. Richardson believes

that 'guided urbanization' is necessary in developing countries for balanced development (H.W. Richardson: 1981)⁸⁰. The new draft National Housing Policy has been discussed by Chaudhuri (Indrajit Chaudhuri in S.K. Chandhoke: 1991)⁸¹. Qadeer highlights underlying corruption in urban development of Lahore. Also presented is a terse account of urban problems of Lahore (M.A. Qadeer: 1983)⁸².

Much has not been written on the urban poverty of Kanpur metropolis. Gupta, of late, has tried to portray various structural aspects of poverty in Kanpur by using, both, theoretical and empirical approaches (S.P. Gupta : 1987)⁸³. A spatial approach to study of slums in Kanpur is employed by Singh (Ujagir Singh: 1966)⁸⁴. Historical growth, spatial extension, housing and slum growth, and others topics of urban geography of Kanpur are beautifully presented in Singh (Harihar Singh : 1972)⁸⁵. Detailed analysis of industrialization and urbanization in Kanpur has been made in a Hindi Journal (Surendra Nath Singh : 1971)⁸⁶. A wide coverage of urban development in Kanpur, including housing, infrastructure, services and role of local administration and corruption was brought out a few years back (Dr. R.K. Awasthi : 1985)⁸⁷. Spatial analysis of pollution of environment and 'pollution of poverty' is presented by Kumra in his pioneering geographical study of Kanpur (V.K. Kumra :

1982)⁸⁸. Affect of pollution on human health in Kanpur is done by the same person (V.K. Kumra : 1980)⁸⁹. River Ganga and atmospheric pollution in Kanpur are analysed in a journal elsewhere (R.C. Dwivedi : 1987⁹⁰; R.K. Gupta and R.S. Dhaneshwar : 1987)⁹⁰. Survey of Kanpur Development Authority painted a dark picture of urban life in Kanpur. It is illuminating. (The Civic Affairs: Jan. 1980)⁹¹. Issues of urban development in Kanpur can be found in various issues of aforementioned journal (Darshan Singh : 1982⁹², 1989⁹³; V.K. Diwan : 1980⁹⁴; C.S. Chandrasekhara : 1980)⁹⁵.

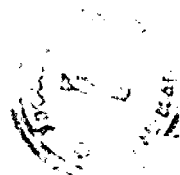
World Commission on Environment and Development (W.C.E.D.) report defines sustainable development and recommends steps for different sectors (W.C.E.D. : 1987)⁹⁶. Gilbert opines that sustainability in developing countries is more a question of survivability. The governments there won't survive if investment in job-creation and welfare is diverted to environmental improvement schemes (Alan Gilbert : 1994)⁹⁷. In Indian conditions, the sustainable development of urban areas is discussed in a special issue on this topic (Indian Journal of Public Administration : July-Sept. 1993)⁹⁸.

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6. OBJECTIVES OF THE STUDY :

The objectives of the study are :

1. to analyse the basic processes and patterns of metropolitanization of South Asia with an emphasis on India
2. to examine the basic urban environmental problems of South Asia with reference to extent of poverty, housing crisis, growth of informal sector, etc. and the resulting urban environmental degradation
3. to analyse the processes and factors of growth and development of Kanpur metropolis, and the resulting urban environmental degradation
4. to examine the extent of urban poverty, informal sector growth and quality of life in Kanpur city
5. to review the urban land, housing and urbanization policies in India
6. to suggest possible solutions for the urban crisis with a focus on the management and policy framework on land and housing etc. in the million cities and on the question of sustainable urban development.

7. SOURCES OF INFORMATION AND METHODOLOGY :

The work is based primarily on secondary sources of information. The major sources of the information have been books, journals, census reports and data, monographs, United Nations Publications and reports, and some government documents.

The methodology includes tabulation and analysis of data, depiction of information through suitable cartographic techniques and mapping of information. Major part of the study is descriptive in nature, though quite a few sections are based on empirical data.

Notes & References :-

1. The concept of 'urban bias', as given by Michael Lipton, says that resource allocation within the city and the village, as well as between them, reflects urban priorities. See : Michael Lipton; 'Why Poor People Stay Poor : Urban Bias in World Development', in Josef Gugler (ed.) (1988) "The Urbanization of the Third World", (Oxford University Press).
2. Rural to urban migrations are supposed to go directly to the metropolitan cities, or indirectly, 'through a hierarchy of urban places. The later process is called **Step-migration**.

3. As industrialization has not been upto the required levels in the developing countries, so rural in-migrants end up in tertiary sector. Because of lack of required skills, they have to settle down in unskilled/semiskilled jobs with low remunerations. This kind of urbanization has been called "Spurious or pseudo urbanization.
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CHAPTER-II

PROCESSES AND PATTERNS OF METROPOLITANIZATION IN SOUTH ASIA

Metropolitanization is closely linked to the process of urbanization. Urbanization denotes the transformation of society from a predominantly rural to a predominantly urban. According to the 'Dictionary of Human Geography', urbanization has three related aspects : the demographic, the structural and the behavioural. The demographic aspect refers to the increasing proportion of the population in the towns, followed later by their concentration in the larger cities. Thus, demographically, metropolitanization of the population points towards the culmination of urbanization processes, whereby most of the population comes to live in metropolitan areas. Structurally, urbanization means that most of the people are economically sustained by the industrial sector. The industries tend to locate in larger cities due to economies of scale and agglomeration economy. In the last, behavioural aspects of urbanization are shown by the large cities being the 'melting-pots' of cultures, and centres of innovations of cultural and behavioural patterns, which diffuse down the hierarchy of settlements.

Recent works seem to challenge these concepts of urbanization - as seen in the processes of 'counter urbanization'

in the developed countries, and in urbanization without industrialization in third world countries. But, these symptoms can be taken as the variations of urbanization and metropolitanization within the framework of 'time and space continuum'.

The fact is that the urban population continues to concentrate, apace, in the large metropolitan cities of the third world, as well as South Asia. And this process parallels the above mentioned model in more ways than one.

1. WHY DOES METROPOLITANIZATION OCCUR ?

Hoselitz (1957) had classified cities as 'Generative' and 'Parasitic' ones. Generative cities are those which enhance the economic growth of the country or the region concerned. Parasitic cities bar the economic growth of the regions or countries in which they are located. Hoselitz himself observed that some cities may be generative for the areas surrounding, but for the larger area, over which they have influence, they may be parasitic². Cities in the developed countries may be generative as they earn capital from the other countries, but those in the third world are, basically, parasitic as they extract natural resources and products from local areas which ultimately find their way to the 'generative' cities in a unified world economy.

The growth of cities was, thus, linked to the economic processes of production and exchange.

The 'Dependency' School grew, largely, due to efforts of Gunder Frank. He showed that Latin America was included in the world system of capitalism by the conquest of the Europeans. The countries of the continent became 'dependent' on the colonial powers because they exported their raw material and received cheap industrial products which destroyed their indigenous industries. In this dependency relationship, some people benefitted from being the mediaries. Those cities, mainly ports, where these elites were located, grew into large metropolises due to flow of capital and the resultant migration of the people.

In the tradition of urban-ecological approach, John Friedmann gave his Centre-Periphery Model in 1966. It traces the development of a newly inhabited region having independent, small centres of population to a hierarchical, well integrated system of urban areas. This happens through industrial development of more favourable places, followed latter by the government's strategy for a balanced development of all the regions. Though oversimplistic, this model throws light on how some large cities grow in the more favourable regions of the country².

One of the off-shoots of the Dependency Theory is the world-systems perspective of Wallerstein. The world economic system is supposed to be divided into a three-tiered division of labour-core, periphery and semi-periphery states. The core is the dominant capitalist world while the periphery is the exploited third world. In-between lies the semi-peripheral states where more of the 'core-production' occurs than in the peripheral states. Though some what like Dependency and Marxist theories in many aspects, it differs from the former in that it focuses on the whole system rather than view the relationship from the viewpoint of the 'dependnet' nation. Unlike Marxism, it does not envisage different stages of capitalism⁴. The different political, cultural and economic resources of the states, alongwith the positon in the hierarchy, decide the nature of labour force and its production in a city. Thus the cities in the periphery will comprise of labour-intensive technologies and production, while the core area cities will have capital-intensive production. This has obvious impact on levels of income, well being and growth of cities in different tiers.

Marxist studies of urbanization are based on the principle of extraction of surplus value by those in command of dominant modes of production. These studies take a historic view of the process of urbanization. Thus, the industrial revolution

and the consequent search for areas of raw material, and for markets, caused the penetration of industrial capitalism into the third world countries. The independence of the colonies was followed by the commercial form of capitalism³. All through, the capitalistic powers came out successful due to their 'dominant' modes of production which are more efficient than the 'dependent' modes of production of the weaker countries. Marxist view differs from Friedmann's on account of its emphasis on social-class analysis, which shows who has the access to the surplus produced. The elites of the dominant and dependent countries join with their states to perpetuate the extraction of surplus. Present day's metropolitanism is part of a complex, global economy having a three-tiered structure, i.e. local, metropolis and the international. According to Harvey⁴, the size of the cities shows the extent of agglomeration of population, of centralization of means of production and concentration of property in a few hands.

2. METROPOLITANIZATION IN THE THIRD WORLD

U.N. Projections show that by the year 2000 over half of the world population will be living in urban areas. The concomitant figure for 1990 was about 45 percent. While the developed countries had three fourths (73 percent) urban population, the developing countries had 63 percent population residing in rural areas in 1990.

TABLE 2.1
URBAN POPULATION AND LEVELS OF URBANIZATION
IN THIRD WORLD (1990-2020)

Area or Region	Urban Population (Billions)			Levels of Urbanization (%)		
	1990	2000	2020	1990	2000	2020
World	2.39	3.20	5.01	45.2	51.1	62.0
Developing Countries	1.51	2.25	3.92	37.1	45.1	58.2
Latin America	0.32	0.41	0.59	71.5	76.4	82.9
Africa	0.21	0.35	0.78	33.9	40.7	53.9
Asia:	1.07	1.58	2.64	34.4	42.7	56.4
South East Asia	0.13	0.19	0.35	29.9	36.9	51.9
West Asia	0.08	0.12	0.21	62.7	70.3	78.2
South Asia*	0.29	0.44	0.88	26.04	31.5	46.5

* South Asia here includes only Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan & Srilanka.

Source : "World Urbanization Prospects : 1990", United Nations, New York, 1991.

From the table 2.1, we can see that the urban population of the world will increase from 2.39 billions in 1990 to 5.01 billions in 2020, and of the developing countries from 1.51 billion to 3.92 billions. Thus, the urban population of the developing countries will form 78 percent of the urban population of the world in 2020, as compared to 63 percent in 1990. Asia

contains the highest number of urban residents in the developing regions, and the position will be alike in the year 2020. But the level of urbanization, the proportion of urban people to the total, is far higher in Latin American countries and compares more favourably with the developed regions than with the developing. The levels of urbanization in Africa and Asia are very low. Only about a third of the total population of Africa and Asia was living in urban areas in 1990. By 2020 A.D., however, the urban population will, have crossed the 50 percent mark in both the continents. Within Asian countries, however, there are large differences in the levels of urbanization. The oil-rich countries of West Asia have 62.7 percent population residing in the urban areas, while the upward-looking economies of the South-Eastern Asia about 30 percent urban population in 1990. These are projected to rise to nearly 78 percent and 51 percent levels by 2020. The seven countries of the South Asian sub-continent have one of the lowest levels of urbanization in the world, and by 2020 will still have less than half of their population living in urban areas. But the absolute size of urban population involved is just unimaginable. By the year 2020, the urban population of South Asian countries, at 0.88 billion, will be greater than the urban population of either of the two continents of Africa and Latin America !

Annual urban growth rate in the developing countries at 4.53 percent was 5.6 times higher than in the more developed countries between 1985-1990. Their urban growth rate for the years 2015-20 will still be 3.9 times higher than developed countries on an average. The expected growth rate for that time is 2.39 percent per annum. The highest urban growth rates in 1990 were in Africa followed by Asia, the respective rates being 5.01 percent and 4.54 percent per annum. The trend of higher growth rate for Africa is expected to continue in the next few decades.

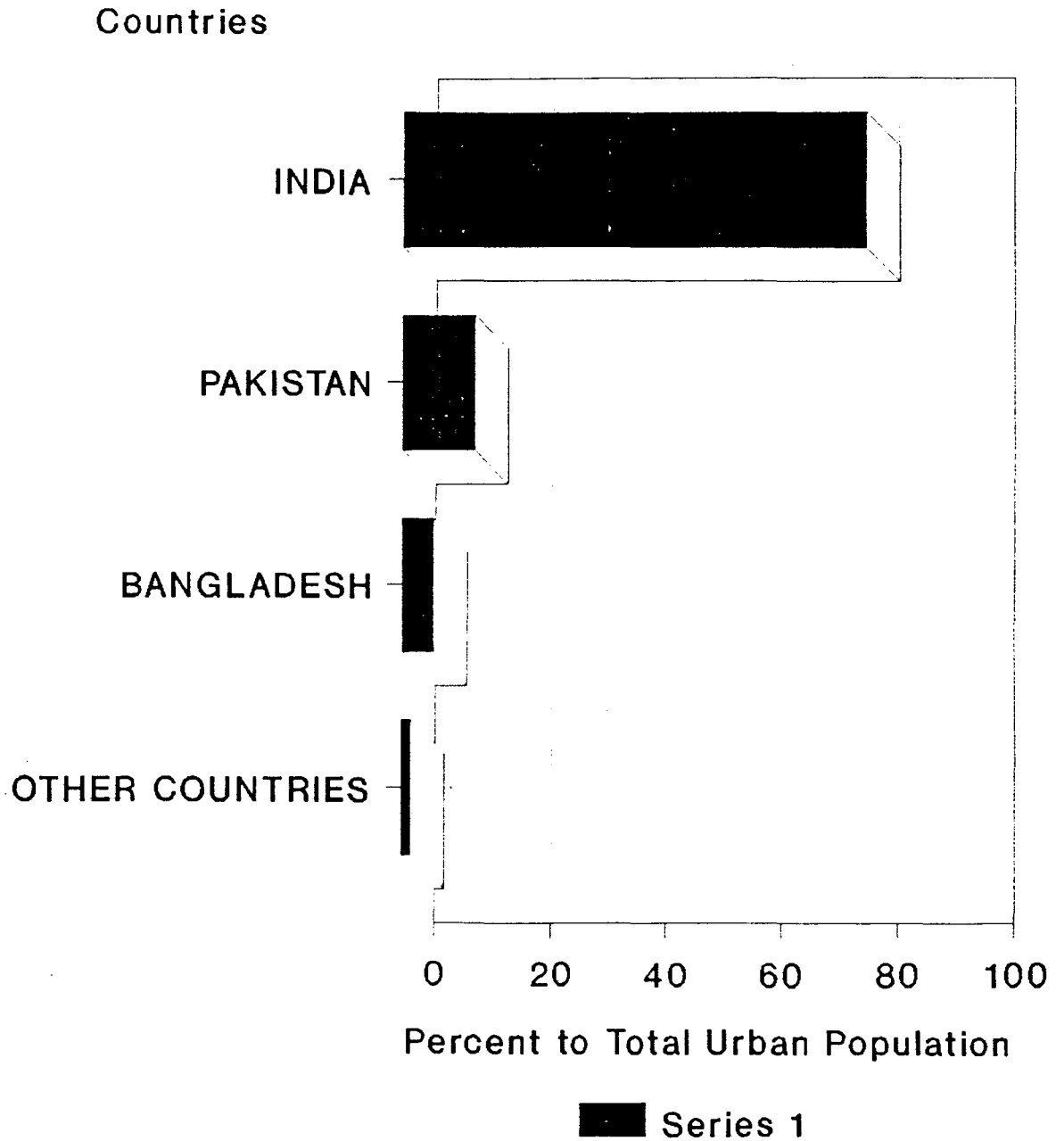
Increase of population in large metropolitan cities is a process concomitant to urbanization. The growth of metropolitan cities is high when the level of urbanization is low^a. The growth of such cities is faster than other lower order urban centres in the third world countries due to large element of in-migrants. In 1990, there were 34 metropolises with population of 5 millions or more. Of these, two-thirds were in the third world. In 2000 these countries will contain 75 percent of such metropolises.

The faster growth of third world metropolitan cities, and the progressive concentration of urban population therein, has given rise to primate cities. These cities dominate the respective settlement structures of the third world countries.

42(a)

URBAN SOUTH ASIA

COUNTRYWISE PROPORTION (1990)



Source : "The Prospects of World Urbanisation"; U.N., New York, 1987.

Fig.2.1

Thus, more than 50 percent of Thailand's urban population is concentrated in the capital Bangkok⁹. Nearly a third of the urban population of Bangladesh and Philippines is concentrated in Dhaka and Metro Manila. Jakarta, Karachi, Istanbul and Teheran have about one-fifth of their respective countries urban population.

3. METROPOLITANIZATION IN SOUTH ASIA

The vast, fertile plains of South Asia have always sustained a comparatively densely settled population. As is clear from table 2.2 and figure 2.1, India, Pakistan and Bangladesh are the three population and areal giants of the subcontinent, having proportionately large urban populations. Sri Lanka and Nepal come next, both of them with urban populations below 10 million level. The tiny mountainous Bhutan and the island state of Maldives have very low urban population.

In 1990, Pakistan had the highest level of urbanization at 32.0 percent, followed by Maldives and India. In the year 2020, it is projected to have 53.1 percent urban population. Maldives will have almost equal level of 53.2 percent. These countries will be followed by India at around 47 percent level of urbanization. Sri Lanka has one-fifth of its population living in urban areas. The agriculture dominated economy of Bangladesh; Nepal and Bhutan with precarious mountain ecology have very low

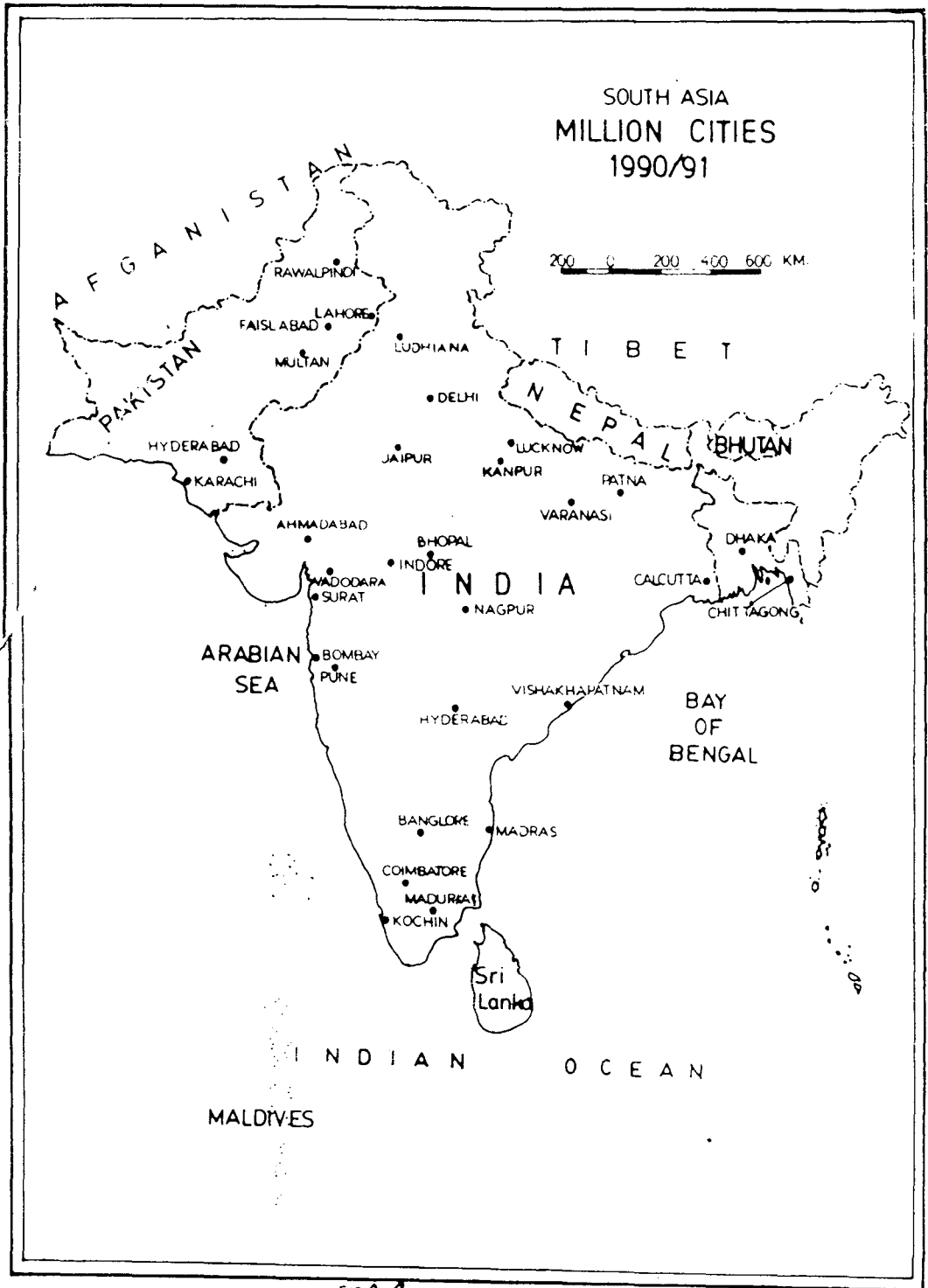


FIG 2.2

TABLE 2.2

**URBAN POPULATION, LEVELS OF URBANIZATION AND URBAN
GROWTH RATE* IN SOUTH ASIA (1990-2020)**

Country	Urban Population (Millions)			Level of Urbanization (%)		
	1990	2000	2020	1990	2000	2020
India	230.3	336.5	648.3	27.0 (3.6)	32.3 (3.8)	47.3 (2.7)
Pakistan	39.3	61.5	131.8	32.0 (4.8)	37.9 (4.5)	53.1 (3.2)
Bangladesh	19.0	34.5	83.9	16.4 (6.3)	22.9 (5.8)	38.2 (3.7)
Srilanka	3.7	4.7	9.1	21.4 (1.6)	24.2 (2.7)	38.6 (3.1)
Nepal	1.8	3.4	8.9	9.6 (6.8)	14.3 (6.1)	26.8 (4.1)
Bhutan	0.08	0.15	0.46	5.3 (5.4)	7.8 (6.2)	16.2 (5.1)
Maldives	0.06	0.11	0.22	29.4 (5.9)	37.5 (4.9)	53.2 (2.9)

* Urban growth rates, given in brackets, are average of the previous five years, i.e. 1985-1990.

Source : "World Urbanization Prospects : 1990", United Nations, New York, 1991.

level of urbanization. By the year 2020, Nepal and Bhutan will still have a predominant rural society. In fact, Nepal, Bangladesh and Bhutan are among the five least developed countries of the world¹⁰. The other two are Afghanistan and Lao.

All five countries, alongwith Cambodia and East Timor, have level of urbanization below 20 percent in 1990. Bhutan is the least urbanized country of the world with urbanization level at around 5 percent in 1990. Even in 2020, it's level of urbanization will be under 20 percent.

Presently, urban population of Nepal is growing at the fastest pace in South Asia. It is followed closely by Bangladesh, the respective annual growth rates are 6.8 percent and 6.3 percent. Maldives also has a high urban growth rate of 5.9 percent per annum. Bhutan, Srilanka and India are projected to attain still higher urban growth rates by the year 2000. Excepting Srilanka, however, all the countries are expected to lower their urban growth rates by the year 2020. India, Pakistan, Bangladesh contain the largest proportion of the urban population of South Asia, having 78 percent, 13 percent and 6.5 percent of the total urban. Their respective urban growth rates of 3.6, 4.9 and 6.3 percent are going to seriously affect their already overcrowded urban systems.

The level of urbanization in South Asia being low, the growth of metropolitan cities is very high. This, primarily, is due to rural to urban migration. Even a small proportion of the in-migrants adds a large burden to the population of those cities due to large populations of these countries. The number

TABLE-2.3POPULATION AND RATE OF CHANGE IN SELECTED
SOUTH ASIAN METROPOLISES (1900-2000)

Metropolis	Population (Millions)		Mean Annual Rate of change* (%)	
	1990	2000	1990	2000
Chittagong	2.28	3.85	5.26	5.17
Dhaka	6.64	12.16	6.30	5.79
Faislabad	1.50	2.19	3.60	3.80
Karachi	7.70	11.66	4.20	4.10
Lahore	4.10	5.95	3.71	3.79
Bombay	11.17	15.38	3.23	3.17
Calcutta	11.83	15.68	2.80	2.84
Delhi	8.76	13.24	4.28	3.97
Madras	5.70	7.77	3.09	3.10
Bangalore	4.99	8.22	5.25	4.72
Ahmedabad	3.64	5.26	3.74	3.61
Hyderabad	3.53	4.99	3.48	3.42
Pune	2.44	3.58	3.88	3.73
Kanpur	2.07	2.74	2.72	2.87
Nagpur	1.78	2.51	3.41	3.40

* Based on average of previous five years.

Source : "World Urbanization Prospects : 1990", United Nations,
New York, 1991.

of people living in metropolises is rising, and is projected to do so in future. The table 2.3 shows that cities of one million or more population are expected to grow at very high rates. Dhaka, Chittagong, Bangalore, Delhi and Karachi can be easily pointed out due to their very high growth rates.

There are two cities of million size in Bangladesh and six in Pakistan in 1990 - the other three cities than those in

the table are Hyderabad, Multan and Rawalpindi¹¹. The 1991 Census of India shows that there are 23 million cities in India. Hence, there are 31 million cities in all in South Asia. In 1980, South Asia accounted for 4 out of 30 largest metropolitan cities in the world - Calcutta, Bombay, Delhi and Karachi. In 1990, this figure rose to six, adding Dhaka and Madras, while by 2000 Bangalore is expected to join the group. At present, there are six metropolises, having population of 5 million or above - four Indian and one each in Pakistan and Bangladesh. Two cities - Calcutta and Bombay - are in the select band of 10 million cities. In this decade the three capitals of India, Pakistan and Bangladesh are going to join the duo.

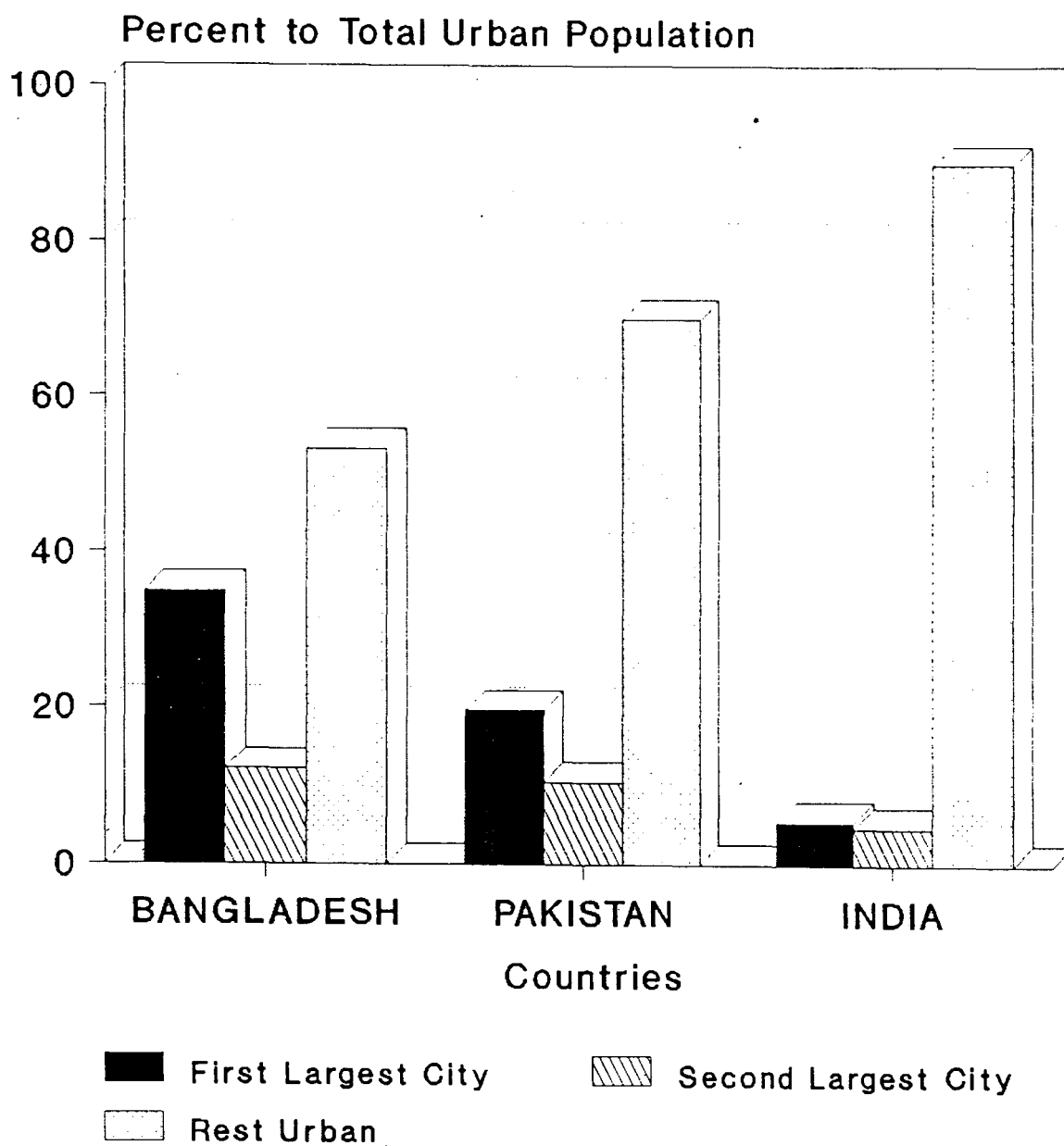
According to George J. Beier, presentday urbanization in the developing countries is different in several aspects from that of the European countries¹². The population growth rate in the third world is supposed to be much higher, resulting into large scale urbanward movement of rural people. Decrease in the availability of agricultural land in rural areas, improvement in transportation reducing the travel-time and difficulties in reaching the distant cities, decrease in the scope of international migration of labour due to rigid laws, etc. are some of the factors of metropolitan growth in the South Asian countries like India, Pakistan, Bangladesh and Srilanka. These factors have worsened the services and employment scenario in large cities.

Cities growth is also supposedly influenced by what Lipton has called 'urban bias'. The large cities are alleged to receive greater share of the government expenditure. Doubts have been raised whether greater focus on rural development will really stop or enhance migration¹³. The concentration of population in cities is favoured by economies of large scale production and by the fact that provision of services like water supply becomes economic with growth of city for a long time¹⁴. External economies due to agglomeration of industries also makes provision of services cost effective, besides creating employment opportunities. These forces enhance growth of the urban areas into large cities. Centralization of administration and decision-makers in the large cities and capitals also favours establishment of industrial units and services in these cities.

Helen Hughes opined that urbanization is not necessarily entirely due to industrialization, though it accelerates the pace of industrialization¹⁵. This seems to be true in South Asian case because urbanization here is not due to industrialization. Many cities, here, are centuries old. Quite a part of the cities growth here is due to from rural areas. Population pressure on arable land, income gap between rural areas and large cities, and inequitable development of different regions are some of the factors responsible for this migration and fast growth of the metropolitan cities.

SOUTH ASIA

URBAN PRIMACY (1990/1991)



Source :i) World Urbanisation Prospects,
 (1990);
 M.K.Premi, (1991)

Figure 2.3

TABLE-2.4

**URBAN PRIMARY IN SELECTED CITIES OF
SOUTH ASIA (1900-2000)**

Country/Metropolis	Proportion of Urban Population(%)		Proportion of Total Population(%)	
	1900	2000	1990	2000
<u>Bangladesh</u>				
Dhaka	34.9	35.2	5.7	8.1
Chittagong	12.0	11.1	1.9	2.5
<u>Pakistan</u>				
Karachi	19.6	18.9	6.3	7.2
Lahore	10.4	9.7	3.3	3.6
Faislabad	3.8	3.5	1.2	1.3
<u>India</u>				
Bombay	4.8	4.5	1.3	1.5
Calcutta	5.1	4.6	1.4	1.5
Delhi	3.8	3.9	1.0	1.2
Madras	2.5	2.3	0.7	0.8

Source : "World Urbanization Prospects : 1990", United Nations, New York, 1991.

From the table 2.4 and figure 2.3 , it is clear that Dhaka and Chittagong dominate the national population scenario of Bangladesh. Nearly 47 percent of Bangladesh's urban population is concentrated in these two metropolises. In 2000, more than one-tenth of the total population will be living there. In Pakistan too, about 34 percent of urban population is presently in the three metropolis of Karachi, Lahore and Faislabad, or almost 11

percent of the whole population of the country. In India, the first eight cities accounted for more than one-fifth of the urban population in 1990, and about 6.6 percent of the total population. The pattern of population distribution indicates that in the countries of smaller size, like Pakistan and Bangladesh, one metropolis tends to dominate the population distribution. But in a country of India's magnitude, it is difficult to have a primate city at the national level. A greater equitable distribution of settlements seems to be present in India. Governments's policies of equitable regional development seem to have bore some fruit.

4. THE EXPERIENCE OF THE INDIVIDUAL COUNTRIES

India : Eleven more 'million-cities' joined the group of dozen others in the 1991 census of India. Each million city served an average population of 3.67 crores, and an average area of 1.42 lakh square kilometres. In 1981, 13 out of 25 states in India had a primate city each¹⁶. Calcutta in West Bengal is a typical example. It was a straight 25 times larger than the second-ranking city of Asansol. Other primate cities were Bangalore in Karnataka, Bombay in Maharashtra, Madras in Tamil Nadu, Hyderabad in Andhra Pradesh and Ahmedabad in Gujrat. Many of Indian metropolitan cities are not based on industries. So, industrialization does not seem to be the sufficient condition to

explain metropolitanization in India. Many of these cities are commercial, administrative or 'nodel' centres.

From their population sizes Bombay, Calcutta, Madras and Delhi are the dominant cities in India. The former three were the bases of the imperialist British, which were connected well with the interior, resource-rich agriculture and mineral regions to carry away the raw material to the industrial cities of Britain. These port-cities grew due to the flow of capital, which benefitted some of Indian elites also. Many of the interior cities also grew because of their nodality, and as the administrative centres.

The vast Indo-Ganga Plains, with such a dense population, do not consist of proportionate number of metropolitan cities. Same case can be observed in the states of Orissa, Haryana, Himachal Pradesh and eastern Rajasthan. This is because these areas have remained in the 'attraction zones' of Calcutta and Delhi, which have attracted the rural and urban people of the different states, thus inhibiting growth of large cities. Punjab, the prosperous agricultural state, has shown a tendency towards medium-sized, equitably distributed urban places¹⁷. Ludhiana has recently joined the 'million-city' league. Nagpur in Vidharbha, Calcutta in the north-east; Bombay-

Ahmedabad-Pune in western India, Madhya Pradesh and Karnataka have exercised dominance. These cities have grown due to migration from the rural parts of the regions on which they exercise influence. Though the data are not much reliable, they show that migrants form a big component of the metropolitan population. There are, however, indications of decrease of migrants in Indian cities in 1981 census.

TABLE-2.5

PROPORTION OF MIGRANTS IN SOME SELECTED INDIAN
METROPOLISES (1971 & 1981)

Metropolis	Proportion of Migrants to City Population (%)	
	1971	1981
Calcutta	37.2	31.2
Greater Bombay	56.8	46.2
Delhi	51.7	45.5
Madras	36.7	34.4
Bangalore	37.7	37.6
Ahmedabad	44.2	37.8
Kanpur	36.9	29.3
Poona	48.7	46.8
Nagpur	36.7	37.0
Jaipur	32.5	32.2

Source : (a) M.S.A. Rao (ed); "Studies in Migration", Manohar, New Delhi; 1986.

(b) Census of India, 1981, Series-1, India. Part V-A & B (vii). 'Migration Tables'.

Pakistan : Urbanization in Pakistan is also related to the colonial past. Karachi, the largest city, functioned as the port to carry away the cotton and other products from the fertile land of Indus valley. It was well-connected with the interior resource-regions of Punjab and Sind to exploit their resources. Railway increased the nodality of several agricultural 'mandi' towns and helped them grow into big cities. The construction of modern canals also led to growth of urban centres in the agricultural regions¹⁸. The partition brought many refugees who settled in large towns and cities. In 1951, migrants accounted for 83 percent of Faisalabad's total population¹⁹. Same (83 percent) proportion of internal migrants and refugees formed part of Karachi city in 1959. Hyderabad had 51 percent of refugees in 1951, while Lahore showed 43 percent. By 1972, migrants formed only 31.7 percent of Lahore's population²⁰. Karachi, a big industrial, commercial and financial centre of Pakistan, attracted poor people from the distant rural places, and also migrants from smaller towns. Lahore is an old city and capital of Punjab. Faisalabad, the second biggest industrial city after Karachi, grew into a big industrial urban centre due to refugees' efforts and government's encouragement. In recent time, a trend of decreasing migration to cities seems to have set in. It may be due to stagnation of employment opportunities, migration to Gulf, etc.²¹. There are 23 one-lakh cities in Pakistan, but

most of them are in the Ahmedabad-Pune in western India, Madhya Pradesh and Karnataka plains. The hilly and arid areas of N.W.F.P., Baluchistan and Sind are regions of out-migration and underdevelopment.

Bangladesh : Bangladesh is a predominantly rural country with more than 86 percent rural population²². In 1973-79, about 78 percent of rural people were living below absolute poverty levels. In the past, Dhaka was famous for its handicrafts which were exported worldwide. The British destroyed this industry. At that time, present day Bangladesh became the rural hinterland of Calcutta, where life subsisted on agriculture. Though at a low level, urbanization is growing fast since 1971.

There were 13 cities of 1 lakh population in 1981. But there are regional disparities in urbanization. Chittagong dominates the eastern parts of the country, with a population of 2.28 millions in 1990. This commercial, industrial and educational centre on the sea-front handles the greatest amount of foreign trade of the country. The biggest city and capital, Dhaka accommodated 6.64 million people. It lies in the most industrialised, central part of the country, and is the centre of destination for the migrants who are 'pushed out' of rural areas. Khulna, the third largest city, occupies a prominent position in the Southern country. The northern parts of Bangladesh are mostly agricultural, and industrially backward, with low level of urbanization.

Srilanka : The urban proportion declined by 0.5 percent during 1970-90 in Srilanka²³. The low level of urbanization, in fact, is due to low industrialization²⁴. Though the government has set-up some basic industries, the chief economic activity remains the work in tea, rubber and coconut plantations.

Most of the plantations are located in the wet region, in the area around Colombo in the Western Province. The government made efforts to resettle people from the wet, Western Province to the Dry regions by eradicating Malaria and providing irrigation. Little fragmentation of holdings in rural areas, provision of an efficient health and education system, developed means of transportation in a small island territory have further reduced the motivation for migration to cities²⁵.

Colombo dominates the urban scene, with a population of 0.61 million in 1989. It grew to be a dominant commercial port during the colonial times. Though the growth of urbanization and industrialization has been very low, Colombo Metropolitan Region absorbed 85 percent of total urban population and 80 percent of industries from 1948 to 1986²⁶. In 1989, this primate city was 3.2 times bigger than second-placed Dehiwala-Mount Lavinia.

Nepal & Bhutan : The Mountain and Hill Regions of Nepal had agricultural densities of 3222 and 2727 person per square

mile, respectively²⁷. Such a high pressure on precarious slopes has caused out-migration to the Tarai Region in search of agricultural land, especially after the eradication of malaria from there. Migration to India has also been significant. A little industrialization has taken place in the small towns of the Tarai.

A land locked state, Nepal had remained cut-off from the world till the middle of this century. Since then, development of trade and transport has led to growth of some towns on the Indo-Nepal border. Capital Kathmandu is the dominant city, and tourist industry is one of the main activities. Kathmandu contains about 25 percent of the urban population of Nepal. The growth of tarai towns due to transportation development has lessened the pressure of urban population in the Kathmandu valley. Tarai region, including inner tarai, contains about 60 percent of urban population while Kathmandu valley has 35.6 percent. Kathmandu city (0.30 million) is more than twice of the second placed tarai city of Biratnagar (0.14 million)²⁸.

Bhutan also is a sparsely populated, isolated, landlocked, mountainous land of dispersed cultivators and itinerant shephards. Towns came up, only recently, as centres of administrative offices. The towns along the Indo-Bhutan border, on the road-network, contain more than 50 percent urban

population of Bhutan²⁷. A few industries are also located there. These towns have Nepali, Indian and Bhutanese migrants. The urban places showed 0.15 million persons in 1981. Thimphu is the biggest town and capital of Bhutan.

Maldives : Maldives is a group of small isles to the South-West of Srilanka. Male, the capital, is the biggest town. In 1990, about 30 percent population was urban resident. Total urban population was only 0.06 million though.

The above appraisal shows that diverse physical, historic and economic conditions of South Asian countries are reflected in different patterns and processes of urbanization and metropolitanization found in them. The agriculture rich great plains of India, Pakistan and Bangladesh have had a long history of towns and cities. These urban places were centres of administration, fort-towns, and religious destinations. Many of these cities also had burgeoning handicraft and textile industries sustained by large-scale exports.

In the last two centuries, India, Bangladesh, Srilanka and Pakistan fell under the British colonial rule. The economic policies of the colonial power created a dualistic structure of the economy, characterized by the 'dependent metropolitan' growth on the coasts and the exploited hinterlands in the interior of

the countries. These ports were, mainly, trade and commerce centres though some industries also came up there. These centres were well-connected with the resource-rich interior areas of the hinterlands. The plantation crops in Srilanka; Cotton in Pakistan; Cotton, Jute, Tea, etc. in India; and jute in Bangladesh were the commodities which were routed through the respective ports of Colombo, Karachi, Bombay, Madras, Calcutta and Chittagong on their way to 'metropolitan capitals' in Britain. The finished goods also were routed through these ports for their local markets. Some locals got involved in the trade and commerce activities and also established some industries. These pioneers of commerce and industry became the elites of these countries. Since independence, this already powerful class has perpetuated and further strengthened its stronghold on the country's economy. They have higher income levels and living standards as compared to the vast number of deprived masses of the rural areas. The rural landless and poor, forced by high population pressure on arable land, have been migrating to these metropolitan cities in search of jobs in industries, administration or services sector. Consequently, these metropolises are showing fast growth rates and excessive concentration of poor among a few rich. The cities are also not able to provide ample employment to them.

In India, government's efforts at balanced regional development are said to be reflected in a more balanced distribution of population at national level, than other South Asian countries. To an extent, it is also true for Srilanka. The area of Colombo Metropolitan Region contains a large concentration of population, of whom many work on plantations and related processing & commercial jobs. In Bangladesh and Pakistan the urban primacy is very significant.

Nepal and Bhutan have remained completely cut-off from the western influences. This isolation, and their distance from the seas has hampered growth of manufacturing and trade in these countries. Further, these two don't have rich agricultural or industrial resources too. All these factors have been responsible for low urbanization levels found there.

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CHAPTER III

URBAN PROBLEMS OF SOUTH ASIA : THE QUESTION OF SUSTENANCE AND SUSTAINABILITY

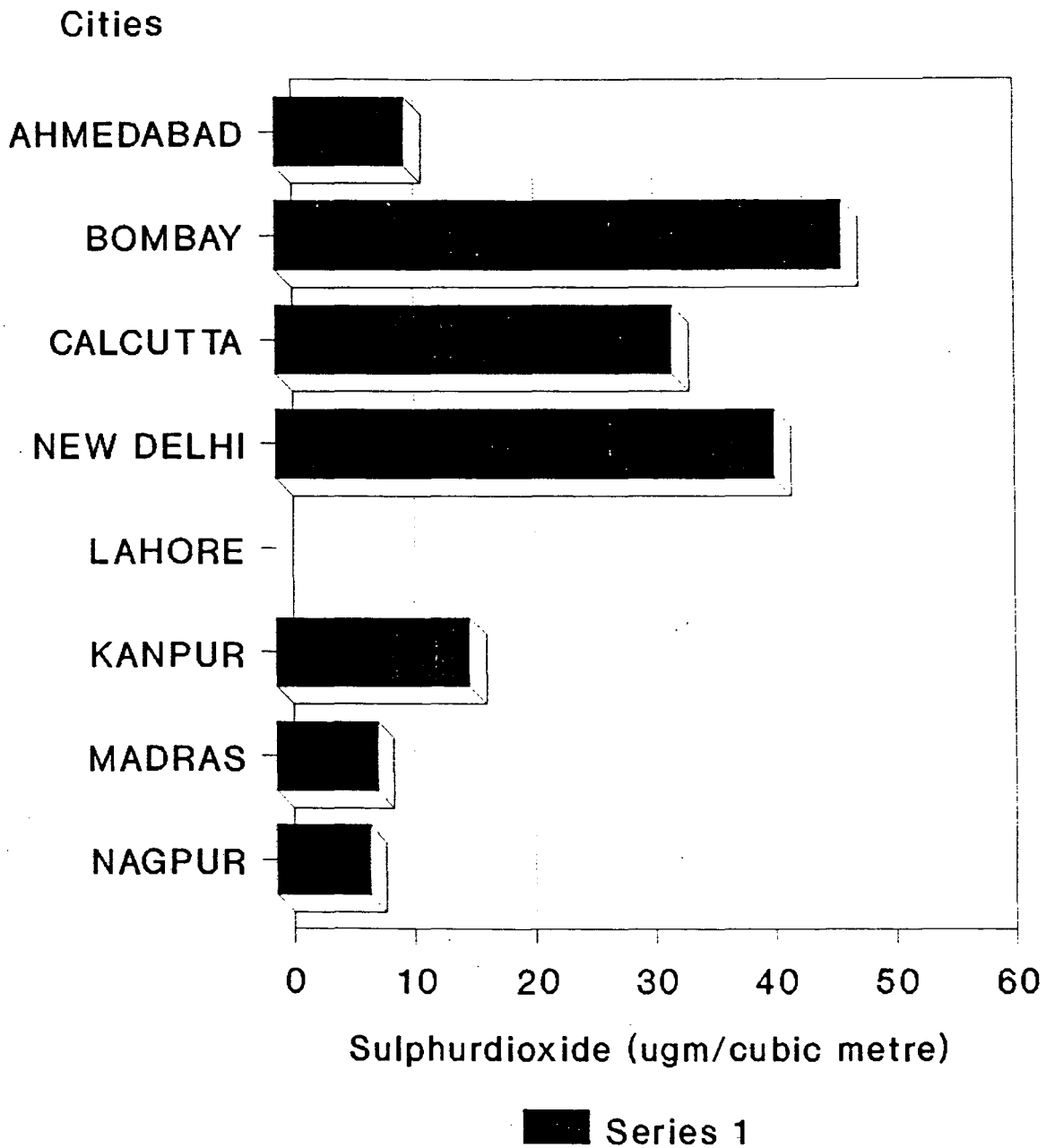
The urban problems of South Asian region are typical of the third world urban problems. One of the main causes of urban problems here is fast 'rate of urbanization' due to which the authorities are unable to create an ample number of jobs and provide adequate housing, civic and other facilities essential for good living. Though the urban proportion, here, is not high, yet the 'urban scale', the absolute number of people living in towns and cities' is so high that it makes the situation simply unmanageable. The proportion of migrants in most of the large cities of India and Pakistan has shown a declining trend during 1971-81. The deteriorating conditions of employment and environment in these cities seem to be responsible for this. The concentration of industries in and around the metropolitan cities is one of the main factors causing distorted urban development. The situation in the metropolitan third world cities has been described as "overurbanization" by some of the critics. According to this hypothesis, urban population growth in the third world is not keeping pace with the growth of the urban resources, particularly the growth of the formal sectors of the urban economy. The fast urban growth rates have caused rapid growth in the informal sectors of urban economy due to influx of rural migrants in the metropolises. Hence more and more people

are working as rickshaw pullers, footpath sellers, vendors, daily wagers, and semi-skilled and unskilled workers. The lower incomes and the poor working conditions of these workers are paralleled by poor housing and quality of life. The urban problems of South Asian metropolises that we are going to discuss are set in the framework of large concentration of urban population in metropolises and its relationship with employment and unemployment, environment, provision of services and quality of life. Besides the issue of industrialization vis-a-vis living environment will be considered.

The Environmental Problem

This problem arises due to unconscious or conscious introduction of obnoxious elements in our living environment. The harmful gases and elements released into the atmosphere by various industries and automobiles has polluted the atmosphere and caused respiratory disorders. Release of organic and inorganic wastes into the rivers, or even in the vicinity of the industries, has caused water and land pollution. Water pollution is a major cause of many diseases. Land pollution may, ultimately, result into ground-water pollution due to percolation of obnoxious effluents into the earth surface.

SOUTH ASIAN CITIES SULPHURDIOXIDE POLLUTION (1970-71)



Source :V.K.Kumra (1982: Varanasi);
p.104.

Figure 3.1

- 64(a) -

Air Pollution : Various industries, thermal power plants, automobile vehicles, burning of coal and fuels, burning of garbage, the sewage of the drains are the main pollutants of the city air. Carbondioxide, carbonmonoxide, suspended air particulates, lead and nitrogenoxides etc. are the main pollutants released by industries and vehicles. Sulphurdioxide, cadmium, asbestos, and flourides are some other industrial pollutants. Garbage and sewage also contribute to pollution through gases like methane, carbondioxide, nitrogenoxides, and poisonous hydrogen-di-sulphide.

TABLE-3.1

AIR QUALITY IN SOME SOUTH ASIAN METROPOLISES (1970-71)

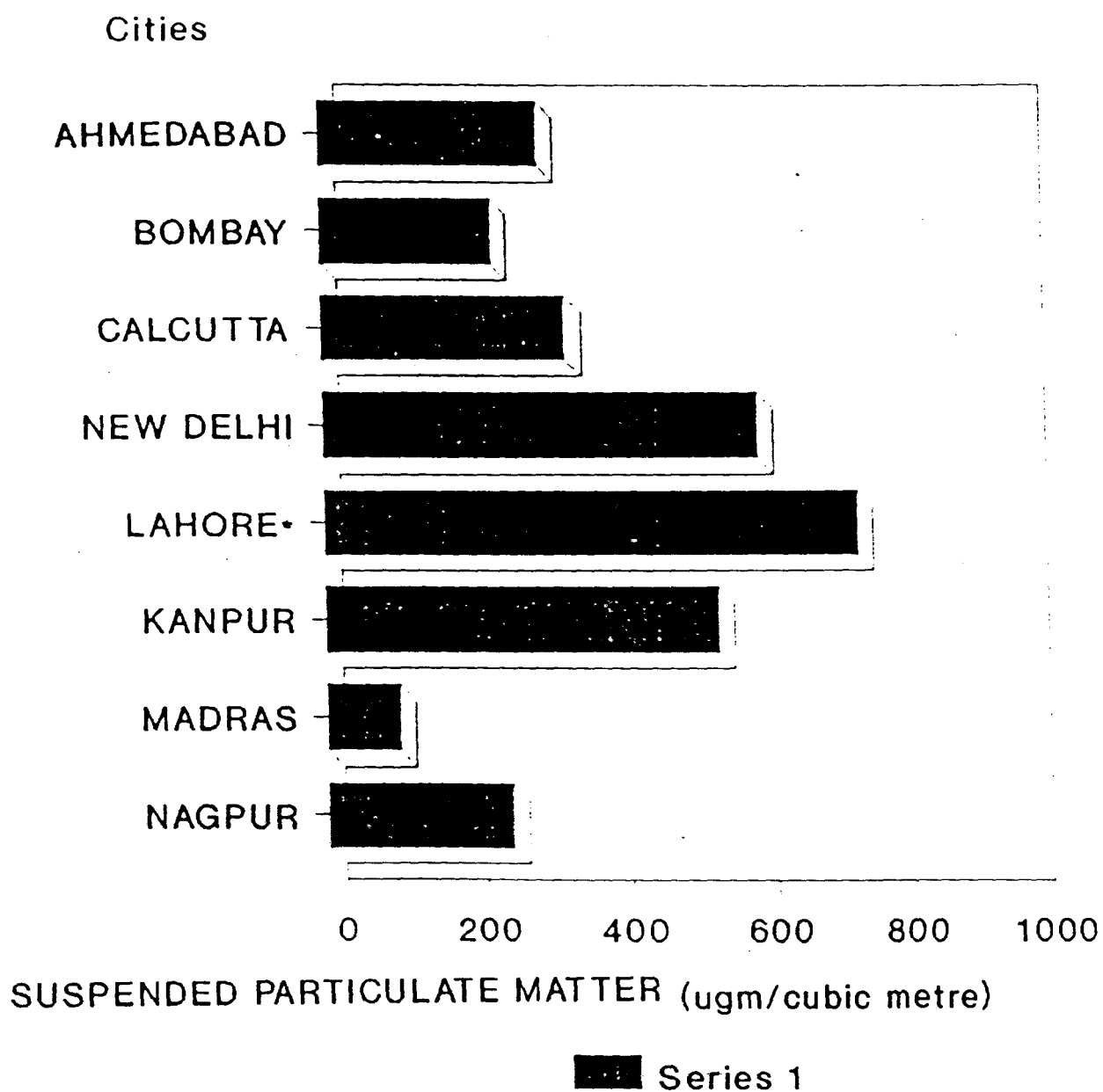
Cities	Average value of Sulphur-dioxide (μ gm/cubic metre)	Suspended Particulates (μ gm/cubic metre)
Ahmedabad	10.66	306.6
Bombay	47.11	240.8
Calcutta	32.88	340.7
New Delhi	41.43	601.1
Lahore*	-	745.0
Kanpur	15.97	543.5
Madras	8.38	100.9
Nagpur	7.71	261.6

Source : V.K.Kumra; "Kanpur City: A Study in Environmental Pollution", Tara, Varanasi, 1982; p.104.

*Average of 1979-82 in milligram/cubic metre. See: 'World Development Report, 1992', World Bank, Washington; 1992, p.199.

SOUTH ASIAN CITIES

SUSPENDED PARTICULATE MATTER (1970-71)



Source :V.K.Kumra (1982: Varanasi);
p.104. • Avg. of 1979-82 in milligram/
cubic metre. World Developpt. Report,1992

Figure 3.2

The table 3.1 and figures 3.1 and 3.2 shows average levels of sulphurdioxide and suspended particulates in the air of some cities. New-Delhi, Kanpur, Calcutta, Ahmedabad, ²Bombay and ³Lahore were the cities with high incidence of suspended air particulates.

Bombay, Calcutta, and New Delhi had high concentrations of sulphurdioxide. By 1979, Calcutta showed highest concentration of this gas (85 ugm/cubic metre) in India, and a very high level of suspended particulates (578 ugm/cubic metre).⁴

Water Pollution: It is measured in terms of physical, chemical and biological pollutants. Physical pollutants include solids (suspended and dissolved), 'total' solids and temperature etc of the water. Chemical pollution is seen through 'Dissolved Oxygen' (D.O), Biological Oxygen Demand (B.O.D)- a measure of bacteriological pollution; presence of ammonia, nitrate, nitrites, mercury, sulphates, lead, heavy metals etc. Biological pollution of water is shown by the presence of bacteria, algae, viruses and coliform M.P.N in the water. The pressure of population and the number of industries has polluted the rivers in several South Asia cities due to obnoxious effluents' discharge.

Nearly 3000 outfalls end up into Hooghly in Greater Calcutta area, in a 100 Kms. stretch⁵. About 360 million litres

of water is discharged by 14 sewage pumps of the metropolis. Average daily pollution load is : B.O.D. (106.1 tonnes), total solids (2308 tonnes), suspended solids (1058) and dissolved solids (1251 tonnes).

Ten Kms upstream of Kanpur quality of water in Ganga is satisfactory. It deteriorates sharply after city's water intake at Bhairon Ghat pumping station, upon receiving sewage from the city and effluents from textile mills and tanneries⁶. In Varanasi, too, Ganga water is unfit for drinking and bathing purposes without being purified. Downstream of Lahore, Ravi has a Dissolved Oxygen (D.O.) value at 6.3 mg/litre, and fecal coliforms at a high value of 555 per 100 ml. of sample⁷.

In Delhi, Yamuna receives so much industrial and sewage wastes that D.O. is reduced to zero level when Yamuna leaves Delhi after Okhla Industrial Area. River Vaigai, one of the most polluted, has a very high count of phosphates, chlorides, nitrates and parasitic coliforms in Madurai⁸. A similar pattern of severe water pollution is found in the industrial cities of Bombay, Ahmedabad, Surat and others.

Bronchitis, respiratory T.B., asthma, tonsillitis are some of the most common diseases of Indian cities. In fact, Delhi being the fourth most polluted city of the world due to automobile pollution⁹, has become one of the worst asthma prone

cities of the world. Water pollution has also caused parasitic infestations, typhoid, diarrhoea, cholera and other water-borne diseases in the metropolises of the sub-continent.

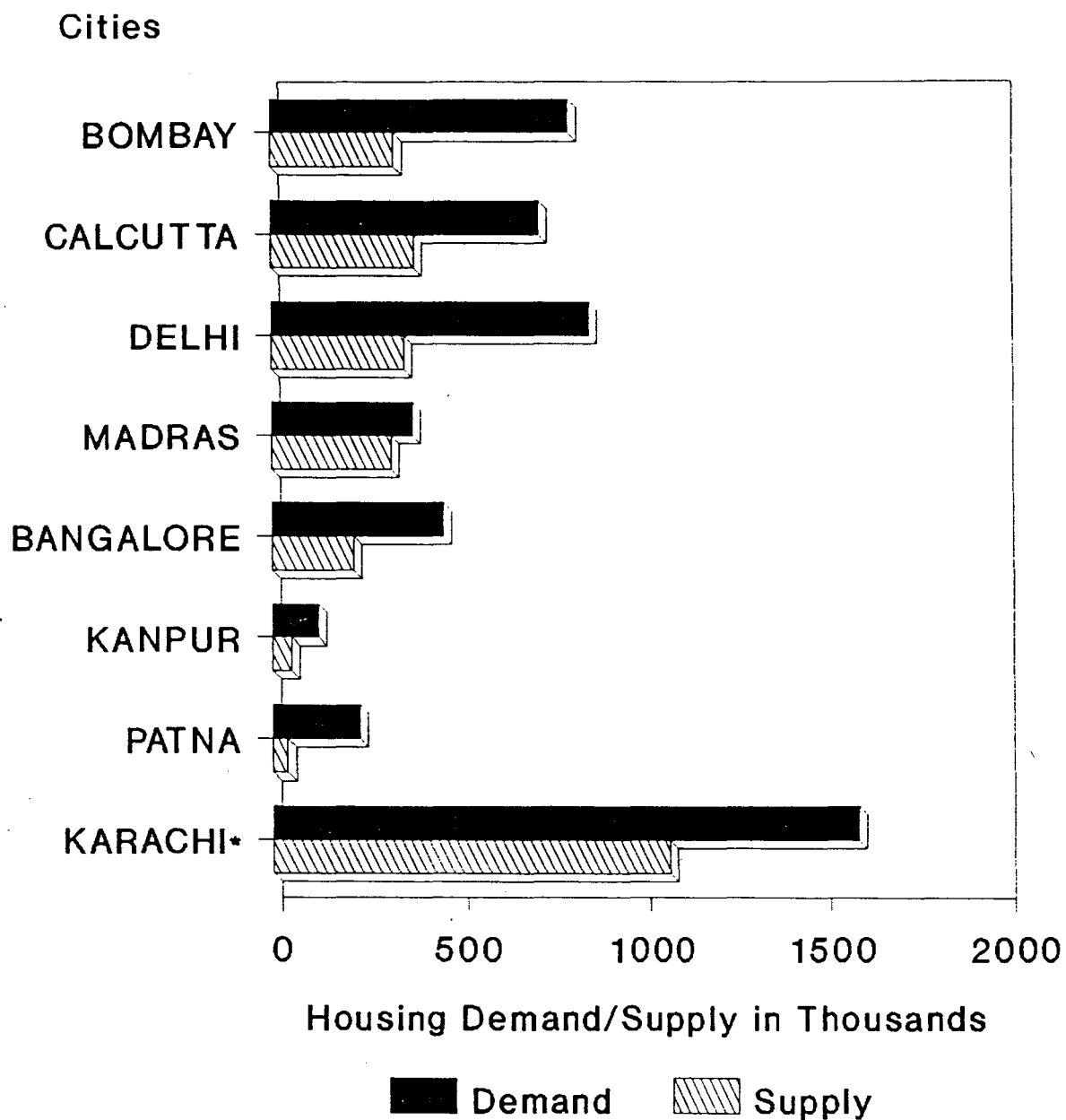
The Physical Problems

Among the various problems in the large metropolitan cities, arising due to increasing pressure of population, the most critical ones are the decreasing supply of such resources as land for housing and water resources. In cities like Calcutta, Karachi, Dhaka and Bombay, problem of urban space for development and expansion programmes has become crucial. There are hardly any open space left in these cities where new houses can be built-up for meeting the demands of growing population. Demand for water for the millions is increasingly exerting pressure on the sources of water like lakes, canals, rivers and ground-water. The paucity of land and the consequent high land-prices make it difficult for the common man to own his own house.

(i) The Housing Problem: Due to higher 'urban scale' the absolute number of people living in urban areas- the pressure on limited available land in the cities has increased, causing a serious housing problem. The poor, low and lower middle classes of these cities are worst affected. Many people live in poor quality, one-room units which are quite inadequate for a family

SOUTH ASIAN CITIES

HOUSING DEMAND AND SUPPLY (1991)



Source :i) R.G.Gupta (1993) Nagarlok:
 25(3). * 1986 Data on Houses & HHs.
 See:S.Gurel et al (Eds.),1991.

Figure 3.3

of four or five persons, as is common in the subcontinent. About 77 percent of the households living in Bombay, 67 percent in Calcutta, 65 in Pune, 59 in Kanpur, and 57 each in Ahmedabad and Delhi were living in one-room dwellings in 1971.¹⁰.

TABLE-3.2

ESTIMATED DEMAND AND SUPPLY OF HOUSING IN SOME
SOUTH ASIAN CITIES (1991)

Metropolises	Demand (10008)	Supply (10008)	Percent Shortage
Bombay	803	329	59.03
Calcutta	720	384	46.67
Delhi	857	356	58.50
Madras	377	319	15.40
Bangalore	462	215	53.50
Hyderabad	239	139	41.80
Ahmedabad	255	126	50.60
Kanpur	119	49	58.80
Pune	193	128	33.70
Nagpur	121	52	57.00
Patna	232	38	83.60
Karachi*	1600	1078	32.60

* Based on 1986 data on number of houses and that of households. See : S. Gürel et. al. (eds.); "Housing Parameters", DCET, Karachi; 1991; pp. 122-127.

Source : R.G. Gupta; "Housing Situation In Metropolitan Cities"; Nagarlok; 25(3); July-Sept, 1993; p. 64.

From the table 3.2 and figure 3.3, it seems that there is a severe shortage of housing units in South Asian metropolises, and many of the households are living in overcrowded conditions due to this shortage of dwellings. In the Lahore metropolitan city, estimates based on surveys show that only about 50 percent of the housing needs were being met annually by the year 1979¹¹.

TABLE-3.3

SLUM POPULATION AND PROPORTION IN SLUMS IN SOME
SOUTH ASIAN METROPOLISES (1981)

Metropolis	Slum Population (millions)	Percent in Slums
Bombay	3.15	34.3
Calcutta	3.02	32.9
Delhi	1.80	31.4
Madras	1.37	32.1
Bangalore	0.30	10.4
Hyderabad	0.49	19.6
Kanpur	0.61	37.5
Nagpur	0.38	31.9
Ahmedabad	0.52	20.3
Pune	0.27	16.3
Karachi ^a	3.40	40.0
Lahore ^b	0.60	15.0
Dhaka ^c	1.29	46.0

a) S. Gurel et. al. (eds.) 'Housing Parameters'; DCET, Karachi;

b) C.S. Yadav (ed.); "Slums, Urban decline and Revitalization"; Concept, New Delhi; 1987; p. 240.

c) C.L. Choguill; in Habitat International; 12(3); 1988; p.31

Source : R.G. Gupta; in Nagarloki; 25(3), July-Sept, 1993, p.66.

SOUTH ASIAN CITIES PROPORTION OF SLUM POPULATION

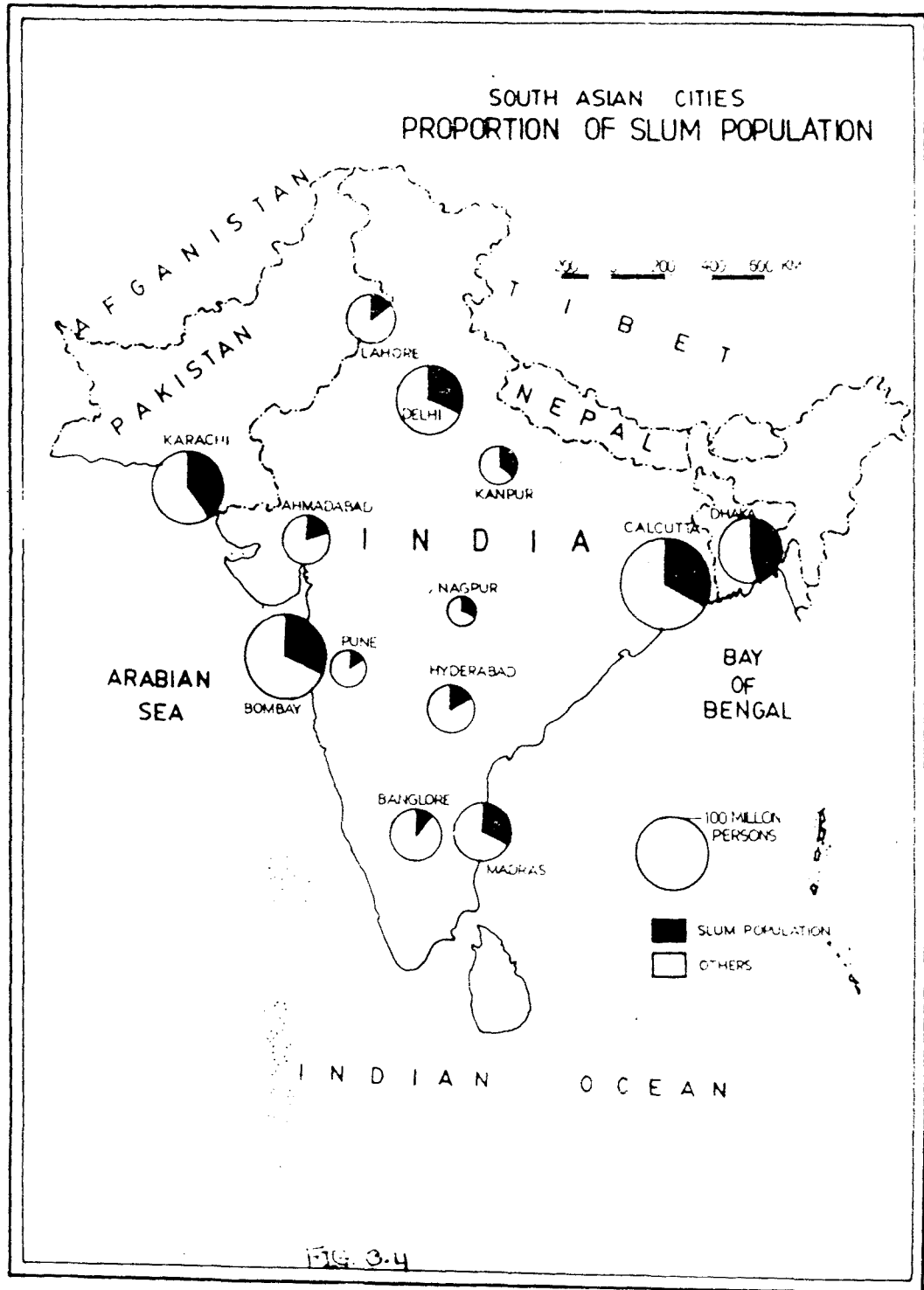


FIG. 3.4

(ii) Slums in South Asian Metropolises : Slums are the areas of substandard housing conditions in a city. 'Housing conditons' mean the actual living conditions of the residents rather than just the dwellings¹². Slums are often overcrowded and poor in sanitation and facilities. Poverty is supposed to be the foremost reason in the formation of slums. Due to this, the poor can't avail of the land which is in shortage in the large cities (Table 3.3 and figure 3.4).

Squatters are the poorest quality dwellings, which are built-up on the public lands with the help of empty tin-boxes, thatch, mud, pollythene sheets, etc. These are also the response to overpressurized land and housing markets. These are, generally, located in the vicinity of drains; along roads and railways; in the low-lying flood-prone areas; near the places of work like industries, ports or old congested city-centres. The slums include the outdated, dilapidated, sometime multi-storeyed houses in which industrial and other workers may be living in overcrowded conditions, sharing taps, toilets and other facilities. Many times, such slums are 'urban villages' which have been incorporated into growing cities, and where slum like conditions prevail. This is seen in the slums of Bombay, Ahmedabad, Kanpur, Calcutta and even in Lahore. The slums of industrial workers are found in many cities, and are called 'chawls' in Bombay and Ahmedabad, 'ahatas' in Kanpur and Lahore.

Common name for slums and squatters in Madras is 'cherry', 'bustees' in Calcutta and 'Jhuggi-Jhonparis' in Delhi. The squatters are called 'jhopad-pattis' in Bombay, 'jhumpris' in Dhaka and 'Katchi-abadis' in Karachi and Lahore.

Often the squatters and the plots are owned by some one and are sub-let to the incumbents. In Calcutta's bustees and the ahatas of Kanpur, a system called 'tenancy settlements' operates¹³. Here, the land is owned by one person, the structures are owned and built-up by another person, while the dweller becomes the tenant of the owner. In Karachi¹⁴ the public land, illegally occupied, is sold to the residents through an informally operating system in which the officials also make money.

In Nepal, Kathmandu and other towns in the valley have seen their central areas changing into sort of slums due to lack of land-use regulations, of the sewerage facilities and due to concentration of administrative services¹⁵.

The foothill towns of Bhutan, which are Nepali overgrown villages on the transport routes with some industries also¹⁶, have many areas of shanty neighbourhoods.

In Vishakapatnam, in India, the shortage of land caused by restriction of Kailasha and Yarada hills on north and

south has forced the slum population, forming 31 percent of the total, into a mere 3 percent of city's area¹⁷.

c) The Water Resources of Metropolises : All the metropolitan cities are facing the scenario of depleting water-resources for their residents. In a metropolis in India, standard consumption level of water is 50 gallons per capita per day (gpcd)¹⁸. In Calcutta, water-supply system established in 1869 is still operating. The supply of water is 213 million gallon per day, against a demand of 335 mgd, including wastage through leakage¹⁹. Unfiltered water; supplied for clearing the streets, fire-fighting, toilets and fishing etc. is being used by many people for washing, bathing and even drinking purposes. The reckless exploitation of groundwater has led to the possibility of gradual subsidence of land in this deltaic area. The South Indian cities of Madras, Hyderabad and Bangalore had per capita water availability of 17.5, 28 and 14 gallons per day²⁰. The situation becomes more acute during dry months. The cities of arid regions like Ahmedabad and Jaipur have serious water problem. Jaipur had a shortage of 6.8 million litres of water per day in 1978²¹. Delhi's water problem is getting worse with each passing summer. It seems that growing water crisis may prove effective barrier in the spatial growth of large cities in future.

The Problems of Management And Resources

The rapid urbanization has created a whole lot of problems of management of clean urban environment and provision of services. The local administration in most of the metropolitan cities do not simply have adequate financial resources to clean up the environment of solid wastes, to provide sewage facilities, water and social overheads like health and educational facilities. The problem of traffic congestion, slow movement of traffic leading to lengthening journeys, is as much a problem of management and resource availability as of concentration of people in large cities.

In cities, there are hardly any spaces left to dispose of, safely, the solid-wastes generated by the 'metabolic' activities of the cities. The municipalities find it difficult because of the enormity of the wastes, and the large distances involved in disposing off the wastes at dumping-sites outside the cities. The Calcutta M.C. area alone produces about 2000 M.T. of solid wastes per day, while the official capacity to clear off is only 1300 MT per day²². Lahore's garbage clearance is in a poor state. There are no specific dumping sites and the waste is thrown wherever some depression occur²³.

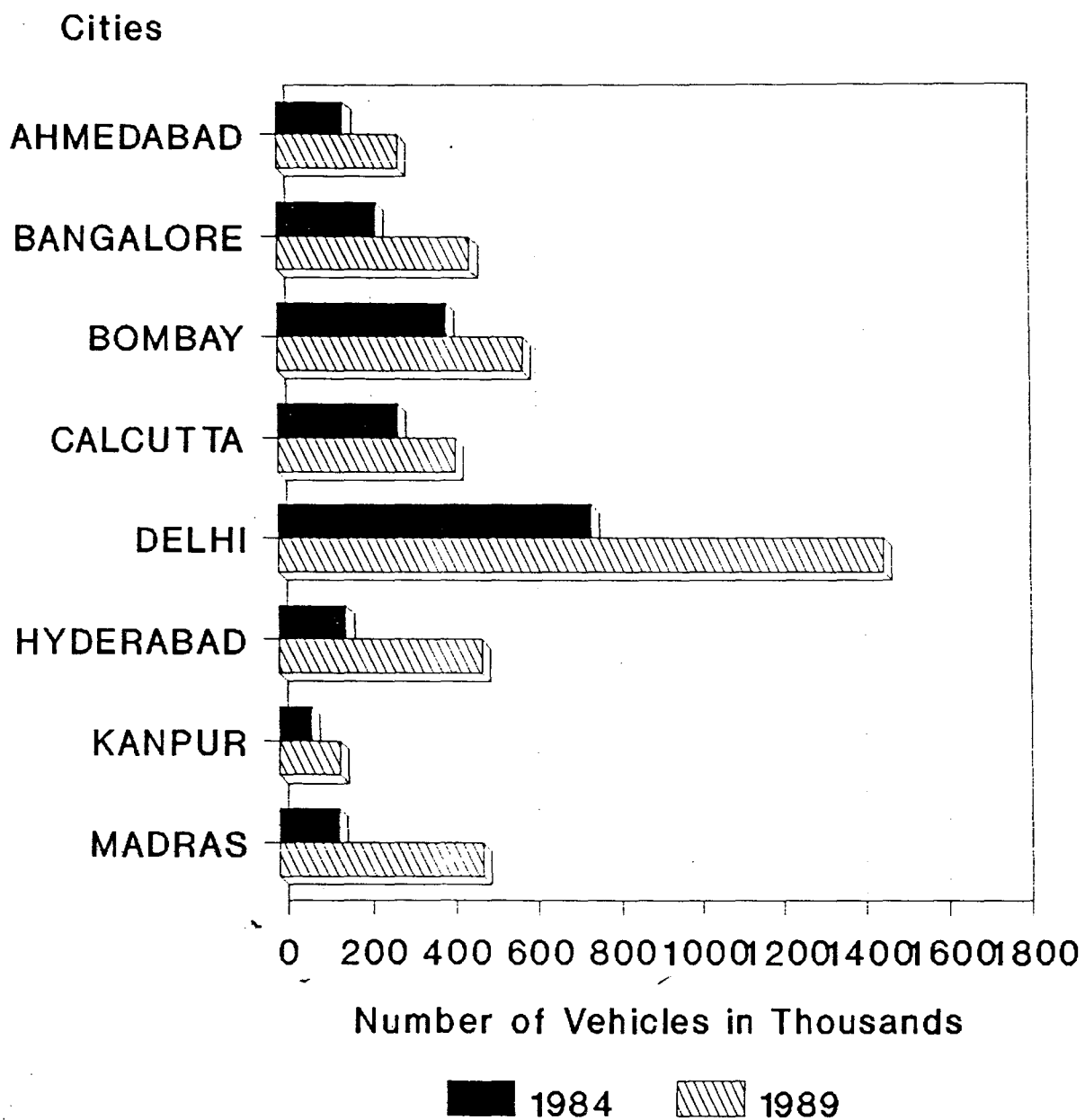
The first seven metropolitan cities of India-Bombay, Calcutta, Delhi, Madras, Bangalore, Hyderabad and Ahmedabad - produced solid wastes on an average of 2570 M.T. per day²⁴. Mounds of solid wastes, and pools and drain of sewage are common sights in South Asian cities.

Congestion on the road and in the markets is a result of increasing 'motorization' of the roads as well as faulty city planning. Many cities like Karachi, Kanpur, Faisalabad, etc. have grown so fast that there was hardly any land-use planning. Therefore, congested, overcrowded areas came into being. Roads were built without keeping into view the future needs of a growing city. Overcrowded roads with all the different types of fast and slow-moving vehicles resulted, hampering the free-flow of traffic. The government buses in Lahore hardly function more than 50 percent of their numbers, on average²⁵. Pilferage of the bus-parts, and conductor's tendency not to give tickets in order to retain public money etc are widely practised.

The rapid increase of vehicles on the roads between 1984-89 is visible from the following table 3.4 and figure 3.5. Vehicle's number increased 3.5 times in Madras, 3 times in Hyderabad and twice in Nagpur and Lucknow. Delhi, Bangalore and Kanpur almost doubled the number of their vehicles. This has produced a great pressure on the roads of the metropolitan cities.

INDIAN METROPOLISES

REGISTERED MOTOR VEHICLES (1984 & 1989)



Source :Motor Transport Statistics of India (1987-88 & 1988-89)
Ministry of Surface Transport (1990).

Figure 3.5

TABLE-3.4

GROWTH OF REGISTERED MOTOR VEHICLES IN SOME INDIAN METROPOLISES
(1984-89)

Metropolis	No. of Vehicles(1000's)		Growth Rate (%) (1984-89)
	1984	1989	
Ahmedabad	158	289	82.9
Bangalore	236	461	95.3
Bombay	404	588	45.5
Calcutta	285	424	48.7
Delhi	750	1466	95.5
Hyderabad	158	484	206.3
Jaipur	113	211	86.7
Kanpur	75	143	90.7
Lucknow	75	151	101.3
Madras	139	485	248.9
Nagpur	67	139	107.5

Source : 'Motor Transport Statistics of India'; 1987-88 & 1988-89; Transport Research Division, Ministry of Surface Transport, Govt. of India, New Delhi; 1990 (Table 1.2)

The Problem of Urban Poverty

A large proportion of the metropolitan population spends its life in penury. These people with a very low level of income lead a life of absolute deprivation, ill-health and lack of access to various civic services and facilities. This wastage of human resources is against the norms of social justice, human dignity and equity. The main issues are the questions of underemployment; improving the housing quality in the slums, squatters or even houselessness; higher incomes and better

nutrition; access to various facilities like drinking water, electricity, toilets, education, health-care and hygienic environment.

Urban Poverty In South Asia : In the past, the colonial power deliberately created economic disparities in South Asia by investing in a few urban pockets. The government's policies of 'development from above', followed since independence, favoured development of a few urban centres in the hope of achieving trickle-down effects which, however, never reached the base levels. In India, for e.g., the bottom 10 percent families accounted for 2.5 percent of G.N.P. in 1961 which came down 30 times to a mere 0.07 percent in 1991²⁶. These marginal people are, mostly, the rural poor and landless labourers. The decline in arable land to man ratio forces them out of rural areas and into the big metropolitan cities. But these unskilled people can't compete in the urban job markets and are forced to engage in petty business, daily wage activities and other unskilled jobs. Poverty is a generalized phenomenon in the masses of Nepal²⁷ and Bhutan.

The urban poverty in South Asia is distinct from the experience of western countries due to its mass prevalence, its relationship with technology which replaces manual labour and forces the workforce to look for employment outside the formal

industrial sector²⁶. In Bangladesh, a minimum of 41 percent urban population falls below the poverty threshold²⁷; while in Nepal this amounts to 55 percent²⁸. Those below the poverty-line are estimated to form 60 percent of the population of Calcutta, 50 percent in Madras, and 45 percent each in Bombay and Karachi²⁹. An estimated 30-40 percent households were below this line in Lahore³⁰.

Unemployment, Underemployment And The Income Levels :

The concentration of large, unskilled labour force in the urban areas causes massive underemployment in the low-producing sectors of the economy. Unemployment is lesser in these people because it is a luxury which they can't afford³¹. Unemployment, paradoxically, is high in the educated children of middle and upper-middle classes of the urban areas because their parents can support them during the time they are looking for better jobs. The poor migrants from the rural areas are the foremost first victims of underemployment, which is characterized by fewer working hours and low incomes.

Unemployment figures in India are not very high. The unemployment by 'usual status' among males was the highest in Madras (5.4%), followed by Bombay and Calcutta at 4.8 and 4.1 percent respectively³⁴. Unemployment by 'current weekly status'

and 'current daily status' was 4.1 percent and 5.2 percent, respectively, among the ten metropolitan cities on average. Unemployment among females was very low. This may be due to their lower education and their work as housewives.

Some estimates of the extent of under-employment can be made from the fact that, on average, 9.1 percent household were dependent on casual labour. 'Self-employed' household were 28.4 percent for the Indian cities. Among these, there must have been quite a few in the petty manufacturing and service sectors. Thus, the proportion of underemployed seems quite high in India.

Indirect calculations show that³⁵ in 1981, 15.1 percent of the urban labour force was unemployed in Bangladesh. On time criterion, 22.6 percent of urban labour force was underemployed, working 40 hours or less per week. On calorie-intake norms, 76 percent of urban labour force was found underemployed, of which 26 percent were severely underemployed.

Unemployment is a big problem in Nepal, 35 percent of the labour force was absolutely unemployed there. Industrialization in Nepal, based on imported raw-material and labour, has failed to generate employment for the locals³⁶.

In Srilanka, 23 percent of persons were unemployed in urban areas in 1971. A survey in 1968 had found 2.4 percent persons as 'severely' underemployed and 19.1 percent as 'less severely' underemployed³⁷.

Income levels can be indirectly estimated with the help of expenditure done by a particular people. In Indian metropolises, between 1987-88, 17.6 percent metropolitan Indians showed a monthly per capita expenditure upto Rs. 160, or only Rs. 5.33 or less, per day. This meagre figure was spent to care for one's various needs. Another 36.5 percent people showed per capita monthly expenditure between Rs. 160-310³⁸. In Bangladesh, 80 percent urban household had incomes of upto TK 1200 per month in 1978-79³⁹. About 34.3 percent of Karachi's households were living at or below poverty line income of Rs. 1600.00⁴⁰. Another 23.5 percent had incomes between Rs. 1601-2600, and fell in the low income group.

The manifestation of urban poverty is visible in the conditions prevailing in the slums. According to 1976-77 slum survey, the proportion of unemployment in slums was very low - 3.6 percent in Madras, and nearing 2 percent in Bangalore, Bombay and Ahmedabad⁴¹.

Most of the slum household tend to fall between the income levels of Rs. 201-500. When we consider that average size of slum household was nearly 5 persons, the conditions begin to seem worse.

TABLE-3.5

SLUM HOUSEHOLDS BY INCOME-GROUP IN SOME INDIAN CITIES (1976-77)

Monthly Household Income Groups(Rs.)	Proportion Households				
	Ahmedabad	Bangalore	Delhi	Madras	Bombay
0-125	2.8	8.5	2.4	11.6	2.3
126-150	5.7	9.8	3.5	11.5	1.9
151-200	7.2	20.4	8.5	22.3	4.8
201-300	28.7	30.8	24.2	31.5	18.3
301-500	41.9	22.9	38.4	16.4	46.3
501 & above	13.6	7.5	23.0	6.2	26.4

Source : NSS (31st Round : 1976-77); Survey on Socio-economic conditions of Households in Slums in Metropolitan cities; Reports 302 / 1-7; 1983.

In Dhaka city slums, 15.4 percent households had monthly income upto TK 500, 17.5 percent between TK 500-700, and another one-third households had monthly income ranging from TK-701-1000*#. Grim conditions can be judged from the fact that, in 1985, an I.L.O. study had taken TK 1000 per capita monthly income as the poverty threshold income.

Quality of Life:

Quality of life reflects a state of well-being, arising out of socio-economic condition and a sense of personal well-being. For an appraisal of this aspect, we can consider the living conditions of a few South Asian Cities. Between one-fourth and one-third of households in Lahore and Indian cities do not have electricity in their houses. Availability of drinking water within the house, and of the toilets also shows a poor

TABLE-3.6

 AVAILABILITY OF FACILITIES IN SOME SOUTH ASIAN METROPOLISES (1981)

Metropolis	Households Uncovered (%)		
	Electricity	Toilets	Tap Water Within House
Bombay	22.5	26.6	41.7
Calcutta	37.1	14.1	66.9
Bangalore	27.7	26.1	56.5
Kanpur	37.5	36.3	51.7
Madras	34.6	30.3	68.6
Nagpur	30.2	40.1	56.3
Karachi*	31.95	21.45	52.0
Lahore**	27.0	12.0	-

Source : Census of India, 1981. Series-1, India. Households Table, Part VIII - A & B (ii).

* R.M. Ishaque in R.C. Sharma (ed.); 'South Asian Urban Experience'; Criterion, New Delhi; 1988; pp. 288-9. Data Pertains to housing units.

** Figures relate to houses, See M.A. Qadeer; Reference No. 11; p. 93

picture. It should be remembered that households uncovered by toilets also include those which don't have access even to public toilet facilities (See Table 3.6).

In Nepal, the situation of water and sanitation in 'inner' tarai and 'tarai' towns is not satisfactory. Sewerage conditions only match it. The location of Hill Towns influences the availability of water and electricity. Water supply is particularly precarious on the ridges. Towns in the Kathmandu Valley have a concentration of urban facilities, though disruptions in supply are frequent and the amount of supplies inadequate ⁴³. Malnourishment, and even infant mortality rates, are apprehended to be high in Nepal because most of the meagre incomes in Nepal are spent on sustaining a regular supply of cereals, not to speak of a nutritious food.

In Karachi three-fifths of the houses were of Kutcha and semi-pucca type ⁴⁴. Similarly, between 50-60 percent of population was living in such houses in congested conditions in Lahore city ⁴⁵.

In 1970, 84 percent urban households did not have tap water in their houses in Bangladesh. Profusion of canals and rivers, illiteracy and insanitation etc. make Bangladesh one of the most diarrhoea affected country. Cholera, filariasis,

parasites, and high rates of T.B. due to congestion are very common. Three-fourths of urban people lacked required calories. This was also reflected in high maternal mortality rates of 25 per thousand ⁴⁶.

Conditions are worse in the slum communities. Households with access to toilet, drinking water and a pucca house are very less. In Dhaka, Kutcha 'Jhupri' and semi-jhupri form 19.3 and 50.0 percent of the total squatters, respectively⁴⁷. Kutcha houses formed 8.4 percent of the houses, while semi-pucca formed about 50 percent of the houses. Poor sanitation, drianage, electricity and lack of toilets and drinking water points is widespread inlahore slums. Slums of

TABLE-3.7

LIVING CONDITIONS IN INDIAN SLUMS (1976-77)

Metropolis	Percent Households with		
	Toilets	Water Supply	Pucca House
Ahmedabad	0.7	16.5	20.7
Bangalore	5.6	2.9	8.0
Madras	7.8	3.3	9.0
Delhi	1.9	16.3	75.0
Bombay	0.03	0.3	7.9

Source : NSS 31st Round (1976-77); 'Survey on Socio-economic conditions of Households in slums in metropolitan cities'; Report 302/1-7; 1983.

Calcutta, Bombay, Kanpur, Ahmedabad, etc. are hotbeds of insanitation, high morbidity and mortality.

Insanitary conditions, ignorance, poverty, malnourishment and ignoring the patient till the condition gets serious etc. combine to give a high rate of infant and child mortality in the slums. In a Bombay study, infant mortality was as high as 130 per thousand⁴⁶. Children under five year age accounted for 60 percent of total deaths. Diarrhoea (16%), jaundice (5%), T.B. and Chronic Cough (16%) were other main causes of deaths. All these are preventable causes and appear to be the effects of unhygienic living environment and poverty. In Delhi slums too, the use of contaminated water and poor sanitation are the main causes of illnesses⁴⁷. Deaths due to cholera and gastroenteritis has become an annual feature in these areas.

The slums tend to congregate near the places of work, like industries and market areas. This is because the poor people can't afford daily transportation costs and prefer to walk to and fro their places of work. In Dhaka, for instance, 81 percent of the heads of households surveyed walked to their places of work⁵⁰.

The Informal Sector :

The concept of urban informal sector defines those among the labour force of the urban areas who have not been incorporated into the formally organized industrial sector. This is supposed to happen due to low level of industrialization achieved in the developing countries. The overwhelming number of job-hunters in metropolitan cities get settled in the unorganized or informal sector, working as small businessmen, vendors and daily wagers. The concept has no fixed aspects. Small units, employing say upto 10 or 25 workers, which are not registered with the government, are also counted in this sector.

Informal sector is integrally related to the general economy, though it is a marginalised sector. Bose's study in Calcutta showed that this sector provides cheap goods for the urban and rural poor³¹. This is due to the overwhelming supply of cheap labour in the labour-market, low remunerations and use of country produced raw-material. Moreover, the relationship of informal sector with formal sector was found to be unequal and in favour of the latter. This is seen from the fact that products of informal sector form inputs for formal sector. Informal sector is also, indirectly, dependent on the formal sector. This is evident from the finding of Bose and others that informal sector survives on the demand of the people whose earnings are dependent on the formal economic sector.

In a detailed study on informal sector in Dhaka, it was found that almost 65 percent of the total employment was engaged in it³². Of the informally employed, 36 percent worked as hired labour, 19 percent as family labour, 32.5 percent were self-employed and rest were employees. The migrants formed 70 percent of those in this sector.

TABLE-3.8

INFORMAL SECTOR ENTERPRISES BY ACTIVITY IN DHAKA*

Activity Group	Percent of Enterprises
Street-selling & petty retailing	37.2
Repair & Personal Services	15.3
Crafts & other manufacturing	24.7
Construction work	11.4
Rickshawa & other informal transports	11.4

Source :* R. Islam & M. Muqtada; "Bangladesh : Selected Issues in Employment and Development"; ILO/ARTEP; New Delhi; 1986; pp. 214-215.

Those in informal sector showed higher incomes than those in rural areas, but lower than those in formal sector. It showed quite lower capital-labour and capital-output ratios than in formal sector. Thus, this sector is important from the viewpoint of providing employment and the efficient use of the capital. This sector was also seen to be important from the

viewpoint of economic development. This conclusion was reached from the fact that informal sector achieved half the labour productivity of formal sector, with a capital intensity of less than one-eighth.

TABLE-3.9

 ESTIMATES OF SIZE OF INFORMAL SECTOR IN INDIAN METROPOLISES

Author	Study Area & Year	Estimated Size (% of Employed)	
Joshi & Joshi (1976)	Greater Bombay 1971	49.5	
	1961	47.7	
Deshpande (1979)	Greater Bombay 1961	(a)	(b)
	1971	51.3	42.0
Bose (1978)	Calcutta City 1971	28.3	
	Ahmedabad 1971	46.5	
Majumdar (1980)	Delhi 1961	61.4	
	1971	53.8	
O.R.G.(1978)	Madras Metropolitan Area 1971	50-70	

(a) Without Corrections (b) With Corrections.

Source : M. Mehta; 'Urban Informal Sector : Concepts, Indian Evidence and Policy Implications'; Economic and Political Weekly; 20(8); Feb, 23, 1985; p. 327.

In India, recognition of informal sector is difficult because even the small business or manufacturing units have to follow prescribed working and employment conditions, and to get registered with administration³³. There have been some attempts at estimation on informal sector in Indian metropolises. The results vary with the criterion used but it gives an indication of the extent of this sector (Table 3.9).

In his study of Madras slum³⁴, Paul Wiebe found that most of the people (45.7 percent) were casual labourers, followed by skilled and semi-skilled workers, small household industry, sales people, industrial employees, etc. Tapan Majumdar³⁵, in his study of Delhi slums and squatters found that various jobs in which these people were engaged were skilled and unskilled construction workers; low-paid unskilled jobs as porters, loaders, rickshaw-pullers, horse and bullock-cart drivers, domestic servants, hawkers; government and semi-government employees; peddlers, wayside restaurant owners, vegetable sellers and petty retailers; traditional workers as scavengers, potters, carpenters, etc.; those in industries and repair workshops; and, lastly small proportion of semi-professionals like compounders, school teachers, clerks, etc.

In Lahore, unorganized or informal sector formed 53 percent of the total employed labour force. It comprised 80.6

percent among the construction workers, 97.2 percent in the trade and 53.7 percent in 'finance, transport and community' services³⁰. Also included were the women who picked glasses from wastes or coal from ashes at stations and boys who gathered spilled-up oil.

The Socio-Cultural Problems.

The metropolitan cities in South Asia contain heterogenous elements belonging to different religions, linguistic groups, classes and castes. Different people come for different purposes like education, employment, transfers etc. Many of them are in search of employment. Unemployment among the educated urban residents and underemployment among the unskilled migrants is very high. There are big differences in the living standards and living styles of the rich and the poor. Many among the lower strata do not have adequate housing, food and other facilities. These conditions given rise to frustration and many take to illegal activities like thefts, kidnapping and abductions, smuggling of drugs etc. But there are others who engage in these activities 'by choice', in order to make easy money. In conditions of scarcity of resources and opportunities, everyone who is in position, tries to make hay. The canker of corruption, hoarding and black marketing is widespread in the metropolitan and other urban areas.

TABLE-3.10

CRIME IN INDIAN METROPOLISES (1991)

Metropolises	Incidences of Crime			
	Kidnapping/Abductions	Rape	Murder	Theft
Delhi	767	195	417	12587
Bombay	332	114	473	16201
Calcutta	110	17	92	6889
Madras	24	26	81	6135
Kanpur	194	23	-	-

Source : (i) Delhi : A Tale of Two Cities; VHAJ, New Delhi, 1993.
(ii) K.N. Gupta; in Kurukshetra; December, 1993, pp.13-19

Commercialization and consumerism; exposure to crime and violence in the media; alienation and diminishing social contacts;³⁷ and widespread poverty is reflected in such social evils as murders, rapes, drug addiction and prostitution (Table 3.10). Karachi, Delhi, Bombay and other metropolises are epitomes of such problems.

Politics In The Metropolitan Cities.

The metropolitan cities provide strong base for the political parties because a diverse cross-section of society is represented here. In South Asia these include the poor; the industrial workers; adherents of various religions, languages; castes and ethnicities; the middle and the upper classes; and

those in various occupations. Therefore, various political interests have natural affinity to be centred here. Moreover, metropolitan cities often provide access to the seats of governments.

Political leaders often align with the deprived people in grabbing land by 'planned' overnight squatting on public lands²⁰. This is often done to attain popularity in order to get votes in future elections. Various 'land mafia' operate in cities like Karachi, Delhi and elsewhere in order to grab land.

Getting an employment is a big problem in metropolitan cities. Many migrants belonging to the middle and upper-classes are well-educated, and they occupy the better jobs on offer in these cities. This often becomes the reason of grouse for the so-called 'indigenous' people. This indigenous-migrant rift is, sometimes, encashed by the political parties to their advantage. Shiv Sena, for e.g., capitulated on this phenomenon to win the Bombay municipal elections.

Clashes between various religious groups are common in South Asian cities. These are often instigated to get political leverage by the interested groups. Land, smuggling and other criminal mafia are often found working in these cities. This is due to greater chances of anonymity provided by large populations

of the cities, and the presence of 'contacts' in political, administrative and police circles. Politician-police-criminal nexus ³⁷ in various illegal activities and crimes is thought to be common in large trade and finance centres as Bombay, Karachi and other metropolises like Delhi.

Urbanization and westernization are homogenizing processes. These produce similarity in life-styles, consumption, working patterns, home and entertainment. In all the metropolitan cities of South Asia the urbanization and industrialization are producing similar kinds of problems. These problems relate to environmental pollution, shortage of land and housing, underemployment and unemployment, congestion, blight, poverty, breaking values, crime and violence. However, the difference may be seen in the extent to which levels of pollution, extent of underemployment and unemployment, incidence of slums, and poverty occur in different metropolises. In highly industrialized cities, pollution due to inorganic effluents like chlorides, sulphates, nitrates; and elements like cadmium and asbestos may be high. Kanpur, Madurai and Ahmedabad cities show high industrial pollution. Pollution in Delhi is due to high concentration of motor vehicles. In metropolises with low industrialization pollution may be due to organic wastes. In the slum like areas of central Kathmandu and in Jaipur and Varanasi pollution is likely to be of this kind.

Poverty is, generally, massively present in the resource-poor countries of Nepal and Bhutan. Bhutan is the least urbanized country of the world. Densely populated Bangladesh, Nepal and Bhutan are amongst the five least developed countries of the world. Though India and Pakistan have developed greatly in agriculture and even in industries; the gap between rural-urban, between different regions and the rich and poor has continued or aggravated. This is reflected in the migration of poor to the metropolitan cities from different parts of the country. This has increased concentration of slums and poor in these cities.

Population concentration in South Asian metropolitan cities is causing a heavy squeeze on land and housing markets; local governments find themselves hard-pressed to maintain the sewage and solid-waste disposal, and also growing congestion and traffic-jams on the roads. Most of the untrained, uneducated rural migrants to these cities cannot compete with the urban people and end up in the 'lower-circuit' of the metropolitan job-market and economy. As they cannot find jobs in the formal sector, they 'carve out' their own jobs in the informal sector. This sector is characterized, generally, by underemployment, low incomes, poor quality of life and housing, and high morbidity. Thus, industrialization though necessary, is not a sufficient reason to explain urban explosion in the subcontinent °°.

In the circumstances prevailing in the metropolises of South Asia, the negative net external effects, like-congestion, pollution, blight and noise-due to overgrown sizes seem to have caught up with the positive external effects, like agglomeration economies, which occur as the towns grow into cities ⁴¹. In this sense, we may consider these cities as "overurbanized". The net benefits and losses due to exploding metropolises need to be considered minutely. Net benefits could include turnover of the city; jobs generated and other benefits accrued to the surrounding region. While the net losses could be estimated by ascertaining the harmful effects of pollution on the quality of air and water; calculating the management costs needed in keeping a clean city environment; cost involved in provision of roads, transport and other facilities; and also the costs in terms of social inequity and deprivation. The future urban policies of the governments will have to consider all these aspects. This is necessary for the sustainability of urban environment, and of good and equitable living conditions for present and future generations.

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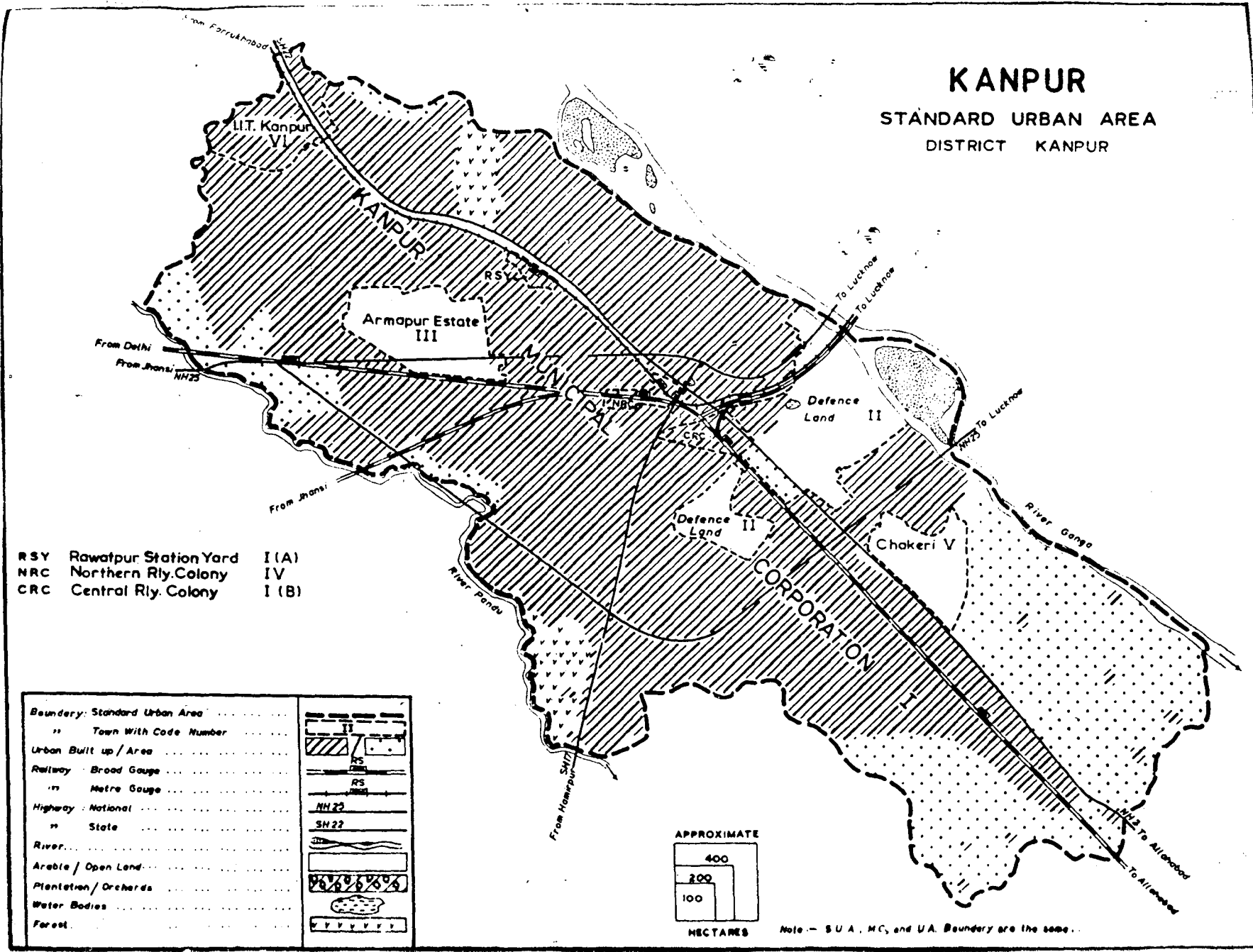
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KANPUR

STANDARD URBAN AREA

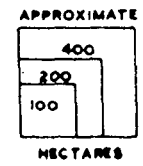
DISTRICT KANPUR

Figure 4.1
- 100 (a) -



RSY Rawatpur Station Yard I (A)
 NRC Northern Rly. Colony IV
 CRC Central Rly. Colony I (B)

Boundary: Standard Urban Area	
" Town With Code Number	
Urban Built up / Area	
Railway Broad Gauge	
" Metre Gauge	
Highway National	
" State	
River	
Arable / Open Land	
Plantation / Orchards	
Water Bodies	
Forest	



Note. - S.U.A., M.C., and U.A. Boundary are the same.

Source: Census of India, 1981.

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CHAPTER IV

PROCESSES AND FACTORS OF GROWTH AND DEVELOPMENT OF KANPUR CITY.

I. PHYSICAL SETTING AND SPATIAL STRUCTURE

Kanpur is a big industrial metropolis situated midway in the great Indo-Gangetic Plains. Lying in the lower Ganga-Yamuna Doab, Kanpur shows a linear growth with River Ganga flowing to its north and River Pandu to its south. Located on the map by 26 degree 28'N latitude and 80 degree 21'E longitude, it is a nodal-point for the rail and road networks. It is the ninth largest metropolitan city of India and the largest one of Uttar Pradesh, having a population of more than two million in 1991.

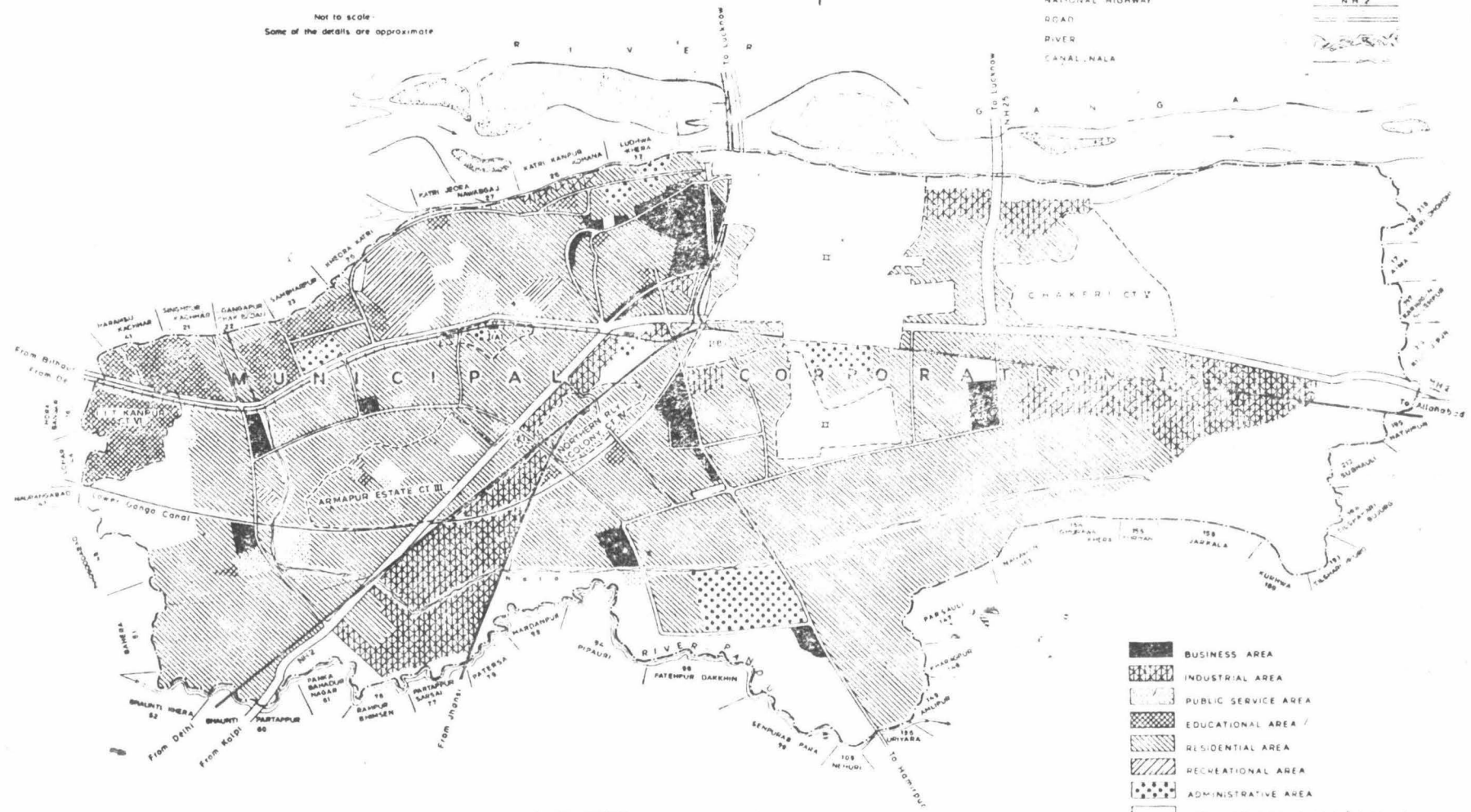
That Kanpur is an industrial metropolis becomes clear from the proportion of industries and warehouses to the total built-up area of the metropolis. This figure is 8.3 percent'. There are six important industrial pockets in Kanpur metropolis. The area to the south-west of the city, between the railway lines coming from Jhansi and from Delhi, is an important industrial land. The second industrial centre is to the east of the cantonment, on the flanks of the National Highway going to Lucknow. The third occupies the eastern flanks of the metropolis, along the G.T.Road going towards Allahabad. A smaller industrial area occupies the Ganga bank to the north of

KANPUR URBAN AGGLOMERATION URBAN LAND USE

Not to scale
Some of the details are approximate



URBAN AGGLOMERATION BOUNDARY	---
CONSTITUENT TOWN BOUNDARY	---
RAILWAY LINE WITH STATION	RS
BROAD GAUGE	RS
METRE GAUGE	RS
NATIONAL HIGHWAY	N.H. 2
ROAD	---
RIVER	---
CANAL/NALA	---



Note: Villages adjoining the urban boundary are shown by location code no and name

11A - RAWATPUR STATION YARD O.G.
11B - CENTRAL RAILWAY COLONY O.G.

O.G. = Out Growth
C.T. = Census Town

Rough numerals indicate name of town.

Figure 4.2
- 101(a) -

the metropolis. This is the area where the first industries came up. Yet another important industrial concentration is along the Kalpi Road. The last, and important, industrial area lies at Jajmau to the east of the cantonment.

Cotton textile mills are predominantly situated on the river bank location. Chemical and plastic industries, metal and engineering works are situated in Kalpi Road area. Leather works are located in Jajmau to the east of the cantonment, on the Ganga river and near Kalpi Road-G.T.Road area. Industrial area on the Allahabad road in the east is a newly developing industrial area. Defence industries are located in Armapur Estate in the west, and C.O.D., situated to the south of the cantonment.

TABLE-4.1

LAND USES IN KANPUR CITY, 1981

Land Uses	Approximate Proportions of different land-uses to Standard Urban Area*
Business Area	2.47
Industrial Area	7.62
Public Service Area	1.16
Educational Area	3.17
Residential Area	38.10
Recreation Area	0.99
Administrative Area	1.75
Others, Including Defence and Transport	44.78

* Calculated from Land use Map of Kanpur U.A. (1981)

The oldest and the largest business area of Kanpur lies to the west of cantonment. Another big area is near Central Railway colony. Educational areas are scattered in north, central and western parts. I.I.T.Kanpur in the west also occupies a large area. The administrative centres have been decentralised towards the south, east and west from the old city in the north. Residential colonies, bustees and slums occupy various parts of Kanpur. The city has continued to grow outwards with the in-migration and population growth of the city (Table 4.1 and Figure 4.2)

II. BRIEF HISTORY AND GROWTH OF KANPUR CITY : THE FACTORS OF GRWOTH

Kanpur region formed part of the South Panchala Kingdom of Mahabharata and Puranas in the ancient times, as well as of the Panchala which is mentioned as one of the Sixteen Great States ('Sodasha Mahajanapadas') in the Buddhist text Anguttara Nikaya. Excavations around Kanpur relate it with the Guptas' and Harsha's periods². But until two centuries ago, when its urban history begins, Kanpur had been a small village of the same name³.

The initial impetus to urban growth came under the administration of Subedar Almas Ali Khan, working for the Nawab of Oudh, from 1773 to 1801. Around this time, East India Company

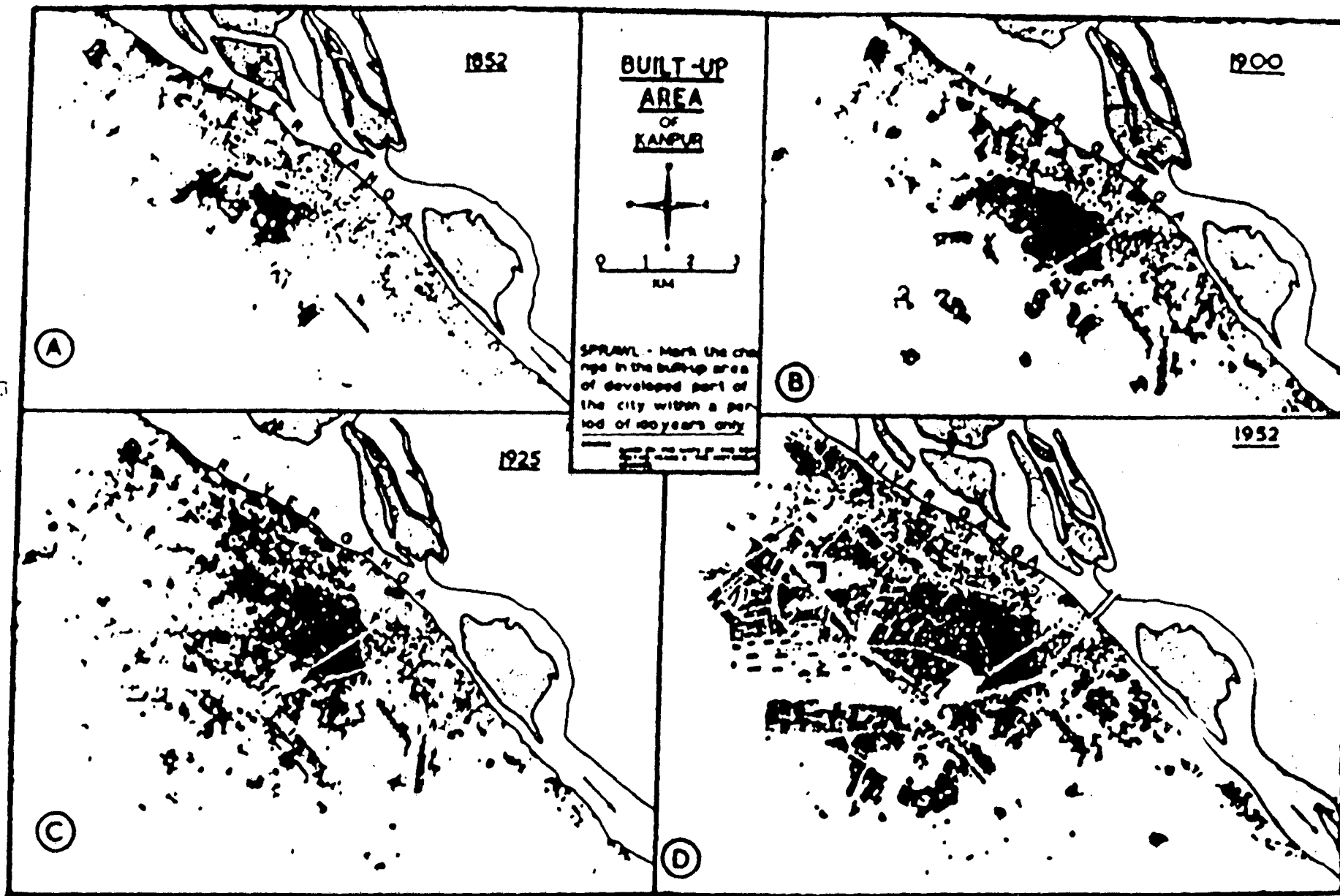


Figure 4.3
- 103 (a) -

Source: Harihar Singh (1972; Varanasi).

established a trading station at this place. The Nawab stationed his army at Kanpur to safeguard the commercial interests of the British under a mutual treaty.

The moving in of the army encouraged trade and commercial activities in the growing township. The Nawab of Oudh ceded the Kanpur region to the British in 1801, and it was, then, made a full-fledged district. The British were interested in Kanpur as the steep and high right-bank of Ganga provided a defensive location, and also due to the strategic location of Kanpur at the contact point of the territories of Oudh, the Mughals and those controlled by the British *. Kanpur began to show fast growth from this time (Figure 4.3).

(a) Evolution Phases: Four district periods of growth and development^s of Kanpur have been identified as:

- (i) The First Phase (1800-1857))
- (ii) The Second Phase (1858-1900)
- (iii)The Third Phase (1901-1947)
- (iv) The Present Phase (Since Independence)

A discussion of these phases alongwith factors of growth follows:

- (i) The First Phase: East India Company put up some indigo and cotton-ginning factories between 1812-19. Ganga

being used as the principal mean of transport in those days. Meanwhile, a permanent shift of district headquarters in 1819 led to large-scale construction of buildings in the form of civil lines, district courts, residences, jail and the revenue offices. This area was situated to the west of the cantonment, in Nawabganj. Cantonment stretched from old Kanpur in the west to Jajmau in east, along the river front. The city area, enclosed on the east and north by the cantonment, and by Civil Lines on the north-west, could grow in south and south-west direction only. The Overcrowded, poorly drained city was, at least in some aspects, caused by constraints on its spatial growth.

Kanpur was linked with Allahabad by G.T.Road in 1832, and with Kalpi in 1846, even as the completion of Lower Ganga Canal contributed to further the growth of transport and communication. This period saw the traditional cottage industries, distributed widely in the city and nearby villages, being transformed into small scale industries^e

(ii)The Second Phase:

The second phase of urban and industrial development of Kanpur began after the 1857 uprising. The new British

administration under the Crown, started on a rebuilding programme of the city, heavily damaged during the Movement. The Cantonment area was cut back towards the east, beyond the Lower Ganga Canal. The city was, now, no longer surrounded by the cantonment on three sides. The former Cantonment area west of the canal on the Ganga, lying to the north of the City, was where the new civil lines came up. The cantonment and the civil lines continue to occupy the same areas even today. New colonies were built up at the old location of the civil area in the west, and also to the south of the new location of the civil lines.

The government made a decision to develop Kanpur as the industrial centre for the north India. Various factors like provision of employment to the people of the surrounding districts active in the 1857 Uprising, concentration of Chamar population skilled in leather-work in the region, use of agricultural raw material from the northern plains etc, were taken into consideration while making this decision ⁷. The process of industrialization was helped by extension of railway from Allahabad (1859), and upto Delhi (1866), Lucknow (1875) and Bombay (1888). Telephone lines followed in 1891. Thus, increasing nodality of Kanpur gave a big boost to commercial and industrial activities.

The government Harness and Saddlery Factory was the first large-scale unit, established in 1863. Most of the large leather, cotton and woollen textile mills that came up now were situated in the area to the north of the city, the area which previously formed part of the cantonment. The construction of a railway station to the south of the city attracted several ginning mills. Industries also came up in the area west of the new civil lines. The city, hemmed in by the cantonment and canal on the east, civil lines to the north and new industries to the south, had no way but to grow out in south-west. Increased pressure on land caused greater congestion and filth. The municipality, established in 1861, did some good work by making roads, clearing wastes and providing potable water.

(iii) The Third Phase:

The beginning of this century ushered in an era of accelerated industrial and spatial growth of the city, accompanied by a great amount of immigration. Municipal limits of city were repeatedly extended. Improvement Trust was established in 1919, which was replaced by Development Board in 1945. New Cotton, jute, sugar and iron and steel factories were set up to the south of the G.T.Road and near the railway station. The areas include Lakshmipurva, Swadeshi Cotton Mill area, Cooperganj, Gutaiya, Raipurva. Planned industrial development was

started, a 'Factory Area' was established and facilities for industries were provided there, as also in Juhi and Harishganj. The two World Wars encouraged industrial growth due to heavy demand. Before independence Kanpur had become the eighth largest city of India.

(iv) The fourth Stage:

Industrial development of Kanpur since 1947 is marked by a diversified range of produced goods like rubber and plastic, light engineering, heavy chemicals, electrical and defence goods. Small-scale industries were encouraged. To cater to the problems of the growing city, Nagar Mahapalika replaced Municipality in 1961. The city was put on air map in 1963 further underlining its industrial status. An industrial estate was established to the west of the city near the Kalpi Road. Colonies of the workers were developed at Hariharnath, Shastri Nagar, Govind Nagar and Kidwai Nagar. Tanneries were relocated at Jajmau, east of the cantonment. J.K.Rayons and J.K.Puri, a labour colony also came up there. Another industrial area was set-up near Panki railway station, towards Kalpi Road. In the public sector H.A.L., small Arms Factory etc., were established near Chakeri. The government policies of discouraging industries in the central city due to congestion and pollution etc., is

leading to their decentralization towards the peripheral areas, like Jajmau and G.T.Road in the far east, and Kalpi Road and Delhi Road in the west *.

(b) Contemporary Trends: In-Migration to Kanpur:

The growth of Kanpur is intimately related to the migrants, seeking jobs in industries and in services. The proportion of population of Kanpur born outside the Kanpur district rose to a maximum of 52.7 percent in 1951. Since then it has been hurtling downwards. It indicates that the volume of in-migration to Kanpur has been declining. Proportion of in-migrants in Kanpur declined further to 36.96 percent in 1971 and to 29.4 percent in 1981.

TABLE-4.2

IN-MIGRATION TO KANPUR METROPOLIS*(1901-1981)

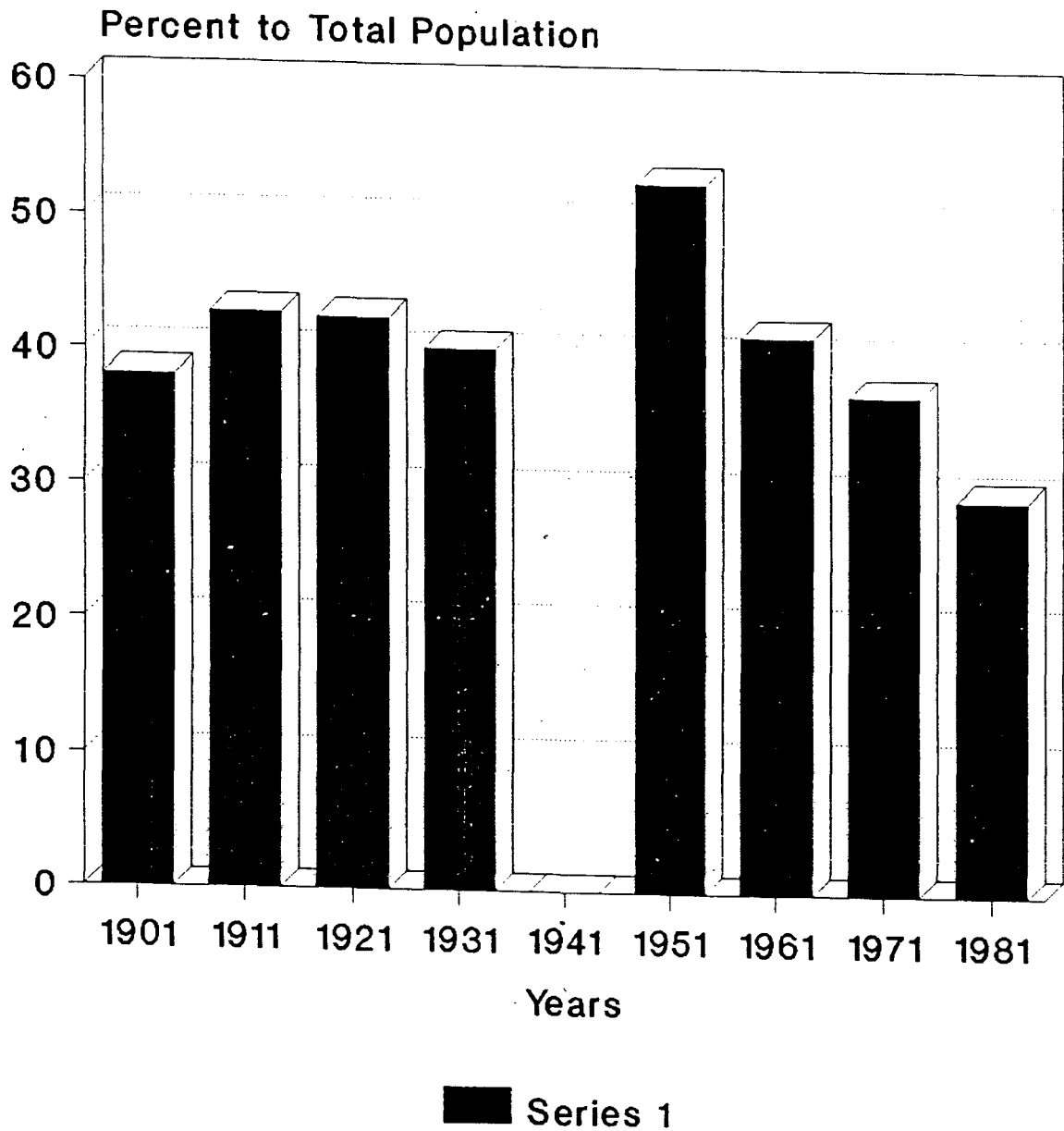
Year	Percent to Total Population
1901	38.10
1911	42.80
1921	42.50
1931	40.10
1941	--
1951	52.70
1961	41.30
1971	36.96
1981	29.40

* Till 1961, those born in Kanpur distt. were not considered

Source : Census of India, 1961, Special Report on Kanpur city. Migration Tables, Uttar Pradesh, Census of India, 1971 & 1981.

KANPUR METROPOLIS

PROPORTION OF IN-MIGRANTS (1901-1981)



Source :i) Census of India, 1961
Special Report on Kanpur City
ii) Migration Tables, Census 1971 & 1981

Figure 4.4

The in-migrants show an absolute decline in numbers from 4.80 lakhs in 1961 to 4.71 lakhs in 1971, though a small increase was reported in 1981 with a population of 4.81 lakhs (Table 4.2 and Figure 4.4).

In 1981, 27.9 percent of migrants reported employment as the reason of migration, 21.9 percent moved because of family movements (transfers etc.) Illiterates were 30 percent in males and half in the females.

TABLE-4.3

IN MIGRATION TO KANPUR METROPOLIS BY LOCALITY
AND PLACE OF LAST RESIDENCE, 1981

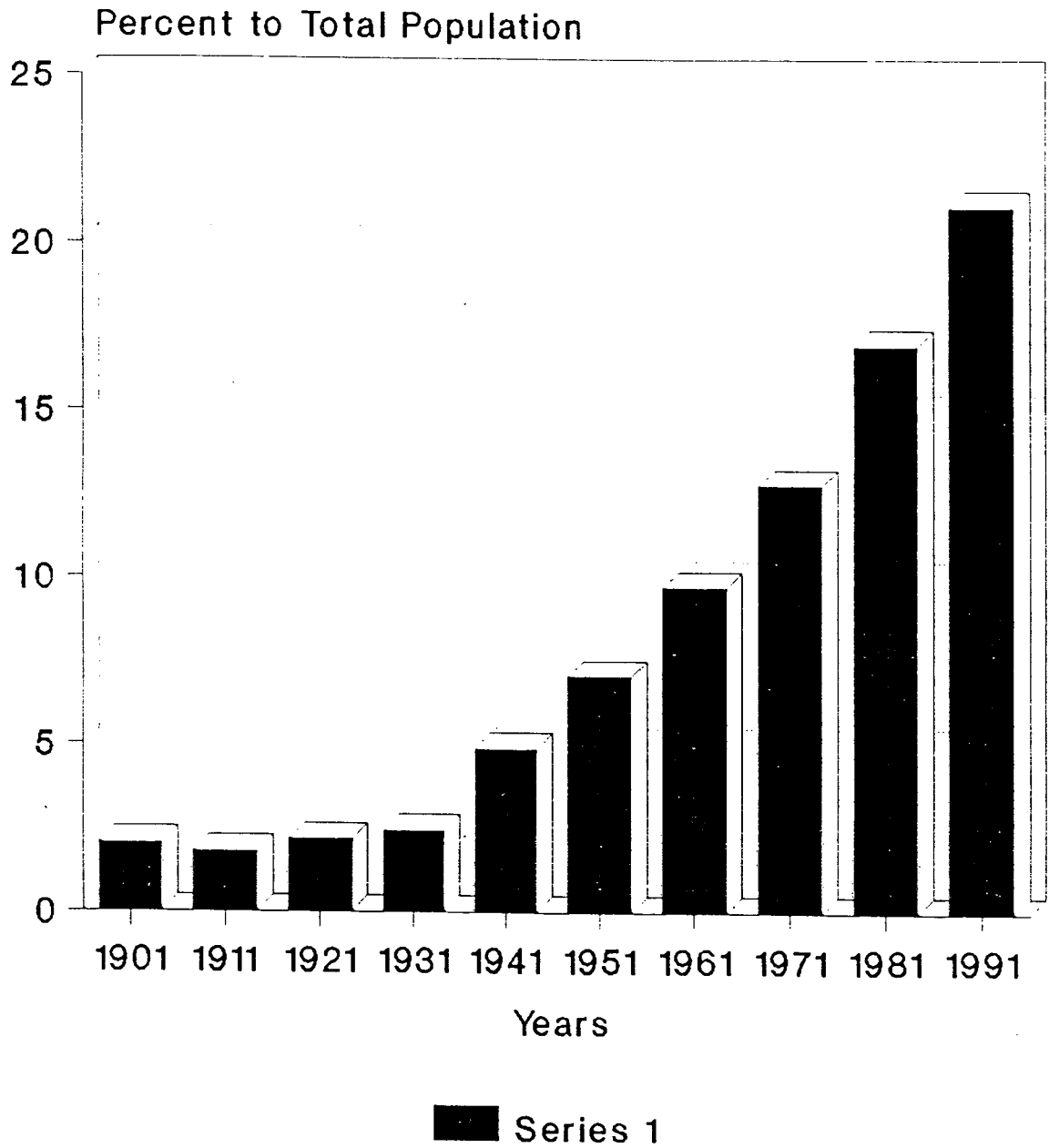
Place of Last Residence	Percent to Total Migrants		
	'Rural'	'Urban'	'Total'
From Kanpur District	9.37	1.87	11.3
Other Districts of Uttar Pradesh	43.0	28.4	71.6
Other State/U.T.s of India	4.5	8.3	12.9
Other Asian Countries	-	-	4.1
Countries Other than Asian	-	-	0.1

Source : Census of India, 1981, Uttar Pradesh, Part V - A & B, Migration Tables.

The proportion of rural in-migrants was very high. Among those coming from Kanpur district, their proportion was 83.3 percent, while amongst those of the other districts, they were 75 percent. Migrants from Bihar and Madhya Pradesh came, mostly, from rural areas while those from Punjab, West Bengal and

KANPUR METROPOLIS

POPULATION TRENDS (1901-1991)



Source :i) Census of India, 1961
Special Report on Kanpur City
ii) Census of India, 1981 and 1991

Figure 4.5

Rajasthan were mostly urbanites. About 54 percent migrants had lived in Kanpur for at least 10 years.

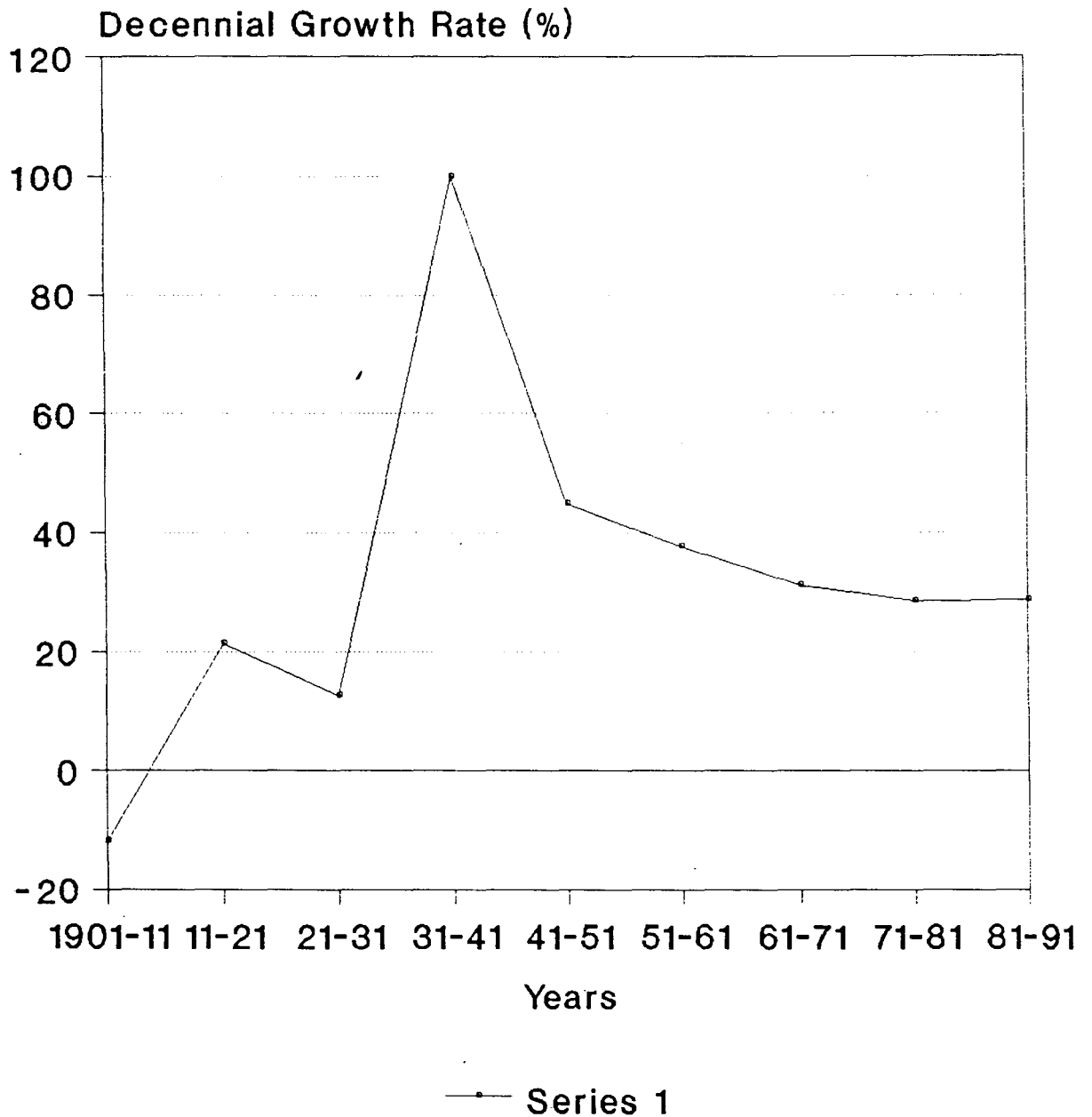
There was a decrease of 1.9 percent in the in-migrant population between 1961-71 while 1971-81 showed an increase of only 2.07 percent. The decreasing proportion of in-migrants in Kanpur's population and their almost stagnant population over 1961-81 shows that in-migration rate to Kanpur is becoming sluggish and may have become so low as to reflect greater out-migration. This may be due to limited employment opportunities, poor living conditions and governments policy of discouraging industries in the city area. Or is it the result of high mortality among the migrants, who are poor industrial workers living in unhealthy conditions? This aspect deserves further study.

III. GROWTH OF POPULATION AND ITS COMPOSITION

(a) Growth of Population: Kanpur is a city of industries. The employment opportunities provided by industries exercised a 'pulling effect' on the landless, poor people from the rural areas who are 'pushed out' due to increasing population pressure on the agricultural land. Consequently, there has been longstanding evidence of migrants contributing to the rapid growth of the city and its population. Of late, there have been signs of decreasing growth rates due to various factors.

KANPUR METROPOLIS

POPULATION GROWTH RATES (1901-1991)



Source :i) Census of India, 1961
Special Report on Kanpur City
ii) Census of India, 1981 and 1991

Figure 4.6

- 11(a) -

It can be seen from the table that Kanpur's population had crossed two lakhs at the turn of the century, but the epidemics and famine brought the population down. During the world wars, especially the Second World War, fast industrial growth enhanced migration and, thus, population growth. After the partition, many refugees settled here. Kanpur rose to eighth rank in population amongst the cities of the country in 1951. It has been the biggest city of Uttar Pradesh since 1941 (Table 4.4 and Figures 4.5 & 4.6).

TABLE-4.4

TREND OF POPULATION GROWTH IN KANPUR METROPOLIS (1901-1991)

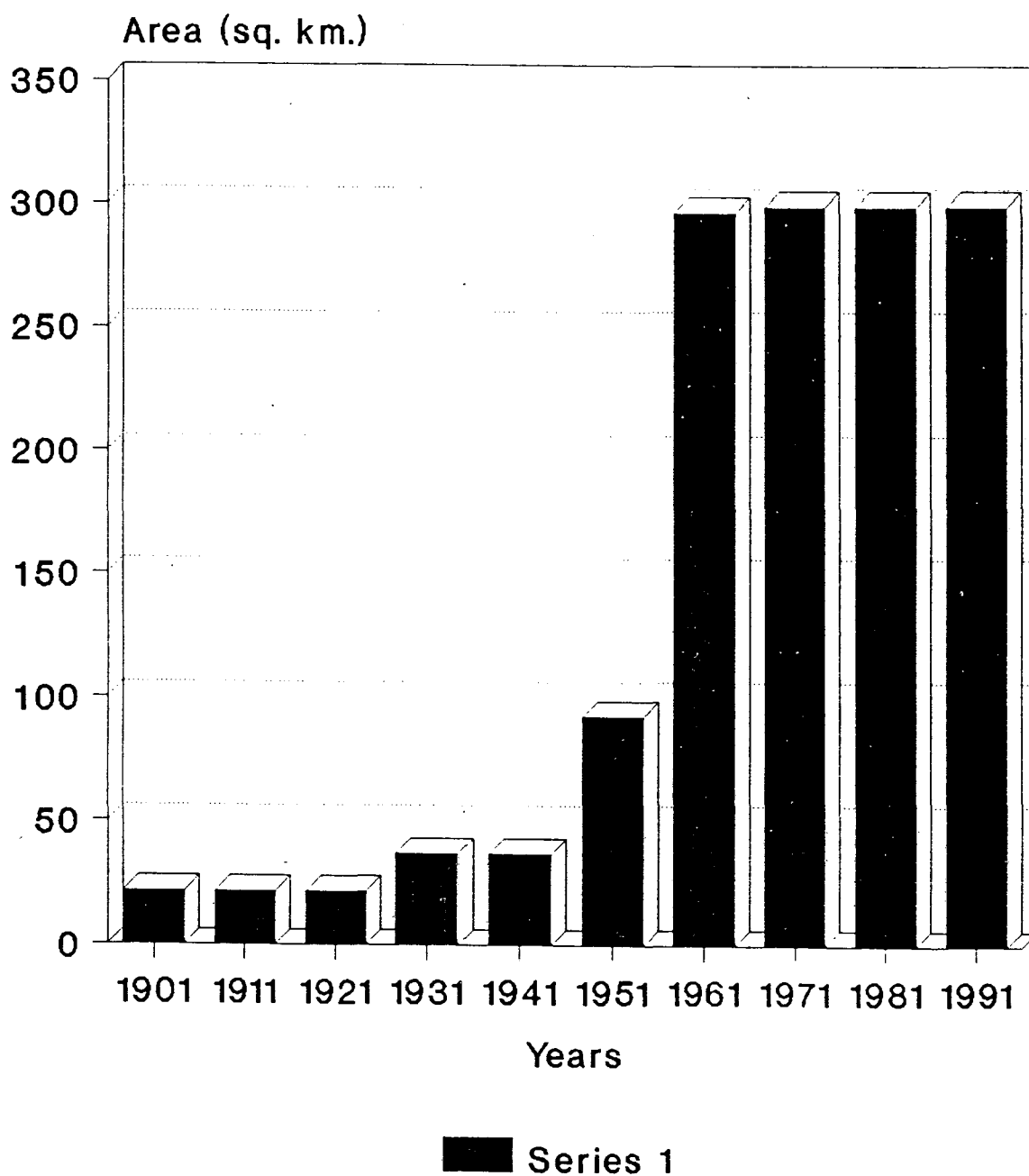
Year	Area(Sq.Kms)	Population (lakhs)	Decemial Growth Rate (%)
1901	21.37	2.02	-
1911	21.37	1.78	-11.9
1921	21.37	2.16	+21.3
1931	36.68	2.43	+12.5
1941	36.86	4.87	+100.0
1951	92.34	7.05	+44.8
1961	296.66	9.71	+37.7
1971	298.98	12.75	+31.3
1981	298.98	16.39	+28.55
1991	298.98	21.11	+28.79

Sources : (a) Census 1961, Special Report on Kanpur city.
 (b) Census of India, 1981 and 1991.
 (c) A. Mitra & R.P. Sachdev (1980): "Population & Area of cities, towns & urban Agglomeration (1872-1971)".

Increase in the population was also a result of the increase in the municipal limits in the years 1944, 1951, 1958-59 and 1961; encompassing areas of 44.21 sq.kms., 14.65 sq.kms.,

KANPUR METROPOLIS

AREAL SPREAD (1901-1991)



Source :i) A. Mitra & R.P.Sachdev(1980)
ii) Census of India, 1981 and 1991

Figure 4.7

-112(a)-

195.93 sq.kms and 4.92 sq.kms., respectively. Population increased by 1,31,521 between 1941-51, and by 77,663 between 1951-61¹⁰. Area of the city registered further growth of 2.32 sq.kms. between 1961-71 (Figure 4.7).

Kanpur Urban Agglomeration, as denoted in the census, includes six census towns as given below. Their growth rates show a decrease in 1971-81, excepting the cantonment and the Arampur Estate.

TABLE-4.5

POPULATION GROWTH RATES AND DENSITIES OF DIFFERENT
AREAS OF KANPUR CITY (1971-81)

Census Towns	Decennial Growth Rate(%)		Density (per Sq.Km) (1981)
	1961-71	1971-81	
(a) Kanpur M.C. Rawatpur R.S C. Railway Colony	+31.6	+28.3	5663
(b) Cantonment	+22.2	+30.0	5616
(c) Arampur Estate	+17.4	+32.3	3776
(d) Northern Railway Colony	+54.1	+23.2	4601
(e) Chakeri	+68.5	+47.2	1829
(f) IIT, Kanpur	-	-5.5	1780

Source : Census of India, 1981, Uttar Pradesh, Series-22, P.C.A. and Town Directory.

(b) Composition of Population:

A large metropolitan city like Kanpur is supposed to contain different people of varying backgrounds. Most of the people are Hindi-speaking (78.3 percent), followed by those speaking Urdu, constituting 17.4 percent of the total. Others include Punjabi and Bangla speaking, in the main, though a sprinkling of all the major linguistic groups of India are present here.

TABLE-4.6

LINGUISTIC GROUPS OF KANPUR CITY; 1981

Linguistic Groups	Percent to Total Population
Hindi	78.3
Urdu	17.4
Punjabi	1.8
Bangla	0.62
Sindhi	0.70
Other languages of Schedule VIII	0.18
Languages other than those of Schedule VIII	0.12

Source : Census of India, 1981, Uttar Pradesh; Pages -1

Hindus form the largest religious group of Kanpur city in 1981 (76.4 percent), while Muslims constitute another one-fifths. Others in order of importance are Sikhs (1.9 percent), Christians (0.76 percent), Jains and Buddhists.

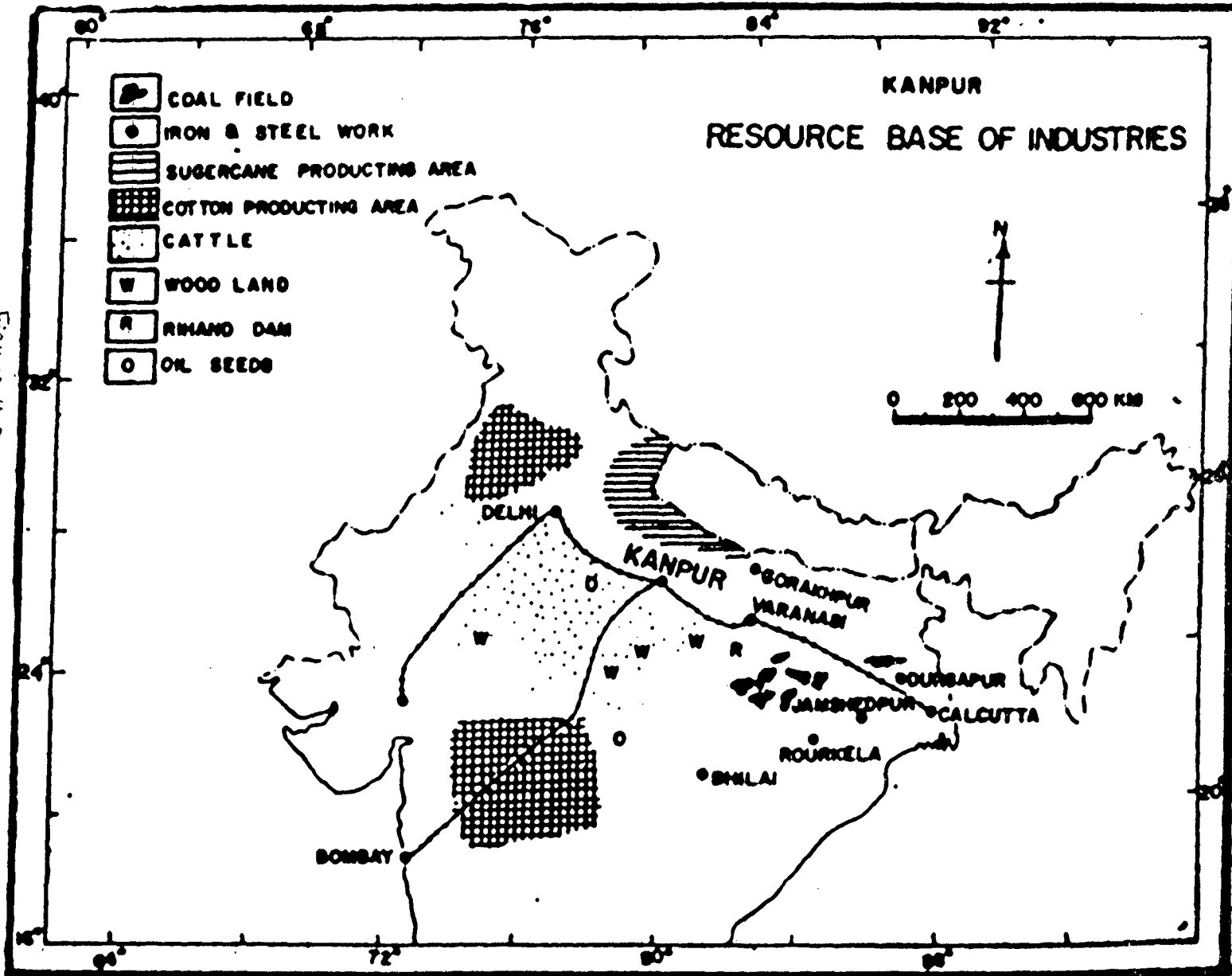


Figure 4.8
- 114(a) -

Source: Harihar Singh (1972: Varanasi).

Scheduled Caste population constitutes 14.3 percent of the whole, while Scheduled Tribe population was merely 0.02 percent in 1981. These ethnicity-related data seem to support the in-migrant figures, most of whom are coming from the state of Uttar Pradesh.

IV. FACTORS FAVOURING INDUSTRIAL DEVELOPMENT IN KANPUR

The nodal position of Kanpur in the middle of the vast Indo-Gangetic Plains was one of the significant factors in its industrial development. Besides its natural location on a navigable river, the increasing connectivity of Kanpur by roads and railways contributed towards its growth as trade and manufacturing centre during the last century. Requirements for industry like cotton, wheat, oilseeds and hides and skins could be obtained from the Great Plains to the north-west, and wool etc from the hills and plateaux to the south¹¹. Black cotton soil regions of Gujarat and Malwa, and Punjab were also well connected. The supply of cheap labour, and of the skilled leather workers in the form of chamar population, could be easily had from densely populated Gangetic Plains. The big animal population of the plains provided abundant quantity of hides and skins. Accessibility to water from river, and to the vast market of the plains, encouraged the initial growth of leather and cotton textile industry in the city (Figure 4.8).

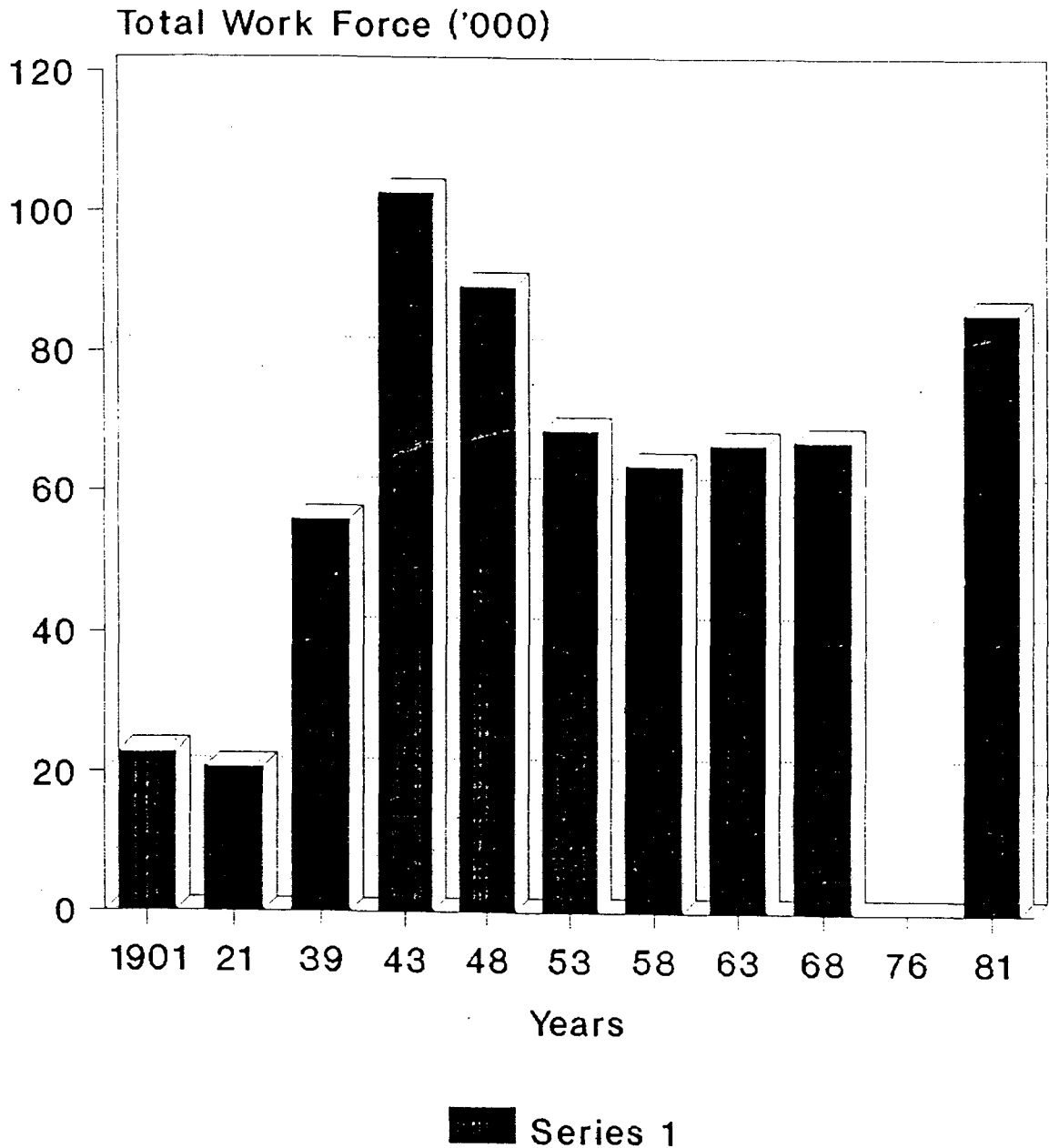
The British Policy of encouragement of the industries for creating employment opportunities played no mean role. There was, however, the problem of obtaining coal for energy needs, which was obtained from distant mines in Bihar. Nowadays, electricity is produced in Kanpur from two thermal plants, and is also obtained from Obra and Rihand Dam project. All these favourable factors have made Kanpur one of the greatest industrial cities of the Great Plain.

Industrialization And Urbanization In Kanpur.

Industrialization and urbanization are said to move together ¹². Industrial growth attracts migrating people and enhances urbanization rate through the employment opportunities it offers in industry, business and services.

The first few years of hectic growth of industries at the beginning of this century were followed by a lull. The First World War also braced up the industrial climate by enhancing production. After the stagnation of the twenties, many India established new industries—all in the southern city. The second World War greatly encouraged the industrial set-up, when the number of industries increased from 90 to 176 between 1931-45 (96% growth), even as the population registered a 100% growth between 1931-41.

KANPUR METROPOLIS INDUSTRIAL WORKERS (1901-1981)



Source :i) R.K. Awasthi (1985); Harihar Singh (1972); 'Working Class Family Income & Expenditure Survey (1981-82)

Figure 4.9

- 116(a) -

Since independence, there has been an accelerated growth of small-scale industries like rubber and plastics, heavy chemicals, electrical and engineering goods etc. The role of government in the location and development of industries though has been significant (Figure 4.9 and 4.10).

TABLE-4.7

GROWTH OF INDUSTRIES IN KANPUR METROPOLIS

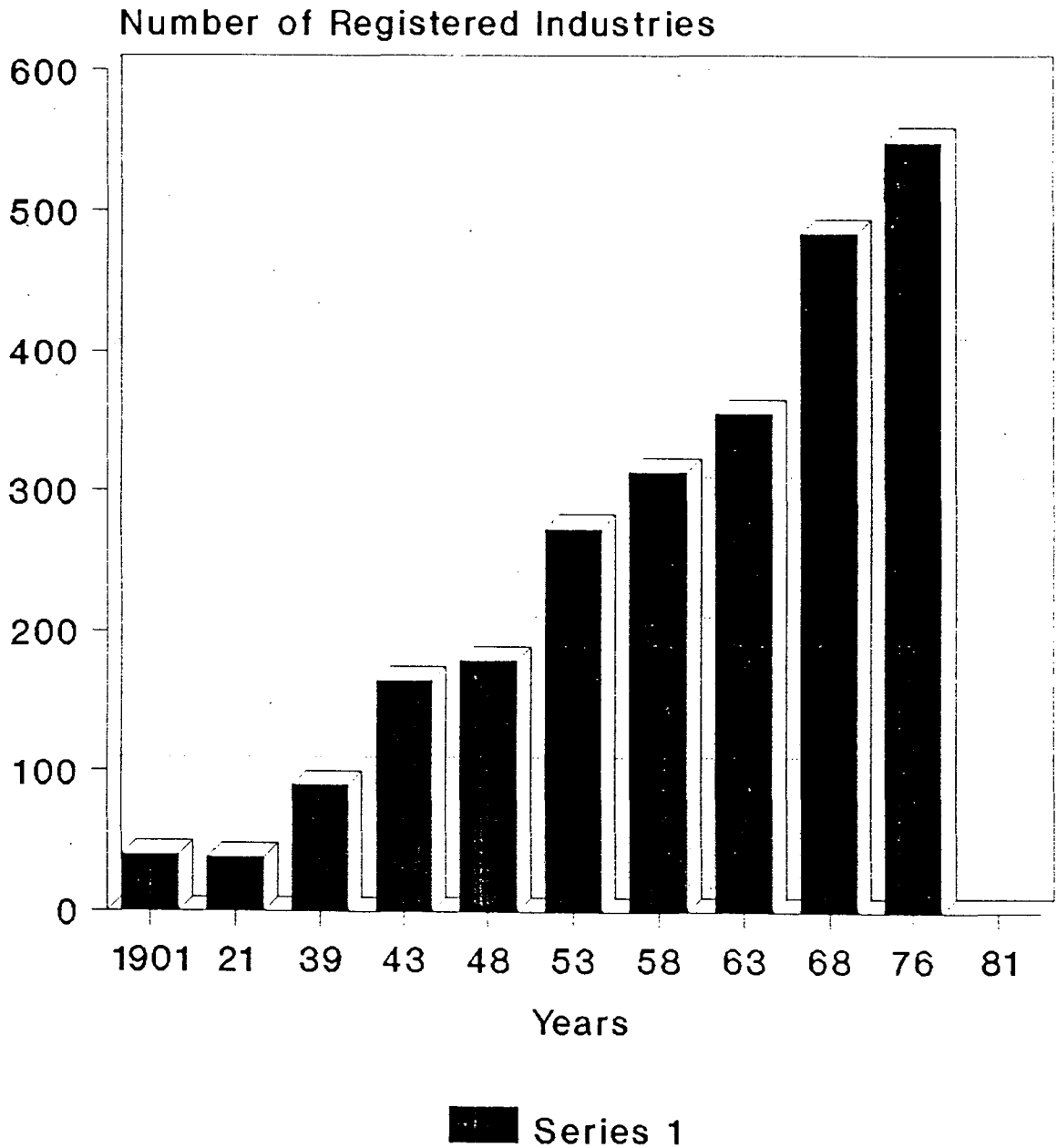
Year	Industries		Industrial Workforce	
	Registered Industries	Growth Rate(%)	Total work-force (000's)	Growth Rate (%)
1901	40	—	22.85	-
1921	38	-5	20.70	-9
1939	90	+135	55.81	+170
1943	165	+83	102.72	+84
1948	179	+9	89.28	-13
1953	273	+52	68.83	-23
1958	313	+15	63.74	-7.3
1963	356	+13	66.72	+4.7
1968	484	+36	67.31	+0.88
1976	549	+13.4	-	-
1981	-	-	85.61	+27.2

Source : R.K. Awasthi (1985); H.H. Singh (1972); 'Working Class Income and Expenditure Survey (1981-82).

The rapid growth of industries and employment therein during Second World War can be observed from the table. The year 1943 shows the highest number of industrial workers in Kanpur. After the Partition, employment in industries came down as many

KANPUR METROPOLIS

NUMBER OF INDUSTRIES (1901-1981)



Source :i) R.K. Awasthi (1985); Harihar Singh (1972); 'Working Class Family Income & Expenditure Survey (1981-82)

Figure 4-10

workers were removed due to stoppage of supply of raw materials like cotton and jute fibres from Pakistan. To provide for the growing population, the government encouraged small-scale industries. Though the number of units has grown, that of the workers has been coming down¹³.

TABLE-4.8

EMPLOYMENT IN REGISTERED INDUSTRIES OF KANPUR (1981-82)

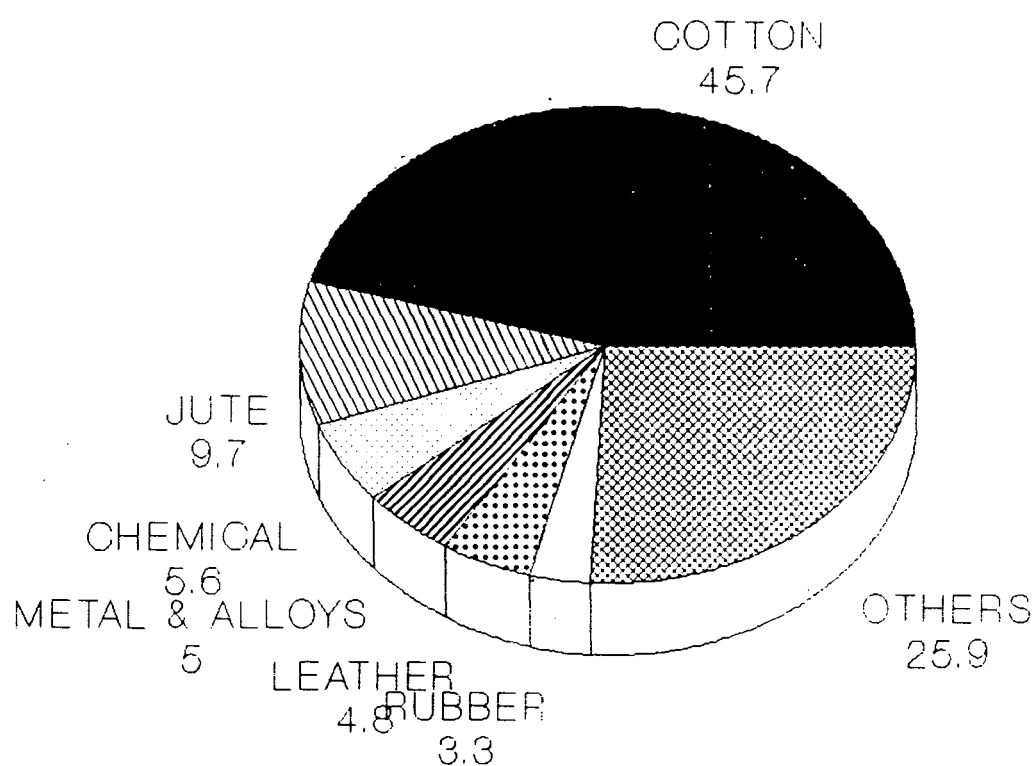
Type of Industry	No. of workers	Percent to Total
Cotton Textiles	39145	45.7
Jute, Hemp and Mesta Textiles	8269	9.7
Chemical and Chemical Products	4794	5.6
Basic Metal and Alloys	4293	5.0
Leather and its products	4116	4.8
Rubber, Plastic, Petroleum, Coal Products	2847	3.3
Metal products	2482	2.9
Food Products	2198	2.6
Hosiery goods	1459	1.7
Machinery, Machine Tools	1330	1.6
Electrical and Mechanical Goods	1160	1.4
Others	13540	15.8
Total	85613	100

Source : Working Class Family Income and Expenditure Survey, Kanpur, 1981-82.

Cotton textiles is the single largest industry of Kanpur, employing 45.7 percent of the workers. Along with jute and hemp textiles, it employed more than half of the workers in 1981-82. Other industries in order of importance are chemicals, basic metal & alloys and leather industry¹⁴ (Figure 4.11).

KANPUR METROPOLIS

EMPLOYMENT IN INDUSTRIES (1981-82)



Source : 'Working Class Family Income and Expenditure Survey', Kanpur (1981-82)
Labour Bureau, Chandigarh.

Figure 4.11

-118 (a) -

Industrialization is deeply related with urbanization and the related phenomenon of migration. In-migration greatly contributed to the urbanization of Kanpur, the proportion of in-migrants rising to its highest in 1951. But now it seems that employment opportunities have come to stagnant level discouraging in-migration to Kanpur, or even causing out-migration¹⁵.

The encouragement and pep that the process of urbanization gets due to industrialization is reflected in the spatial growth of the urban areas. The greatest spatial growth of Kanpur occurred in the period 1951-61, when it grew 222 percent ¹⁶. However, due to sluggish industrial growth, the urbanization is now occurring almost due to natural increase of population of Kanpur, as the migration process seems to be contributing little to it in the present.

The proportion of manufacturing sector workers to total population was 22.6 percent in 1941, 14.6 in 1951, 11.7 in 1961, while during the next two decades it hovered around 10.2 percent ¹⁷. It is quite high and compares with such cities as Gr.Bombay (14.2 percent), Bangalore (11.4), Ahmedabad (12.7 percent) ¹⁸. The proportion of 'manufacturing and repair' workers to total workers was 34.4 percent in 1971 which rose to 37.01 percent in 1981, in the 'urban areas' of Kanpur district. Obviously, this figure can only be higher in the city of Kanpur.

It is a city which owes its growth to historical-geostrategic factors. It has had intimate British connections, whose association with it saw it grow into a big commercial and industrial centre of India's north. Various factors like transportation links, cheap labour, agricultural raw material and the vast market helped it further. Industrial land-use proportion 17, percent of manufacturing to total workers, number of and diversity of industries etc. show that it is an industrial city of great significance to the economy of Uttar Pradesh and India. But it has become an industrial city with various problems of land, pollution, economy and social justice. This is what we turn to next.

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18. Based on Census of India, 1981.
19. Industrial land-use accounted for 13.2 percent of total developed land of Kanpur in 1966. See: V.K.Kumra (1982) ; 'Kanpur City-A Study in Environmental Pollution'; (Varanasi: Tara).

CHAPTER V

ENVIRONMENTAL CRISIS, POVERTY AND QUALITY OF LIFE IN KANPUR CITY

Kanpur metropolis is facing many urban problems. Though we are concerned with the issue of poverty and sustainability in Kanpur, we would, rather start with an appraisal of the whole scenario of land, economy and life in Kanpur. This is necessary to acquire a holistic view because the issues we are concerned with are interrelated.

1. THE LIVING ENVIRONMENT IN KANPUR

Kanpur's character is deeply influenced by its industrial character. The growth of population due to industrialization, the congested conditions in the localities and roads, the pressure on services and amenities have led to the deterioration of the living environment.

(a) the Quality of Air : Vairous industries dot the landscape of Kanpur metropolis. These industries give out poisonous gases, fumes of sulphurdioxide, carbonmonoxide, solid particles and smoke. The increasing number of vehicles on the road also raises the levels of these gases plus carbondioxide, lead and nitrogenoxide. Sewage and solid organic wastes also add to the air pollution by releasing petrified hydrogen sulphide, carbonmonoxide, ammonia, ethane and methane gases.

(The concentration of sulphurdioxide is the highest in the industrial areas while the lowest figure are observed in residential areas. Such congested parts of the city as Chamanganj are second only to the industrial areas¹. /

^ Suspended Particulate Matter (S.P.M.) is the concentration of particles in the air above 20 microgram per cubic metre air. In Kanpur, the highest values of SPM were observed in the congested areas like Chamanganj. In 1990, average value of sulphurdioxide in Kanpur was at 7.6 which was lesser than the four mega-cities and Ahmedabad². SPM value in Kanpur (351) was second only to Delhi at the national level. The high rates of asthma, bronchitis, tonsillitis; the highest rates of T.B. deaths among Indian metropolises; and the presence of deadly lung disease - byssinosis - among 7.5 - 9.0 percent textile workers point to serious effects of pollution³. /

(b) The Quality of Water : River Ganges receives thirteen polluted domestic sewage outlets along its 18.5 Kms stretch in the Kanpur metropolis⁴. Sewage and the effluents of the thermal power plant, tanneries, chemical and textiles mills are the main sources of river pollution in Kanpur. Tanneries and domestic sewage alone account for 94 percent of the river pollution⁵. The silted-up sewers of are hardly cared for, and instead of cleaning them, the authorities resort to diverting their in-flow into the storm water drains. Sometimes the overflow from the

sewers also goes down these drains. According to the recent studies, domestic sewage outflow was 250 million litres per day which accounted for B.O.D. load of 90 tonnes per day⁶. The seventy tanneries of Kanpur released 7.5 million litres of effluents with B.O. load of about 50 tonnes each day, which eventually reach river Ganga. Large quantities of chromium and tannins are also contained in it.

Though Dissolved Oxygen contents of Ganges have not gone much low (lowest 6.3 mg per litre); yet the indicator of bacterial pollution, the coliform organisms, shows readings as high as 2,20,000 per 100 ml of water⁷. This is due to high amount of organic sewage coming via domestic sewage. The bathers in the river, the fish-eaters and users of polluted drinking water are exposed to the risks of various ailments like typhoid, dysentery, cholera, respiratory diseases, diarrhoea, jaundice, ringworm; anaemia, cysts. Studies show growing incidence of jaundice and cholera in Kanpur city⁸.

(c) Problem of Solid waste Removal : A populous and industrial city such as Kanpur is bound to produce a lot of solid waste refuse. The problem, then, arises of the disposal of such a large quantity of waste. Refuse such as garbage, which is of organic nature, is produced by households, hotels, etc. Industries produce a lot of solid industrial waste. The refuse heaps in the residential areas are common sight. The

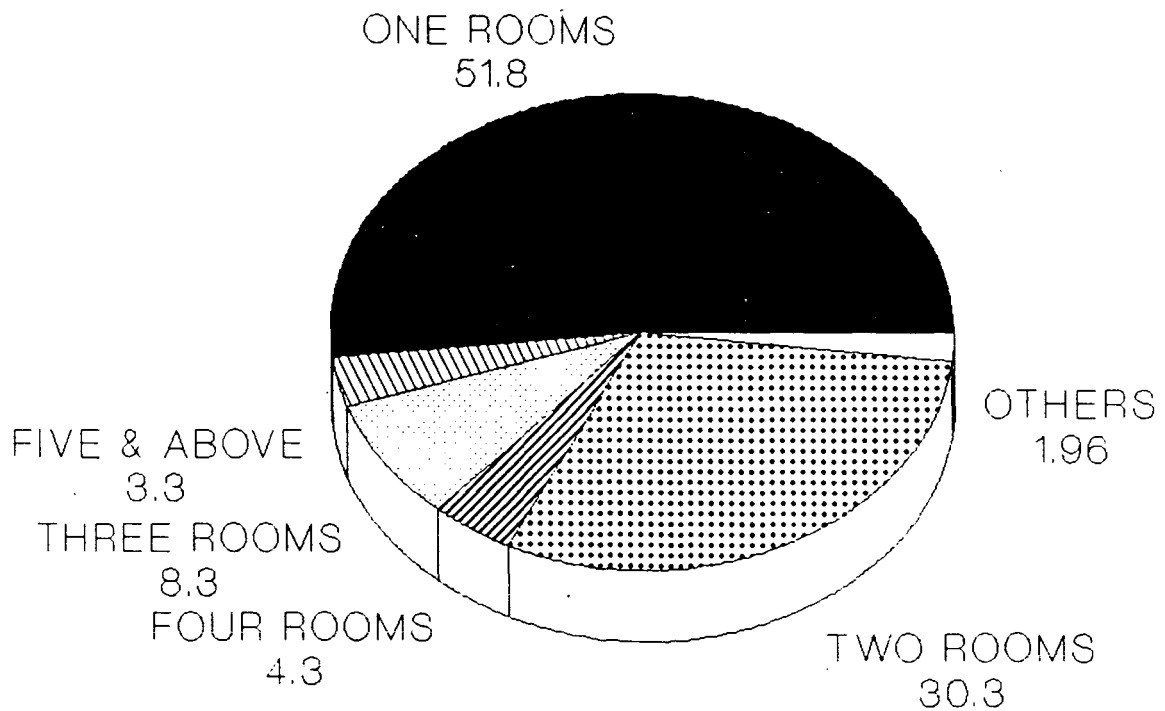
administration has used garbage wastes to fill up lower areas near Rawatpur, Kalyanpur and West H.B.T.I. campus, in order to establish new residential areas. The rich produce more garbage and rubbish (metal and glass etc) than the poor due to higher consumption levels. The poor produce more ash refuse as residues from fires used for cooking. (Heaps of industrial wastes are found in the industrial estates and Jajmau area of the Kanpur city, while chemical compounds of sulphur were found near chemical factory in Fazalganj.)

Solid refuse is a source of diseases, which spread through biological and physical agents polluting the air and water flow. The land and the underground water also become polluted due to it. (Now, Kanpur is believed to have become the second most dirtiest city of India after Calcutta. The quantity of solid refuse produced in Kanpur has been increasing from 1.97 lakh tons in 1966 to 2.28 lakh tons in 1970 and 2.51 laks in 1976¹⁰.)

Besides, all these, Kanpur is also a high scorer on the noise-pollution level, because of a number of industries distributed in a ubiquitous manner all over the city, as also the increasing number of vehicles on the roads.

(d) Housing Crisis : A house is the basic need of human beings. Housing conditions for the multiple in Kanpur has never been satisfactory. In 1961, 62.4 percent households lived in single-

KANPUR METROPOLIS HOUSEHOLDS BY NUMBER OF ROOMS (1981)



Source : 'Household Tables' Part VIII,
A&B(ii) Series-22, U.P., Census of
India, 1981.

Figure 5.1

room tenements, the figure came down to 59.6 in 1971 and to 51.8 percent in 1981. Simultaneously, there has been an increase in the proportion of household with two-room tenements, which has attained a figure of 30.3 percent from 23.7 percent in the twenty year period. The proportion of rented households, though, was very high at about 70 percent in 1981 (Table 5.1 and Figure 5.1).

TABLE-5.1

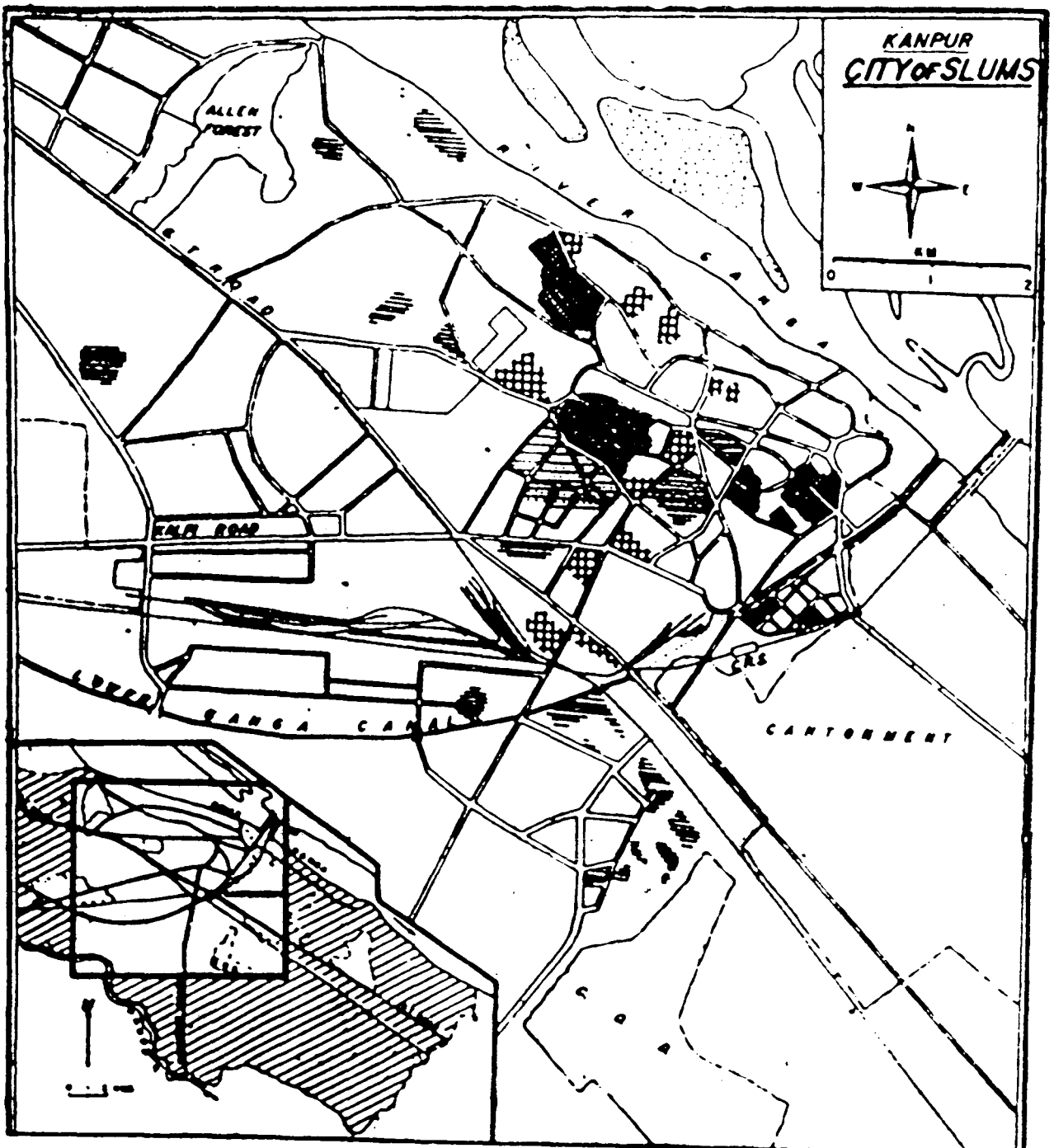
PROPORTION OF HOUSEHOLDS BY NUMBER OF ROOMS OCCUPIED (1971-81)

No. of Rooms Occupied	(Percent Households)	
	1971	1981
No Regular Room	0.01	0.06
One Room	59.6	51.8
Two Rooms	27.0	30.3
Three Rooms	7.1	8.3
Four Rooms	3.3	4.3
Five Rooms and above	3.0	3.3
Unspecified	-	1.9

Source : (i) R.K. Awasthi (1985): 'Urban Development and Metro politics in India; Chugh, Allahabad).

(ii) Households Tables, Part VIII - A & B (ii), Series-22, Uttar Pradesh, Census of India, 1981.

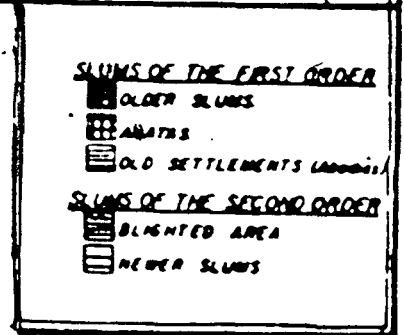
The higher proportion of households in single-room houses with hardly any amenities shows that they are not able to own houses, and are forced to live in rented houses and slums or squatters. The proportion of rented households was 70 percent apprx. in 1981. The shortage of housing, calculated from the difference between number of households and the number of houses, was 25 thousand in 1971 and 5 thousands in 1981. In the face of



Source: Harihar Singh (1972: Varanasi).

Figure 5.2

-127(a)-



increasing congestion in the city, there is need for building more houses in the future. According to the estimates, the difference between demand and supply is expected to be 70 thousands in 1991 and 83 thousands by the turn of the century¹².

Housing conditions in the slums : In Kanpur slums, about three-fourth of the households lived in extremely congested one-room tenements. Another 17.8 percent households managed to have two-rooms while the lowest class of 1.5 percent had no room at all¹³ (Figure 5.2).

The NSS survey of 1976-77 shows that 85 percent of slums households lived in rented houses¹⁴. One fifth of the slum households had a mud floor in their houses. Of them, about five percent (4.7) had Kutcha houses as well. In all, 18.7 percent of households stayed in Kutch and semi-pucca houses.

TABLE-5.2

QUALITY OF HOUSING IN KANPUR CITY SLUMS (1976-77)

Structure Type	No Room of NBO specification (% HHS)	At least 1 Room of N.B.O. specification(% HHS)
Kutcha	0.40	4.90
Semi-Pucca	0.40	12.90
Pucca	1.20	78.70
Not Recorded (0.2)	-	-

Source : 'NSS Survey on Socio-Economic condition of households in slums in metropolitan cities : Kanpur; 31st Round (1976-77); 1983.

While perusing the NSS survey data of 1976-77 we should consider two of its shortcomings. First, it covered only the slums of the 'city' proper and not the whole of metropolitan Kanpur. Secondly, it is based only on the recognized slums. As the recognized slums include the old-city's, dilapidated buildings; the 'ahatas', which are either owned by industries or let-out by individuals, and other such areas with some what better conditons and facilites, they tend to present a somewhat rosy picture. The conditions in 'abadies' and squatters are worse still.

The People Without Roof :

According to C.S. Chandrasekhara, some 30 thousand people are pavement dwellers in Kanpur¹⁵. The 1981 census shows a population of only 12 thousand, which seems to be too low figure. Many of these people have no source of income. Most of them are beggars, orphans and handicapped. Besides the lack of housing, food and clothing they also lack access to pure air, water and other health. Safety in any aspect of life is out of their purview.

2. THE TRANSPORTATION PROBLEM :

The problem of transportation in Kanpur, like the overcrowding, obstruction to quick movement of traffic, poor road of inadequate quality etc., owe themselves to lack of foresight and planning in the past. The roads in a city are supposed to

follow a hierarchical pattern, in which the main arterial roads are meant for uninhibited traffic flow while the access roads lead to different kinds of land-uses like residential and market areas ¹⁶. But the Kanpur metropolis shows a 'ribbon development' along the highways, where different types of land-uses occur on the main roads. The roads that should cater to the free-flow of traffic, are used both for the movement of traffic and for access to different land-uses which lie along these roads. The perusal of slow modes of transport by most of the people to reach distant places along the roads, the encroachments on the roads, frequent digging-up of roads by different departments showing little coordination among themselves etc., further slow down the traffic. The use of the same roads by fast and slow moving modes of transport leads to uneconomic speeds for the former and frequent accidents. The practice of taking the railway lines to the newly established industrial pockets in the outer limits of the city created numerous level-crossings, besides wasting valuable lands ¹⁷. An industrial zone in a fixed part of the metropolis would have been preferable, perhaps. The width of the roads is meant for a much lesser population than two millions of today. The roads' thickness, too, is unable to cope with the heavy traffic and vehicles, and the repairs hardly last for a few days. The persistence of commercial areas in the old city has been responsible for congestion and overcrowdedness in those areas.

TABLE -5.3

REGISTERED MOTOR VEHICLES IN KANPUR CITY, 1989

Vehicle Type	Percent to Total
Two Wheelers	85.50
Three Wheelers (a) Passengers	1.30
(b) Goods	0.10
Cars	6.30
Jeeps	1.70
Taxis	0.03
Buses	0.40
Trucks	3.92
Tractors	0.09
Trailors And Trolleys	0.05
Others	0.70
Total	100

Source : Motor Transport Statistics of India, 1987-88 & 1988-89. Transport Research Divisions, Ministry of Surface Transport, Govt. of India, New Delhi, 1990

The table 5.3 shows that 85 percent of registered (taxed and non-taxed) vehicles were two wheelers. A KDA study showed that each bus catered to 25000 of the population ¹⁵

3. THE EMPLOYMENT SCENARIO:-

The 43rd round of National Sample Survey shows that in Kanpur 31.4 percent of surveyed households were self-employed, 52.6 percent were regular employees, 16.4 percent casual labour, and about 8 percent others. After Delhi, Kanpur had the highest proportion of self-employed households¹⁹.

It was also found that 28.2 percent households had monthly per capita expenditure upto Rs.160, 22.2 percent fell in expenditure category of Rs.160-215. Amongst the ten metropolitan cities survey, Kanpur had the highest proportion of households expending below Rs.160 per capita per month.

Unemployment situation in Kanpur does not seem to be bad compared to the other metropolitan cities. Total unemployment amongst men in 1987-88 amounted to 8.2 percent. In the women, total unemployment was only 0.3 percent. Is it due to the fact that they are not seeking job and they prefer to work at home? (Table 5.4).

TABLE - 5.4

UNEMPLOYMENT IN KANPUR (1983 & 1987-88)

Stats of Unemployment	Percent Males		Percent Females	
	1983	1987-88	1983	1987-88
Usual Status	3.5	1.2	0.8	0.1
Current Weekly	2.7	4.5	0.8	0.1
Current Daily	6.6	2.5	0.9	0.1

Source : 'Employment and Unemployment Situation in cities and Towns During Late 1980's; NSS Report No. 371-B, 43rd Round, 1987-88; (December, 1990)

4. AVAILABILITY OF URBAN FACILITIES AND SERVICES:

The services-and-facilities system of Kanpur is under stress. More and more people need the services, but the administration is unable to cope with the increasing demand. At

other times, people are, economically, unable to afford them. Central Pollution Control Board estimates for 1988 showed that 75 percent of the population in Kanpur was provided with water supply²⁰.

The 1981 census showed that 37.5 percent of the households had no access to electricity, while 36.3% of them were devoid of toilet facilities. Only a third of the metropolis had access to sewerage facilities ²¹. The facility of refuse collection did not cover even the area falling under the municipality. For every 1000 persons only two beds were available in the hospitals. A high rate of deaths due to child-births prevailed throughout 1950s, as also high infant mortality rates ²². This shows that various factors like poverty, malnutrition and poor living environment had been behind this . With at least one-third of population living in slums ²³, about 29 percent households having per capita monthly expenditure upto only Rs.160 in 1988, and poor environmental conditions still prevailing or even worsening, the situation regarding health and mortality doesnot seem to have changed much over time.

Slums' conditons: About one-tenths of the slum households had no access to toilets facilities, three-fourths had access to community toilets only and 15.5 percent had their own facilities. Sanitary type toilets accounted for 30.2 percent of the households using community ones, and 13.1 percent of those households using the private toilets²⁴.

Again about a fifth of the slum families had no access to potable water, 68 percent got water from community taps and only 11.5 percent households had their own taps in the houses.

The working class Family Survey (1981-82) found that 32 percent families had no access to toilets, 83 percent had no access to a Kitchen, 77.8 percent families had no access to a bathroom. 'Ahatas' had 34.13 percent of the working class families living, with an average floor area of the living room per head amounting to 2.47 sq. metres²⁵.

The conditions of the people living in 'abadis' and the squatters can only be equally bad, or even worse, in the latter case.

Our discussions show that poor inhabitants of the areas surrounding Kanpur metropolis are attracted to the city because of its perceived job opportunities. They find jobs in the industries or set up their own small business in the informal sector. The encroachments of these small businessmen on the roads; the presence of rickshaws, thelas, ekkas and tongas on the roads; and large slum areas testify to the operation of this sector. Because most of people can't afford costly land and housing due to low incomes and high prices of land, the living conditions reflected in poor housing and facilities, are growing from bad to worse. The faulty planning, bad administration and industrial pollution have made the living environment

unattractive. The poor, naturally, become the victims of these factors as they are forced by their circumstances to live and work where other won't like to. In the next parts of the chapter we turn, specifically, to the poor, poverty and their environment.

5. URBAN POVERTY IN KANPUR METROPOLIS :

(a) Slums and Poverty : Mass poverty in metropolitan cities is one of the major factors behind the urban problems. Many recent studies tend to show that all the people living in poor neighbourhoods - blighted zones or slums - are not necessarily poor²⁶. But they can be considered as 'housing poor', compared to others who can afford some minimum level of housing. In this way, slums can be taken as one aspect of poverty. Though the slums may contain people who are not absolutely poor, yet a majority of them are really poor in an absolute sense. An appraisal of the slums in Kanpur can give us an insight into the situation of poverty in Kanpur.

(b) Estimates of Slum Population : Various estimates of slum population are at variance with one another²⁷. Based on different criteria, the proportion of slum to city population shows wide variations. National sample survey (NSS) estimates this proportion at 8.51 percent. The 1981 census gives a more meagre 4.81 percent. The other estimates are all above 37.5 percent²⁸. The Kanpur Development Authority study shows that one-

third population of Kanpur lived in slums²⁹. Based on these facts, we may conclude that at least 33 percent, or around 7 lakhs, of people live in slums according to 1991 population of about 21 lakhs.

TABLE - 5.5

ESTIMATES OF SLUM POPULATION IN KANPUR

Estimating Agency and Time of Data Base	Incidence of Slum Population
1. NSS (1976-77)	8.51
2. TCPO (1981)	37.50
3. NBO (1981)	40.31
4. Census (1981)	4.81
5. Task Force Estimate(1981)	
(a) Low Estimate	40.00
(b) High Estimate	45.00
6. Kanpur Development Authority Study*	33.00

* The Civic Affairs, Jan. 1980; pp. 61-2.

Source : B. Mohanty (ed.) (1993) : 'Urbanization in Developing Countries' : Basic Services and Community Participation; p. 179

(c) Origins of Slumification : In the earlier times, Kanpur was made up of a collection of few villages like Juhi, Sismau, Patakapur and Old Kanpur³⁰. As the city grew, the in-migrants started rushing into the city and due to poverty started living near their working places, which were generally industries. These settlements had no facilities and thus, deteriorated with time. The old Kanpur, Patakapur, etc., now falling in the older parts of the city, have become one of the worst examples of human

dwellings. As the city grew, many villages were incorporated in its ambit. Because of cheap accommodation, the immigrant labourers preferred to live in those areas. The administration did little to improve their conditions, and those villages degraded into slum areas, Luxmipurwa, Dhakanpurwa, etc. are such slums. New houses were built in different areas of the city like Jawaharnagar, Gandhinagar, Aryanagar, for the industrial workers and the refugees of the partition. These unplanned colonies in the private sector also changed into slum like areas. In the recent times, more slums have developed during the last decades. Many slums are found near the industries, which are not fixed in one or two pockets of the metropolis but scattered all over it.

(d) Typology and Distribution of the Slums : On the basis of type of building material, location and occupation etc. of the inhabitants, the slums in Kanpur have been classified into six types³¹. :

(i) Old City Slums : These slums are located in the oldest part of the city, around the C.B.D. Though the buildings are pucca and multi-storeyed, they are in very poor state with no water, sanitation, drainage or other facilities. The poor live in these slums in a very high density of persons per room. In some of the houses, labourers of day and night shifts sleep one after the other. These areas include Patakapur, Colonelganj, Bengali Mohal and Beconganj, Pheelkhana, Gwaltoli, Moti Mohal, Khalasi line, etc.

(ii) The 'Ahatas' : These are the areas where the industrial workers (about three fifths) live on large enclosures having small flats in multi-storeyed buildings. Most of these are privately owned though a few are government's property. These buildings lack many of the desired facilities like, latrines and bathrooms, drainage lines and kitchens. Most of the 'ahatas' are located near industries, but a few are also found in crowded neighbourhoods. Some middle class people also live in the 'ahatas'.

These 'ahatas' and old city slums contain most of the population of slum areas of Kanpur. In 1978; 'ahatas' were supposed to house 2.59 lakhs of persons, while old city slums housed, at least one lakh persons.

Ahatas are supposed to be the most congested kind of slums, housing the poor rural migrants to Kanpur metropolis.

TABLE-5.6

PROPORTION OF POPULATION IN DIFFERENT SLUM-TYPES IN KANPUR (1978)

Slum-Type	Population	Percent to Total
<u>Ahatas</u>	259552	51.60
<u>Bustees</u> (older slums)	158511	31.51
<u>Villages and abadies</u>	40580	8.10
Along road, rails and unauthorised areas (new slums)	44437	8.83

Source : V.K. Kumra (1982) : 'Kanpur city : A Study in Environmental Pollution'; Tara, Varanasi, p. 160.

Some of the areas where these occur are Chamanganj, housing the Muslim workers and petty-traders, Darshanpurwa, Deputy Ka Purwa, Gwaltoli, Colonelganj, Juhi among others. These lie in a belt, from Ganga bank in the north to Railway yards in the south.

(iii) 'Abadies' : These are the old villages which have now become a part of the metropolis due to its spatial growth. The immigrants tended to locate there because of their comparatively cheaper accommodation. But due to increased population pressure and neglect these have turned into slum-like areas, having no facility either of sanitation or of potable water. Such settlements, as Nawabganj and old Kanpur on the Ganges, Luxmipurwa, Juhi Khurd, Rattupurwa, Dhakanpurwa, etc. on the South; are expectedly of the Kutcha type buildings with a few exceptions.

(iv) Blighted Areas : Some of the mohallas have become blighted due to neglect of buildings, overcrowding and too much construction in cramped areas. These areas fall in Anwarganj, Dalelpurwa, Butcherkhana, Farashkhana, Maida Bazar, HIRAMAN KA PURA localities near the C.B.D. territory. Unlike the old city slums, these zones are in slightly better position as the residents here are not that economically depressed.

(v) New Slums : Some of the areas developed by administration have degraded into slum-like conditions as in the Muslim areas of Chamanganj and Colonelganj. Many poor people of the abolished

slums have shifted to these new areas, as the richer people shifted elsewhere renting out these buildings to the incomers. Located near the residential areas, many of these slums have come up uncontrolled, and thus are of kutchha type, without access to personal taps and with no sanitation.

(vi) Temporary Hutments or Squatters : These fast-growing hutments occur along the road, railway lines and other available places. They are constructed with wood, tin-boxes, gunny bags, scrap and soil and are amongst the worst possible housing arrangements. They are often housed by beggars, orphans and other such people, sometimes without any proper work. These also house recent in-migrants to the city.

The Labour Colonies : These are the other areas where the poorer among the Kanpur population can be found; though about 30 percent of the residents are said to be engaged in other jobs than labour³². The labour colonies of the industries are located near the mills and industries. These include Maxwelganj, Elgin Mill Settlements, Allenganj, Mac Robertganj, Kamalanagar and Kakomiganj. The labour colonies planned by the government, wholly or partially, include Harihar Nath Shastri Labour Colony, Jajmau Labour Colony, Nawabganj Labour colony, Benajhabar and Rukmani Devi Labour Colonies, Juhi Kalan and Civil Lines Labour Colonies, and Kidwai Nagar and Govind Nagar Labour Colonies.

6. EMPLOYMENT, INCOME AND EXPENDITURE OF SLUM PEOPLE

Among the slum-dwellers of Kanpur city, 34.1 percent of people of all ages were working³³. Only one percent of the persons were seeking or available for work (Table 5.7).

TABLE-5.7

SLUM POPULATION ACCORDING TO CURRENT WEEKLY
ACTIVITY IN KANPUR CITY (1976-77)

Age-Groups (years)	Working (% to total)	Seeking/Available for work (% to total)	Not Available for work (% to total)
0-14	1.04	0.05	34.70
15-29	11.30	0.89	16.90
30-59	19.10	0.10	10.90
60 & above	2.63	-	2.38
All Ages	34.07	1.04	64.90

Source : Tables with Notes on Survey on Socio-economic condition of Households in Slums in Metropolitan Cities; Kanpur; NSS 31st Round; 1983.

Most of the people relied on their efforts to find jobs. Thus, these people might have been using their acquaintances to get jobs in industries or they might be doing their own jobs. Very few had their names in the employment exchange.

The monthly household income figures for the slum population and industrial workers, as given in the table, are not strictly comparable because they pertain to two points of time.

Still they may provide us an idea about the conditions of these people.

TABLE-5.8

KANPUR : MONTHLY HOUSEHOLD INCOME OF SLUM (1976-77) AND
WORKING CLASS (1981-82) POPULATION

All Slums Population (1976-78)		Working Class (1981-82)	
Monthly HH Income Groups (Rupees)	% of households	Monthly HH Income Groups (Rupees)	% of households
0-50	2.05	0-60	0.19
51-100	5.74	60-99	0.44
101-150	12.90	100-149	1.27
151-200	11.70	150-199	2.50
201-300	20.00	200-299	7.92
301-500	29.00	300-499	21.43
501-700	10.60	500-749	42.30
700-1000	7.20	750-999	11.96
1001 & above	0.82	1000 & above	12.02
	100.0		100.0

Source : (i) NSS Survey on Socio-Economic conditions of households in Slums in Metropolitan cities : Kanpur; 31st Round (1983)

(ii) Working Class Family Income and Expenditure Survey 1981-82, Kanpur; Labour Bureau, Chandigarh.

About one-fifth of the slum households in 1976-77 had a monthly household income upto Rs. 150 only. About half of the households live on income upto Rs. 300 per month. This was with an average household size of 4.12 persons.

The condition of working class households was somewhat better in 1981-82. Only 4.4 percent of households had a monthly household income upto Rs. 200. Another 8 percent had their

income between Rs 200-300. Compared to all-slums population, the workers show lesser proportion of households in lower income groups. Thus we see that workers in registered industries earned more. But around 10 percent of them lived a very deprived life (Table 5.8).

Low income levels of the slum population in Kanpur are paralleled by low percapita monthly consumer expenditure observed there. It was found that more than 42 percent of households had monthly per capita expenditure upto Rs. 55³⁴. This can roughly be compared with the poverty-line of Rs. 69.90 in 1977-78³⁵. So, we may conclude that around 40 percent of the slum households were living below this line in 1976-77, while another 20 percent were living just above or around the poverty line (Table 5.9)

TABLE-5.9

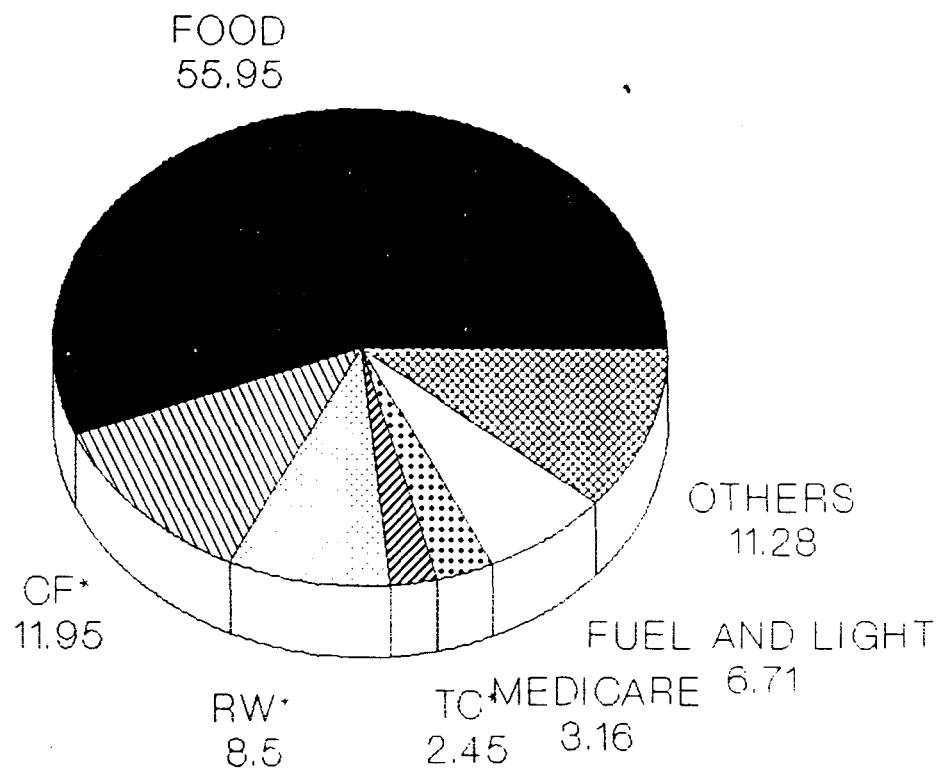
KANPUR CITY SLUMS : MONTHLY PER CAPITA
CONSUMER EXPENDITURE (1976-77)

Monthly Per Capita Consumer Expenditure Classes (Rs.)	Present Households
0-18	0.20
18-24	1.40
24-34	9.60
34-55	31.10
55-75	20.04
75-100	17.40
100 & above	20.20

Source : Survey on socio-economic conditions of households in slums; Kanpur; NSS 31st Round; 1983.

KANPUR METROPOLIS

EXPENDITURE OF INDUSTRIAL WORKERS (1981-82)



Source :Labour Bureau, 1981-82.
 CF**=Clothing,footwear etc.;RW**=Rent,
 Water Charges;TC=Transport & Communica.

Figure 5.3

TABLE-5.10

KANPUR : PERCENT EXPENDITURE OF INDUSTRIAL
WORKERS BY ITEMS (1981-82)

Items of Expenditure	Present Expenditure
Food	55.95
Fuel and Light	6.71
Rent, Water charges, House repair	8.50
Clothing, Footwear	11.95
Education	2.52
Medicare	3.16
Recreation	0.79
Transport and Communication	2.45
Personal Care	2.56
Others	5.41

Source : 'Working Class Family Income and Expenditure Survey : 1981-82, Kanpur'; Labour Bureau.

The working class family income and expenditure survey revealed that around three-fourths of the expenditure of the industrial workers was spent in providing for food, rent and clothing only³⁶. Such a high proportion of expenditure on basic necessities shows that the income levels of these workers are really very low. In such conditon, there can be hardly any hope for expenditure on luxuries (Table 5.10 and Figure 5.3).

A similar situation - even worse - is present in other slums people who are not employed in industries.

7. INFORMAL SECTOR AND SLUM-DWELLERS :

A large size of informal sector is found in all the metropolitan cities of India. This is due to a number of factors

which we have discussed above. Here, we shall try to find the nature of activities followed by slum-dwellers of Kanpur, and on the basis of those activities and income (where available), estimate the extent of informal sector.

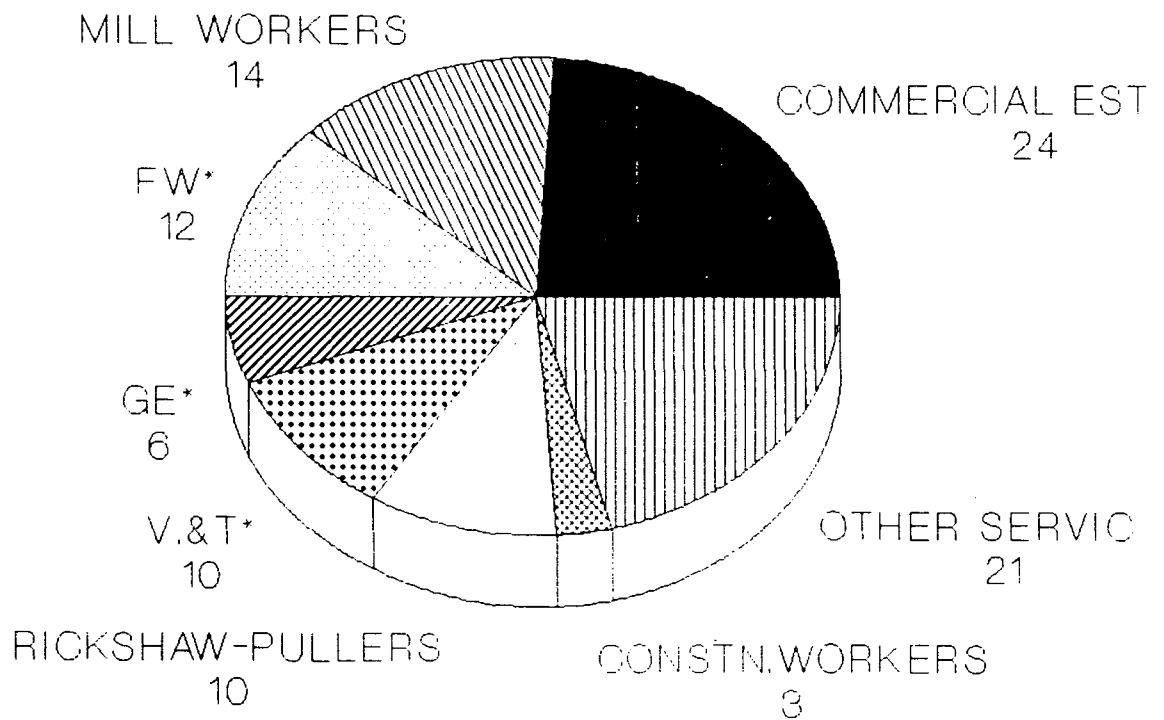
From the table on occupation classification (see Appendix) of the workers in slums areas, we can say that workers from entry number 9 to 23 form part of the informal sector. These workers form 42.2 percent of the total workers. It can be argued that 'sales workers' living in these slums also form part of the informal sector of the economy. The addition of these 18.3 percent workers gives us a figure of 60 percent or three-fifths of workers in this sector. If we further add one-fourth of the workers in 'spinning & weaving' and 'tanning and shoe making' into the informal sector, which is not an unrealistic figure, we get a final list of workers in informal sector at 65 percent.

From the table 5.11 and figure 5.4, based on Kanpur Development Authority study, we can infer that most of the people in slums of Kanpur are dependent on earners in small occupations³⁷.

Occupations from serial number 5 to 8 obviously fall in the informal sector. The income levels of occupations 'Commercial Establishments' and 'Other Services' being not so

KANPUR CITY

OCCUPATIONS OF SLUM POPULATION (1978)



Source :V.K.Kumra (1982), Varanasi.
FW*-Factory Workers;GE*-Govt. Employees;
V.&T*-Vendors, Thelawalas

Figure 5.4

TABLE-5.11

POPULATION IN SLUMS OF KANPUR DEPENDENT ON DIFFERENT
OCCUPATIONS AND THEIR INCOME LEVEL (1978)

Class of Occupation	Population Dependent(%)	Monthly Income (Rs.)
1. Mill Workers	14.0	300-400
2. Factory Workers	12.0	250-300
3. Government Employees	6.0	250-275
4. Commercial Establishment	24.0	150-200
5. Rickshaw Pullers	10.0	150-300
6. Vendors & thelwalas	10.0	150-200
7. Unskilled Building Workers	1.0	125-150
8. Skilled Buildig Workers	2.0	300-400
9. Other Services	21.0	125-200

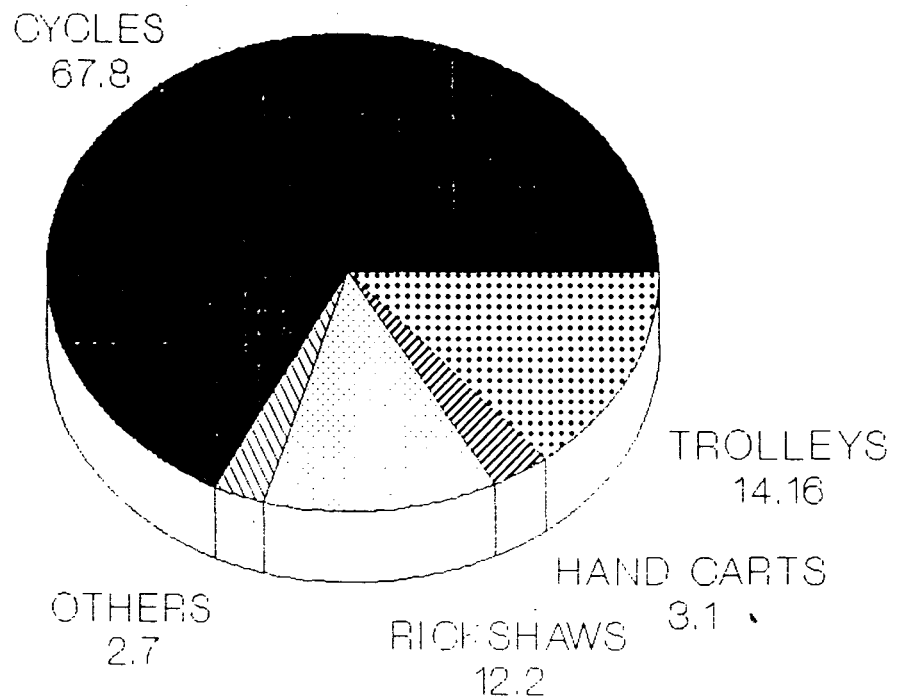
Source : V.K. Kumra (1982) : "Kanpur City : A Study in Environmental Pollution"; Tara, Varanasi.

high, as compared to those of rickshaw-pullers and vendors, we can say that these occupations relate to petty business and other such services. In this way, by leaving out the first three occupational categories, we see that about 67.4 percent of the population in slums is dependent on small business, daily labour, vendors, rickshaw-pullers etc. It give us an indirect indication of the size of informal sector in these areas. This figure is close to the earlier figure we arrived at above.

The part played by the informal sector in the economic life of Kanpur metropolis can also be inferred by the number of informal type of 'vehicles' (driven by man or animal power) on

KANPUR CITY

INFORMAL MODES OF TRANSPORT (1976)



Source :R.B.Mandal & G.L.Peters (eds.),
1982.'Urbanisation and Regional Develop-
ment'; (Concept: New Delhi).

Figure 5.5

the roads³⁵. Rickshaws, Carts, Tongas, Trolleys, Cycles constituted more than one lakh in number in 1976-77 and this figure is only for registered carriages (Table 5.12 and Figure 5.5). Kanpur Development Authority report on integrated city development programme estimated around 30000 unregistered rickshaws about the year 1975³⁷. These figures of informal modes of transport (1.19 lakh) compare with the total registered motor vehicles in 1980 and 1989, which were 52000 and 1,43,079, respectively. Even if the informal modes of carriages have declined over the years, they should not go much down. This inference is drawn from the fact of continuous shortage of buses, the presence of narrow, congested roads and markets where

TABLE-5.12

INFORMAL MODES OF TRANSPORT IN KANPUR (1976-77)

Kind of Hackney Carriages	Total Number
Cycle	80863
Rickshaw	14513
Moving Trolleys	15882
Buffalo Thelias	522
Thelias (Hand Carts)	3715
Rickshaw Trolleys	1028
Bullock Carts	19
Tonga Kharkhara	1996
School Rickshaws	677
Boats	10
Total	119225

Source : R.B. Mandal & G.L. Peters (eds.), 1982 : "Urbanization and Regional Development"; Concept, New Delhi.

vehicles like buses can't go; and not so upward-looking economy as clear from stagnant in-migration.

From the above discussion, we come to see that informal sector is an important part of the economy of the slums areas in Kanpur, where a minimum of three-fifths of people are dependent on it. The rickshaw-pullers, vendors, unskilled workers, domestic servants, sweepers, dhobis, barbers, tailors, carpenters, blacksmiths, daily-wage earners like construction workers and stone-cutters, thelawalas are some of the main representatives of informal sector in Kanpur metropolis. Due to low income levels, large families, drinking and other habits, these people lead a life of struggle. Even a tolerable housing is something of a privilege for many of them, what to talk about other facilities and items of luxuries.

8. ENVIRONMENTAL, HEALTH AND LIVING CONDITIONS :

It is commonly observed that heaps of garbage and rubbish are found near the slums. It, sometimes, so happens that slums are located near the disposal sites of solid waste refuse. This is so because these sites are of negative value to the general public, and they have no objections to these poor people living there. If the slums are not located in such areas, they rapidly become associated with such sights as the wastes from these settlements are never removed by the municipal or other authorities.

Many of the people living in slums are 'untouchables' or Harijans⁴⁰ (their proportion can vary between one-fourth and one-third). These people are engaged in 'inferior labour and live as outcastes in utter poverty in slums, generally by the side of 'nalas' (of sewage). The rodents flies and mosquitoes that originate in these wastes and nalas, alongwith the poisonous gases, play havoc with the health of people living nearby. The utter lack of public latrins forces these people to use open places like solid waste disposal sites and nalas for the purpose. Even where public latrines are available, they are very filthy and insanitary. Similarly many people in the slums and the 'ahatas' of Kanpur have no access to tap water. Quite a few depend on Kutchha and pucca wells, ponds and canals⁴¹. Living continuously in such exposed and dangerous conditions, it is no surprise that many diseases like cholera, malaria and jaundice are common. It is reported that some of the highest tuberculosis and infant mortalities in the country are observed in Kanpur slums.

Kanpur Development Authority report said that about 30 percent of slum population remains continuously ill⁴². General well-being of the people is very low and the danger of the breakout of epidemics always present. All these factors of diseases and health reduce the work efficiency and productivity of the workers. Diseases of lungs and wind-pipe are common among the textile wokers and skin-diseases amongst the skins and hides curators.

The factors of poverty, density of population and various tensions of life, the low sex-ratio amongst the migrant workers etc. are reflected in rising rates of crimes in slums areas⁴³. Violence, criminal activities, drunkenness and prostitution are some of the disturbing trends. These have bad affect on the children. About one-fourth of the children of school-going age don't go to school⁴⁴. Juvenile delinquency is on rise among the children.

The problems of Kanpur city can be visualized as that of an integrated ecosystem. The growing population pressure on agriculture-based eco-system of the rural hinterland of Kanpur city engenders movement of people towards the city. Kanpur city can be conceptualized as an urban ecosystem with industries and commercial activities, characterized by high turnover of goods and services. The higher economic productivity of this urban ecosystem is supposed to sustain a greater number of people. But due to migration as well as natural increase of population, the urban ecosystem has also come under stress. The land and water resources are becoming more scarce. Various activities of the concentrated mass of mankind are adding abnoxious elements into the city's air, water and land. This has endangered his own health and well-being. Moreover, the city's economic system itself has been overwhelmed, and is unable to provide jobs and employment to the people, to make optimum use of their abilities. Faulty planning of city's physical and economic aspects has

worsened the situation. The problems of sanitation, transportation, informal sector, underemployment and poverty, and slums are the consequences of this. But this can't be allowed to go on because it has defaced human dignity, equity and well-being. A good house, food and environment is his prime necessity. The problem has to be tackled in a comprehensive manner. This issue we take up next.

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CHAPTER - VI

A REVIEW OF URBAN LAND AND HOUSING POLICIES - THE QUESTION OF SUSTAINABLE URBAN DEVELOPMENT

Although there have been a number of attempts to develop Master Plans for various cities and metropolises; an all-comprehensive land policy is still lacking. A National Housing Policy was drafted only in late 1980s. In view of the fast pace of urbanization and metropolitanization, there has been an increasing pressure on land in million-plus cities. Prices of land are, thus, sky-rocketing. Little availability and high cost of land is reflected in the housing situation in large cities. Many people live in one-room tenements, most of them rented, while a gradually growing number is forced to live in slum-like conditions, or even squatters.

Providing land for housing for teeming urban millions and the poor, improving the conditions of the people living in slums and squatters etc. are issues of management of resources, economic development of cities, and a sustainable urban development policy. For achieving a sustainable urban development we need to have a growing city economy with an equitable provision of housing, employment and other facilities. Access to good housing is an integral part of the equitable development of society. Without this, the urban society can't be sustained. A responsible, balanced and law-abiding future citizen can't be brought up in the streets slums or pavements without access to basic facilities and opportunities. The land

and housing policies are, thus, an integral part of the overall metropolitan development strategy.

URBAN LAND POLICIES

Inflation in urban land-prices in India has outpaced the general rate of inflation, and sometime it increases more rapidly than the growth in average incomes¹. The growth of population, urban economy, and nearness to facilities also raise the value of land. About 59% of households in India's urban areas have no land at all while 3-4% of the rich have about 18% of the total land. Land is a fixed, natural entity which can't be created by man². Due to this, monopoly control can easily occur in the case of land, and this further adds speculative prices and unearned capital gain to this commodity.

Land policy in India is a misnomer, as there never has been a coherent, comprehensive land policy³. Occasionally, there have been some expressions of decisions relating to land-use and other aspects. But these were in brief and rarely based on acute understanding of urban problems. In a Conference of State Ministers for Town and Country Planning in 1961, the 'social objectives' of a National Urban Land Policy were identified. The main objectives were adequate availability of land at affordable prices; prevention of land concentration in a few hands; and encouragement of co-operative community effort and 'bonafide' builders in the field of land development, housing and

construction activities⁴. The Third Five Year Plan followed these recommendations.

The report of committee appointed by Central Council of Local Government Ministers, submitted in 1965, felt the need for a comprehensive, long-term urban land policy to tackle problems of slums and housing, provision of services, and planned development of rural and urban areas. The report suggested creation of Development Authorities to buy vast areas in order to control speculation and land-price rise⁵.

Seventh Five Year Plan recommended a 'spatial approach' to the land problem. The strategy developed was to buy land in concentric circles, around the small, medium towns and new urban centres much before there could be a escalation in the land prices⁶. This land was proposed to be developed before being sold to public or private sectors. The ongoing Eighth Five Year Plan has a greater spatial emphasis as it purports (i) an integrated planning for development of a hierarchy of rural and urban settlements through various schemes as IDSMT, the concept of Growth Centres and Generators of Economic Momentum (G.E.M.s)⁷, (ii) the promotion of industry in small and medium towns (iii) it calls for a more efficient use of land in the older city-areas by their 'economic regeneration' through setting-up industries in those areas, following the new 'industrial location theory'.

The Plan lays stress on integration of various plans of the Urban Development Ministry, Integrated Development of Small and Medium Towns, housing and infrastructure development programmes of H.U.D.C.O., and employment generation scheme of Jawahar Rozgar Yozana (J.R.Y.). A combination of UBSP (Urban Basic Services Programme) and EIUS (Environment Improvement of Urban Slums) has been proposed for solving various problems of the poor. It also focuses on decentralization of local urban administration and raising resources of the local government through rationalization of tax and non-tax resources. Significantly, it calls for removal of legal 'bottlenecks' like Urban Land (Ceiling and Regulation) Act, 1976, Transfer of Property, Land Acquisition and Land Control Acts which have been heavily criticized for their loopholes.

In 1976, Urban Land (Ceiling and Regulation) Act was passed to wrest the land concentrated in a few hands. It proposed buying of surplus land by the government at a prefixed rate; development of land by public or private sector and provision of facilities therein; and, finally, the redistribution of land among the lower classes. A ceiling was put on the owning of vacant lands and plinth area of new buildings.

A number of difficulties were faced in implementation. Due to lack of resources, the state governments could buy only 8% of the surplus land⁶. The other stages of the programme were

naturally affected. The anticipation of land-shortage created by the passage of Act prompted the land-developers to buy large areas of land on the urban fringes. These rural areas were outside the perview of the Act. Due to large-scale hoarding, the prices of land rose high. Land could not be bought except in black-markets. The shady deals also meant unsurety about the title of land and tenure. The overall impact was that the poor, for whom the Act avowed special targets; were driven out of the land-market and their condition was worse than ever.

It is felt that one of the causes of failure was that the state governments failed to take complementary measures suggested by central government to avoid speculation in urban land and properties⁹. These measures were related to built-up property, unproductive use of vacant land, agricultural land within or periphery of cities, etc. which were not covered by the Act proper.

THE HOUSING POLICIES

Uptill late 1980s, there was no comprehensive Housing Policy in India. Government's programmes and policy-bits for housing sector were announced from time to time in the Five Year Plans.

The Integrated Subsidized Housing Scheme for Industrial Workers and Economically Weaker Sections (EWS) was begun in 1952

for the eligible workers¹⁰. The scheme was integrated with Housing Programme for EWS in 1966. It aimed at creating open developed plots or small two-room houses to be given on rent. Centre provided a 50% loan and a 50% subsidy to the states, while the employer-built houses got lesser subsidy.

Slum clearance and Improvement Scheme was started in 1956 for those with monthly income upto Rs. 350/-. The scheme also included improvement of the slums¹¹. The rental houses were built by State Housing or Slum Clearance Boards. The scheme was taken-up in 1969 but high costs and enormity of the problem forced the scheme to be cancelled. It was then, replaced by schemes for improvement of slum environment in 1972. These schemes aimed at providing amenities in the slums. An estimated 45% slum population is claimed to have been covered by it.

The Task Force - IV on "Shelter for the Urban Poor and Slum Improvement", observed that 'sites-and-services' and self-Help Housing Programmes, in which developed plots having services are provided or allottees themselves develop their houses, had reached only a handful of the poor¹². Moreover, the houses wherever built for the poor, were unaffordable for them and often passed into the hands of middle and higher income classes.

A Draft National Housing Policy was framed in 1987. It encourages government to act as a facilitator of housing especially for the weaker sections. It also aims at improving of

existing housing stock; stimulating investment in the housing sector and improving quality of life by providing basic services.

Without access to land, equitable access to housing is not possible. The Policy, therefore, calls for provision of developed land at reasonable prices and for forming a Land Policy ensuring an enlarged supply of land for the economically weaker section and the poor¹³. A Housing Bank has been recommended for financing and encouraging individual, public or co-operative housing. It also calls for suitably amending the ULCA, Rent Control Act and Transfer of Property Act. The role of the NGOs has been recognized as a link between public sector and the people. The Policy lays emphasis on making programmes for the informal sector, rural and slum areas.

On paper, the Housing Policy appears to be in favour of low income classes and weaker sections. But the chances of getting cheap land and provisions of soft loans for the poor need to be improved further. A sincere perusal of the policy will ensure its success in future.

Rent Control Laws were formed during WWII. These laws have made the rents stagnant at the then prevailing rates. The city-centres in such metropolises as Bombay have become old and dilapidated due to those laws. The owners can't afford to improve the housing conditions with such low rates, while the tenants don't leave them because of their cheap rents. This has created

virtual ownership of the tenants and discouraged private sector in the housing development¹⁴. Consequently, housing backlog has amassed and the responsibility of providing housing has fallen on the government which finds itself unable to cope with the situation. The law has been further circumvented by the practice of 'pugdi' where lumpsum amounts, equalling the market rates of house-rents, are paid at the time of entry of tenants. Many areas in city-centres are being 'under-used', devoiding the local government of high revenues which could occur due to modern land-uses.

Role of Non-Governmental Organizations (NGOs) in housing programmes for the poor has become important¹⁵. Advantages in the exclusive implementation of projects under NGOs, as compared to government projects, are their high sensitivity to local problems and needs; good rapport; enthusiasm and possibility to take over controversial issues; less susceptibility to political manipulation; no pressure for quick results; and the opportunity to supervise the projects intensively and for long periods of time. Involvement of the NGOs in low-cost housing projects in Hyderabad and elsewhere is an illustration of their worth and potential. Government has recognized their importance in the Draft National Housing Policy¹⁶.

URBAN DEVELOPMENT POLICIES

Integrated Urban Development Project (1974) was the first urban development scheme of such a magnitude. It covered all metropolitan and million-plus cities, all towns of 3 lakh and more, towns with growth potential, all capitals and other towns and areas of national importance. The aim was to achieve a 'healthier pattern of human settlements'.

There were several shortcomings in its implementation. It was accused of a 'metropolitan bias' citing a greater allocation for such cities¹⁷. Lesser emphasis was laid on generation of employment and increasing urban productivity than on physical planning and development - about 70% of the projects were related to land acquisition and development only. The growth of Development Authorities degraded the role of local government.

The scheme was suddenly stopped. However, it succeeded in attracting the attention of the governments towards urban problems of development.

A national urbanization policy in the form of Integrated Development of Small and Medium Towns (IDSMT) was formed in the Sixth Five Year Plan. The scheme aimed at slowing down, and if possible even reversing, the growth of metropolitan cities. Emphasis was laid on the growth of small and medium towns upto one lakh by developing infrastructure and other

facilities there. These towns were supposed to be 'growth' and 'service' centres for their rural areas, with a bigger aim of stemming rural migration stream to metropolises.

The selected cities were to be provided with more and better infrastructure, housing and land development alongwith generation of employment. Improving the urban environment was another feature of the programme. The scheme succeeded to an extent in commingling physical and financial planning of the city but lack of resources was felt¹⁶. Another failure was in connecting spatial development with sectoral developmental programmes. The guidelines had not mentioned as to how this was to be achieved.

During Seventh Plan, the urban policy shifted from IDSMT to Urban Basic Services (UBS) and housing policy¹⁷. UBS is a district level scheme and works in conjunction with other rural and urban development schemes like IDSMT, Urban Community Development (UCD), Social Inputs in Area Development (SIAD), DWCRA, etc. The aim, again, is to achieve a balanced development of rural and urban areas and stop rural to urban migration. There is, however, a serious need for coordination between different departments executing various schemes. A fruitful urban development programme needs to deal directly with the problem of poverty, a mere urban services programme can't be of ultimate help.

National Commission on Urbanization in its report has identified 329 centres, 92 Generators of Economic Momentum (G.E.M.s), and 49 Spatial Priority Urban Regions (SPURs) and recommended a large investment in them. Also included are 4 National Priority Cities; State Priority Cities, districts with urban population above national average. Though a large increase in funds has been recommended, this has not been related to development of small and medium towns or of the urban poor. It has proposed strengthening of resource - raising capacity of local bodies, but this seems improbable in case of small towns with weak economic base²⁰. The commission has expressed concern for the poor by asking for 15% of all developmental funds for the Economic Weaker Sections. It also wants recognition of the squatters. But it has not spoken for a large number of metropolitan workforce engaged in low-income informal sector²¹.

The Commission encourages public and private sectors in housing, services and infrastructure sectors. However, its policy suggestion for withdrawal of all schemes for development of industries in backward and 'no-industry' districts does not appear acceptable on the plane of spatial and socio-economic equity²².

METROPOLITAN DEVELOPMENT PLANS

Master Plans of respective cities and metropolises are other documents having some sort of inbuilt land and housing

policy. Delhi's Master Plan, passed in 1962, was the first comprehensive urban planning exercise in India. It aimed to acquire 35,000 acres of land for future expansion; zoning and land-use regulations for 136 zones of the city; decentralization of large and obnoxious industries to the peripheral areas; 'reception areas' to accommodate 70,000 immigrants every year in self-help, cheap design housing; a ring road; one mile green belt and 6 'ring-towns'.

Delhi Development Authority has been able to acquire land more than anywhere else in India²³. It is felt that government provided a lot of money to buy this land. The 'fixing' of prices also helped the administration. Nearly one-half of the residential plots have been sold in auctions, which made it difficult for the poor to own a plot and house. the monopoly of government also raised the land-prices which further marginalized the poor.

The resettlement of 'jhuggi-jhonpri' dwellers at a distance away from their place of work has increased their expenditures due to daily transport costs. The restrictions on carrying one's occupations inside the house has always hurt the poor more because they are mostly self-employed²⁴. Land-use policy in Delhi and elsewhere has always gone against the poor.

Calcutta Metropolitan Planning Organization (CMPO) framed Basic Development Plan (BDP) in 1966. Economic

Development of the city by providing employment was one of the main objectives of the plan. Other objectives included creation of infrastructure like water supply, sanitation and drainage; transportation development; provision of housing, health and educational facilities. The short-term targets dealt with problems of water-supply, drainage, traffic congestion, and improvement in slum conditions. The long term policy focussed on growth of population in 'growth centres' and development of metropolis so as to sustain 12.3 million people in 1986²⁵. The proposed agencies for the provision of services could not take shape. The supervisory body of Calcutta Metropolitan Development Authority (CMDA), meant to plan, finance and implement programmes was established in 1970.

Calcutta Urban Development Programme-I (CUDP-I) was now framed with the financial backing of World Bank. Investment in infrastructure increased by over 13 times²⁶. During CUDP-II about 50 projects related to water supply, roads, sewerage, health care and environment, and 'bustee' improvement were undertaken between 1977-83.

About 3 million slum-dwellers have benefitted due to heavy investment in infrastructure and services sector in Calcutta. Improvement in environment and infrastructure has, however, raised the rental values of 'bustees' and the owners of the dwellings have increased the rents²⁷. This has put economic

pressure on the dwellers. The improvement in environment and infrastructure has occurred in the slums of the city centre. This has increased the 'gap' between the slums of central and peripheral areas. The co-ordination among different projects in operation in Calcutta is a difficult proposition for the present organization. Despite taking big steps, the problem of housing and poverty in Calcutta remains. Commanding the largest hinterland amongst all the Indian metropolises, a properly executed and formulated regional plan is a must for Calcutta and its region²⁰.

In 1973, Bombay Metropolitan Regional Planning Board prepared a regional plan for Bombay Metropolitan Region for 1970-91. The Plan proposed to ameliorate deficiencies of water supply, housing, transportation; and problems associated with slums, congestion, insanitation, traffic jams and increasing commutation distances in the metropolis. Another aim was to keep the population of metropolis within optimum levels. This needed a balanced development of other areas within Bombay Metropolitan Region and the backward areas of the state.

The hierarchy of urban settlements proposed in the Regional Plan was (a) Greater Bombay (b) the twin metropolis (New Bombay in Thane-Panvel area) (c) existing towns and their expansion (d) new towns to be built around new work places (e) small full-fledged townships near railway stations. The Plan

recommended a policy fo dispersing industries to the periphery by providing incentives. However, the industries relocating in New Bombay faced problems of higher transportation costs and disruption in electricity supply leading to production loss²⁷. Bombay Metropolitan Regional Development Authority was created in 1975. It was supposed to engage in bulk acquisition of land for development purposes. BMRDA received a lot of money as loan from World Bank and other national financial organizations for development of transport, housing, water-supply and sewerage, environmental improvement of slums, and schemes for improving the conditions of urban poor.

The BMRDA started Affordable Low-Income Shelter (ALIS) with World Bank loan in 1985, the project itself being subsumed under Bombay Urban Development Project (BUDP) . The project was very large and involved a big amount of Rs. 2823.3 million, 53% of which was provided by the Bank. It aimed at catching up with the housing shortfall of 44,000 units per year by the year 1985-86³⁰. The supply under site-and-services and other housing projects was to be raised from 15000 units in 1983-84 to 40,000 units in 1985-86. The other programmes to be taken up were the improvement in squatters and resettlement of dilapidated houses. The results of this housing programme are yet to be evaluated for their performance.

The functioning of BMRDA has been affected by multiplicity of local administrative bodies, and more than one

agency providing the same services. Shortage of land and its high-prices have made land unaffordable for the poor, lower and middle income groups. Urban Land (Ceiling and Regulation) Act of 1976 has further increased hoarding, black-marketing and price of the land. The government has allowed HUDCO to participate in the capital market to mobilize funds for low-income housing schemes. But Bombay remains a metropolis with one of the worst housing situation. Sites-and-services programmes may provide some hope to poor households, especially in view of the large money being pumped into it.

Concentration of a large population- many of them poor - and haphazard urban growth has deteriorated living conditions in Kanpur metropolis. A large number of people live in slums, squatters or under the sky. The Slum Clearance Scheme in Kanpur was started in 1956. Loans and grants provided by the government, and some by municipality, were invested in multistoreyed rental-house construction for the slum-dwellers³¹. However, the scheme was discarded due to lack of resources.

In 1972-73, the Central Government launched a new scheme for Environmental Improvement of slums. A grant of Rs. 100 (Rs. 150 since 1979) per capita was granted for creating basic infrastructure as piped water, public toilets, pucca streets and lights, etc.³². Since 1979, these schemes are being executed by Kanpur Nagar Mahapalika.

Integrated City Development Programme for Kanpur (1975-81) was prepared by Kanpur Development Authority (K.D.A)³³. It proposed to provide 10,000 plots to economically weaker sections for construction of houses, while 13,000 houses were to be built for them. Under sites-and-services programme 25,000 housing plots were to be developed and provided. Kanpur was the first city of North India, and fourth city after Calcutta, Madras and Bombay to receive loan for urban development from World Bank³⁴. With this support, several programmes were proposed to be launched by K.D.A. at a cost of Rs. 4163.30 lakh. In all 35 rural slums were to be improved by providing services. Other programmes included were related to sewerage and sanitaiton, water supply and traffic management.

However, most of the houses that have been built up for the economically Weaker Sections are unlawfully sub-let, or forcibly occupied by persons who have nothing to do with their allocation. It is alleged that officials, local leaders and councillors are engaged in these unlawful activities³⁵. Provision of services, and their maintenance in a city, requires a strong financial base. In an industrial city of the stature of Kanpur, tax-revenues in a full decade (1961-71) grew by only 1.2 percent. It is said that underestimation and non-recovery of dues, free supply of electricity to some of the clients, occupation of municipality land and sale of plots at lower rates than viable caused a heavy downturn on the resources of Kanpur Nagar Mahapalika³⁶.

There are many unbuilt areas within the municipal limits³⁷. Housing programmes can be started there within a well-planned framework. The provision of better employment for the poor, enhancement of informal sector activities and raising the income levels of workers also need to be incorporated in the urban development plan of Kanpur. A regional approach to urban problems is also needed in order to lessen the pressure on land and jobs in the metropolis. Meanwhile, 'shelter for all' by 2000 A.D. seems to be a too distant a target to be attained.

To ensure a sustainable urban development, we need a kind of urban policy which provides an equitable supply of land and housing for all the present and future residents of the city. With this end in view, some considerations for an urban development policy could be :-

- (i) Availability of cheap land is an important requirement of the common masses, and a significant aim of urban land policy. The government should take measures to control hike in land prices through advance large scale acquisitions, fixing of land prices, etc.
- (ii) Economically Weaker Sections and those below the poverty line can't buy the land outrightly, and settle down on public land. Because of the fear of being evicted they don't invest in the improvement of their hutments. They need to be provided tenural security of some sort as an incentive to improve their housing.

Direct ownership of land has not proved successful in case of urban poor³⁸. It has been suggested that land should be provided to them on leasehold basis for 30 or 50 years, with options for buying after expiry of 10-15 years of lease.

(iii) It has been seen that given security of tenure, the poor manage to improve their housing gradually. The administration can help with programmes like 'sites-and-services', slums improvement through provision of services, and by providing credit on easier terms.

Without tenurial security even the slum area improvement programmes prove harmful to the poor. This occurs due to displacing of the poor by rich due to appreciation in the rental values of dwellings following infrastructural improvement.

(iv) In case of the vacant urban land lying useless in the city-centres, high tax-rates should be imposed to mope up the unearned advantages occurring to the land-owners. The Urban Land (Ceiling and Regulation) Act, 1976 has failed in its purpose to create an equitable access to land. Rather, it has led to a greater hoarding of land by a few and encouraged black-marketing. It needs to be suitably amended/modified. (v) An Urban Land Management Authority should be established to facilitate proper utilization of

urban land, to check price-hike in urban land³⁷. It should be provided with its own resources and powers to take action against the erring.

(vi) The Central Governemnt has decided to encourage private sector in housing in the Eighth Five Year Plan⁴⁰. But this should be done under the overall supervision of the government to take care of the weaker sections. To encourage construction of low-cost housing, tax deductions on the housing built by the private sector for the weaker section could be allowed⁴¹.

(vii) In line with the proposals of the latest plan, it would be logical to stop building government housing for the civil servants and other professional services. This policy is a continuation of the Colonial policies⁴². It could be replaced by housing allowance instead.

(viii) Government housing may be limited to lower income groups only. Those working in the private sector should be taxed according to their earnings (pays) to subsidize housing for the poor.

(ix) Many people in large cities are temporary residents on posting. Rental housing can be helpful in reducing housing shortage in those cities. Therefore, investment should be enhanced in rental housing. To encourage private sector

rental housing, a reasonable amount of profit should be allowed to occur to this sector.

- (x) To encourage owners of houses to rent out parts of their house, the present Rent Control Act should be amended. However, the 'pugri' transactions and high rents as prevalent now should be checked.
- (xi) Building regulatory standards should not be uniformly applied. The poor can't build houses at par with the rich. Building regulations should be according to different income groups.
- (xii) Informal sector employs a majority of the metropolitan poor. Therefore, it can't be erased out. Rather opportunities for higher incomes in this sector should be created. Informal workers should be allowed to carry on their work in their residences.
- (xiii) Lengthening journey to work and home discourages middle class from living far from the cities. An efficient, rapid transport system will encourage people to live in peripheral areas⁴³. This will also reduce land and rentals in inner cities. The poor, however, should be provided housing near their places of work. Relocation programmes for slum dwellers failed because these people can't afford the transport costs involved.

(xiv) People should be involved in decision-making for the processes and programmes which affect them⁴⁴. This will bring greater success to government's policies, besides educating the planners about their actual needs, and installing confidence and community spirit in the people.

(xv) For a long term plan, policies should be framed on a bigger, regional scale. Policies should be directed towards decentralization of population from large metropolitan cities to satellites and other towns. For this, equal opportunities of vertical mobility should be provided in smaller urban and rural areas by creating employment opportunities and providing infrastructure.

It seems that we have to live with the fact that immigrants will keep pouring into the metropolitan 'melting-pots'. Further, it may not be proper to interfere with one's rights and choices in a democratic society. So, we have to learn to live in a state of progressively declining living ambience and activity space, lower levels of consumption, and social and political tensions⁴⁵. Technological development and a change in living styles and consumption patterns seem to be the options available to our future metropolitan societies.

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CONCLUSIONS AND POLICY IMPERATIVES

South Asia has one of the lowest levels of urbanization but a massive urban population. Most of the urban population is concentrated in three large countries of India, Pakistan and Bangladesh. The growth of towns and cities in South Asia is, to a great extent, dependent on rural to urban migration. Inequitable development of regions, rural-urban income gap, decrease in land-man ratio, development of transport have encouraged migration to towns and large cities. South Asian region is still predominantly rural. Nepal and Bangladesh, two of three South Asian countries included in the world's five least developed countries (the other being Bhutan), have the fastest urban growth rates in the region. Thus, 'push' or distress migration is more significant in the region.

Large million-plus cities are to be found in the three largest countries only. There are six metropolises above 5 million, five in India and one in Pakistan. However, unlike the western experience, urbanization in South Asia can't be explained fully by the process of industrialization. The colonial policies in the past encouraged inequitable growth and led to dominance of some cities over the other. Various factors causing 'push' migration have also encouraged growth of those cities. So, metropolitanization in South Asia has acquired the form of urban primacy. It is especially noticeable in Pakistan and Bangladesh. In India, urban primacy does not occur at national level, but at the state level urban primacy can be seen in 13 out

of 25 states. The recent trends show a slower migration rate in India and Pakistan. This may be due to stagnating economy and deteriorating living environment in large metropolises. Srilanka also has a primate city in Colombo. In case of Nepal and Bhutan, various physical, historic and economic factors have made them lowly urbanized.

Varied urban problems are to be seen in South Asian metropolises. Atmospheric and water pollution in large metropolises like Lahore, Calcutta, New Delhi, Kanpur and Bombay are directly related to endemic diseases of respiratory system and alimentary canal. Heavy population pressure on limited urban land and their high prices mean that owning a house is becoming difficult for the poor, low and middle class people. So, they rent in poor quality slums or squat on public land. Many in Dhaka, Calcutta, Bombay, Kanpur, Karachi, etc. live in slums. The local administrations don't have enough resources to provide infrastructure and services to such large concentration of urban people. Many of the in-migrants from rural areas are landless labour or petty farmers. So, their migration is a survival strategy. As they are unskilled or semi-skilled workers, they are not able to compete with urban job-seekers. They settle down in small-scale business, daily wage activities etc. This has effected the growth of informal sector in metropolises like Dhaka, Madras, Ahmedabad, Delhi, Bombay.

The growth of slums, informal sector and lack of access to facilities points to a growing urban poverty in metropolitan cities. Polluted environment and lack of proper management further enhance the grind of poverty through raising the incidences of diseases.

In the fourth chapter, we discussed various factors and processes of growth of Kanpur. It started growing when the British East India Company took over the area in view of its strategic location among the Oudh, Delhi empire and British East Indian territories. Vast market of the north and north-west India must have been the underlying factor. The stationing of the British East Indian Army and development of roads, railways and canal transport made it a nodal city of the plains enhancing its growth. After the 1857 struggle, the British government formulated a policy to make Kanpur an industrial centre. The aim was to give employment to the restless people of the surrounding region. The turn of this century witnessed an accelerated industrial growth, especially during the two World Wars. Concentration of Leather-working Chamar population, greater nodality and nearness to sources of agricultural raw material aided the industrialization process. All the above factors propelled the growth of Kanpur city. Since 1947, industries have grown in number as well as diversity. The industrial growth has always encouraged migration to Kanpur, but after 1961 the migration has become slow or even negative. It seems to be the result of a stagnating economy.

In the fifth chapter, we saw that like other metropolitan cities of South Asia, Kanpur metropolis is fraught with urban problems. Heaps of wastes lie in every locality and they are rarely cleared on regular basis. Air and water pollution due to various industries, scattered all over the city, is widespread. Increase in motor vehicles is another reason of air pollution. High percentage of T.B. deaths is a serious repercussion of pollution. Heavy inflow of domestic sewage and industrial effluents has turned river Ganga into a murky drain. The roads are overcrowded and there is obstruction to free movement of traffic due to encroachments. The roads are often dug up by various departments having little coordination among themselves. The policy of taking railway line to the industries has caused numerous level crossings, waste of precious land and haphazard growth.

The condition of amenities and public services is equally dismal. One-fourth of the population is devoid of water supply, 36.3 percent has no access to toilets, only one third population has access to sewerage facilities. The number of hospital beds per 1000 population is only two. Thus there is an excessive pressure on the limited infrastructure and public services in the metropolises.

The metropolitan limits have not extended for three decades. The demand for land and housing is higher as compared

to supply. So, people are forced to live in congested conditions - about half of the households are living in one-room tenements. Those who can't afford high rents, stay in low-quality slums with lower rents. A third strata of Kanpur's poor can't afford either. They occupy public lands by informal, illegal squatting. Their huts are built up of scrap items. In all, about a third of Kanpur's population is living in slums and squatters spread all over the city.

Urban poverty is visible everywhere, as are the industrial units. About 8.5 percent population is unemployed while 16.4 percent is dependent on casual labour. At least three-fifths of the slums population banks upon low-productive informal sector, often characterized by underemployment.

Finally, we reviewed the urban land and housing policies in Indian context. The lack of a comprehensive metropolitan land policy was observed. Each metropolis has a Master Plan which gives expression to desired land use patterns that should come up. Urban Land Ceiling and Regulation Act of 1976 was proposed to control concentration of land in a few hands and to provide land to the weaker classes. But due to its loopholes, it has had a reverse effect.

Various programmes of subsidized housing for industrial workers and weaker classes started in fifties and sixties had to be given up due to high investment needs. The 'sites-and-

services' and self-help Housing Schemes have also reached a few poor persons only. Other scheme being followed now is Environment Improvement of Urban Slums (EIUS), where the slum's environment is made more livable.

One of the causes of housing shortage and poor quality housing is the outdated Rent Control Act. Presence of old dilapidated buildings at lower rents in the city-centres also prevents the local administration to earn more revenues through a high revenue use of the land. This is because the Act restrains the administration to do that. We also saw that the NGOs can bring a new hope in the slum upgradation projects. The new Draft Housing Policy has recommended improvements in ULCAR, 1976 and Rent Control Act. The Eighth Five Year Plan envisages encouragement of private sector in housing. For equity sake, it may be necessary to keep private sector under the overall charge of the government.

We also found that Integrated Urban Development Project, and Integrated Development of Small and Medium Towns (IDSMT) paid more attention to physical development of towns. The emphasis should have been on removing poverty in urban areas, which is the cause of several urban problems. National Commission on Urbanization (NCU) has talked in favour of the poor but clear guidelines as to the steps needed to be taken to ameliorate poverty or raise income have not been provided. Moreover, some suggested measures seem to go against the poor.

There have been some housing successes in places like Calcutta and Madras, but generally the housing needs of the poor have been neglected. These include providing housing near place of work, permission to carry one's work in the house and not imposing homogeneous housing standards on all the classes of the city.

We also considered some housing related policy issues like favouring the poor in providing land and housing, constructing no homes for the rich, making land available at cheaper rates, creating a land Management authority, revision of ULCAR' 1976 and Rent Control Act, encouraging rental housing revoking homogeneous housing regulations for the rich and the poor, providing housing to poor near place-of-work. Lastly, for a better solution of metropolitan problems, a wider regional approach should be applied, wherein the urban infrastructure and employment opportunities should be provided in smaller towns.

Policy Imperatives for Sustainable Development of Kanpur Metropolis

Besides the general land and housing policy guidelines we considered in the sixth chapter, the following ones could be taken into account for a sustainable development of Kanpur metropolis :

- (1) The industries should be encouraged to agglomerate in specified industrial areas outside the limits of the city.
- (2) The industries causing air and water pollution should be made to instal pollution control equipments. Trees are the 'lungs' of a city which purify the air and supply clean air. So, green belts should be created in Kanpur and trees planted wherever possible. Lines of trees along the roads is useful practice.
- (3) More sewage treatment plants should be established at River Ganges and also at River Pandu in the South, so that sewage can be treated before it falls into river and pollutes then.
- (4) Solid waste disposal system should be made equivalent to the demand of the situation. Feasibility of garbage-based power plant should be explored. Disposal sites should be selected and ways found for a scientific, non-polluting dumping.
- (5) Kanpur lies on Grand Trunk Road and is also an important nodal centre. So, a large traffic passes through the city, which increases congestion. Construction of bye-passes and overhead bridges should be undertaken. Encroachment on the roads should also be controlled by relocating the small sector business at suitable sites.
- (6) Informal sector is an important sector for the slum-dwellers and poor. It should be encouraged and ways found to improve the income levels, living conditions and housing of informal sector workers.

- (7) Public services like drainage, road and street lights should be equally provided to the poor localities. It is logical because, even the high class localities which are provided these facilities, don't pay for them.
- (8) Kanpur can't itself cope with the growing population. So some towns surrounding Kanpur should be developed and provided with opportunities for employment and infrastructure. This requires a comprehensive regional planning of Kanpur and its region.
- (9) There is need to improve the financial position of the local administration. This would require a rational system of taxation, its collection and also the control of rampant corruption in the administration.

APPENDIX I

MILLION CITIES OF SOUTH ASIA (1990/91)

Bangladesh

Chittagong	2.29 millions
Dhaka	6.64 millions

Pakistan

Karachi	7.70 millions
Lahore	4.09 millions
Faislabad (Lyallpur)	1.50 millions
Hyderabad	1.05 millions
Multan	1.02 millions
Rawalpindi	1.09 millions

India

Ludhiana	1.01 millions
Jaipur	1.51 millions
New Delhi	8.37 millions
Kanpur	2.11 millions
Lucknow	1.64 millions
Varanasi	1.02 millions
Patna	1.09 millions
Calcutta	10.91 millions
Vishakhapatnam	1.05 millions
Hyderabad	4.28 millions
Madras	5.36 millions
Coimbatore	1.13 millions
Cochin	1.14 millions
Bangalore	4.08 millions
Greater Bombay	12.57 millions
Pune	2.48 millions
Nagpur	1.66 millions
Ahmedabad	3.29 millions
Vadodara	1.11 millions
Surat	1.51 millions
Bhopal	1.06 millions
Indore	1.10 millions
Madurai	1.09 millions

Source : (i) Census of India, 1991, Series-1, INDIA, Provisional Populatin Totals : Rural-Urban Distribution, Paper 2 of 1991.

(ii) World Urbanization Prospects, 1990 : (New York : U.N.) 1991.

APPENDIX II

EXTENT OF SLUM POPULATION - ESTIMATING AGENCIES AND DEFICIENCIES IN ESTIMATION (INDIA)*

- (i) NSSO Estimates (1976-77) : These estimates covered only the 'city proper' slums instead of the whole metropolis. Moreover, only recognized slums were covered. So, it underestimates the slum population.
- (ii) NBO Estimates (1981) : National Building Organization Estimates are based on the information provided by various administrative bodies, derived under the scheme of Environmental Improvement of Slums. These estimates were arrived at assuming certain growth rates of slums.
- (iii) TCPO Estimates (1981) : Based on slum population as given by different states under the 20-point Programme. These figures are also related to recognized slums only.
- (iv) Task Force Estimates : The Task Force on Housing and Urban Development gave 'interval' estimates for lower and upper slum population levels, based on 1981 population data.
- (v) Census Estimates (1981) : Census of India estimates also relate to the slums recognized by municipality only. It, too, underestimates slum population in the metropolises.

*See : Bidyut Mohanty(ed) (1993); "Urbanization in Developing Countries : Basic Services and Community Participation" : (New Delhi : Concept); pp. 174-76.

APPENDIX III

OCCUPATIONAL CLASSIFICATION OF SLUM-DWELLERS
IN KANPUR CITY (1976-77)

S.No.	Occupational Classes	Percent of Total Workers
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1.	Professional, Technical, Administrative, etc.	7.7
2.	Clerical	8.7
3.	Transport Supervisor, Conductors, etc.	0.14
4.	Metal Processors	0.30
5.	Spinners, Weavers	15.4
6.	Tanners, Shoe-Makers	4.7
7.	Farmers, Fishermen, etc.	1.02
8.	Sales Workers	18.3
9.	Domestic Servants, Maids, House Keepers	0.6
10.	Sweepers, Cleaners	0.73
11.	Dhobi, Washerman, Press-Operators	0.6
12.	Barbers	0.7
13.	Other Service Workers	2.5
14.	Food and Beverage processors	1.6
15.	Tailors, Dress-Makers	7.4
16.	Carpenters	1.6
17.	Blacksmiths	2.8
18.	Stone-cutters, Fitters, Plumbers	5.5
19.	Construction Workers	1.3
20.	Drivers	1.0
21.	Cycle Rickshaw, Animal Driven Vehicles	4.1
22.	Labourers n.e.c.	6.4
23.	Printers etc.	1.6
24.	Others	5.4

Source : NSS Survey on Socio-Economic Conditions of Slum-Dwellers, Kanpur (1976-77); 31st Round; 1983.

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