

**POPULATION GROWTH AND INFRASTRUCTURAL
FACILITIES IN SMALL AND MEDIUM TOWNS OF
HARYANA AND RAJASTHAN**

Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements
for the award of degree of
MASTER OF PHILOSOPHY

REKHA YADAV

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067, INDIA**

1995



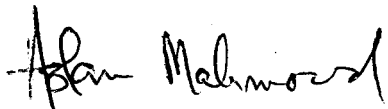
जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067

21st July, 1995

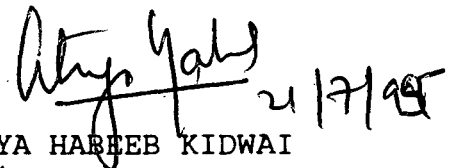
CERTIFICATE

This is to certify that this dissertation entitled "POPULATION GROWTH AND INFRASTRUCTURAL FACILITIES IN SMALL AND MEDIUM TOWNS OF HARYANA & RAJASTHAN" submitted by REKHA YADAV in partial fulfillment of the requirements for the award of the degree of Master of Philosophy of this University, has not been previously submitted for any degree of this or any other University. This is her own work.

We recommend that this dissertation may be placed before the examiners for evaluation.



ASLAM MAHMOOD
Supervisor

 21/7/95

ATIYA HAREEB KIDWAI
Chairperson,
Centre for the Study of
Regional Development,
School of Social Science

CONTENTS

Page No.

ACKNOWLEDGEMENTS

LIST OF TABLES

LIST OF FIGURES

Chapter - 1

INTRODUCTION, REVIEW OF LITERATURE,
OBJECTIVES AND HYPOTHESIS 1-25

Chapter - 2

STUDY AREA, DATA BASE AND METHODOLOGY 25-38

Chapter - 3

DISTRIBUTION AND GROWTH OF SMALL AND
MEDIUM TOWNS IN HARYANA & RAJASTHAN 40-70

Chapter - 4

DISTRIBUTION OF SOCIO-ECONOMIC AND
INFRASTRUCTURAL FACILITIES IN SMALL
AND MEDIUM TOWNS IN HARYANA & RAJASTHAN 71-86

Chapter - 5

SOCIO-ECONOMIC AND INFRASTRUCTURAL
CORRELATES OF POPULATION GROWTH OF
SMALL AND MEDIUM TOWNS IN HARYANA
AND RAJASTHAN 87-104

Chapter - 6

SUMMARY AND CONCLUSIONS 105-110

BIBLIOGRAPHY 111-118

APPENDIX

A C K N O W L E D G E M E N T S

With deep sense of gratitude, I express my thanks to Dr. Aslam Mahmood, without whose patience and able guidance the dissertation could not have taken this form.

In course of writing this dissertation, I receipt co-operation and encouragement from a number of my friends. I thank all of them especially Baboo, Nivedita, Roopi, Alok, Laxmikant, Ramakant, Hanu and Dripta. I am also very grateful to Sameer for his constant support. I express my thanks to Mr. Ramesh Sharma for taking great pains to type the dissertation.

Finally, I am highly indebted to Naresh for his constant co-operation, Shailesh for his understanding and unending patience with me, last but not the least, to my brother and my parents who remain a constant source of inspiration.


REKHA YADAV

JULY '95

LIST OF TABLES

Table No.	
3.1	Urban Population in India, Rajasthan and Haryana, 1901-81.
3.2	% Decadal Variation in Urban Population in India, Rajasthan and Haryana, 1901-81.
3.3	Share of different type classes of Town in total urban population of Haryana and Rajasthan.
3.4	Number and Percentage Share of Towns in each sized class to the total towns in Rajasthan and Haryana, 1971 and 1981.
3.5	List of Small and Medium Towns in Haryana.
3.6	List of Small and Medium Towns in Rajasthan.
3.7	No. of Small and Medium Towns by Districts - Rajasthan, 1981.
3.8	No. of Small and Medium Towns by Districts - Haryana, 1981.
3.9	Growth Rates of Urban Population, 1971-81 by class sized of towns, India, Haryana and Rajasthan.
3.10	Distribution of Towns according to decadal growth rate of population, 1971-81 for different class sizes - Haryana.
3.11	List of Towns according to rates of growth, 1971-81, Haryana.
3.12	Distribution of Towns according to decadal growth rate of population, 1971-81 for different class sizes - Rajasthan.
4.1	Number of towns according to level of education facilities per 10000 of population in Haryana and Rajasthan.
4.2	Number of electrical connections per 10000 of population, 1981 for Haryana and Rajasthan.
4.3	Number of towns according to levels of Sanitation, 1981 for Haryana and Rajasthan.

- 4.4 Number of towns according to availability of medical facilities, 1981, for Haryana & Rajasthan.
- 4.5 Number of towns according to availability of pucca roads per 100 Sq.kms. area of town, 1981, for Haryana and Rajasthan.
- 4.6 Number of towns according to level of cultural - recreational facilities - 1981, for Haryana and Rajasthan.
- 4.7 Number of towns according to level of public expenditure, 1981, for Haryana and Rajasthan.

- 5.1 Coefficients of correlations between growth of population (1971-81) and different socio-economic infrastructural variables in small and medium towns of Haryana and Rajasthan.
- 5.2 Results of preliminary Regression Analysis
- 5.3 Coefficient of correlation between population growth and infrastructural variables in class I towns of Haryana.
- 5.4 Coefficient of correlation between population growth and infrastructural variables in class II towns of Haryana.
- 5.5 Coefficient of correlation between population growth and infrastructural variables in class III towns of Haryana.
- 5.6 Coefficient of correlation between population growth and infrastructural variables in class IV towns of Haryana.
- 5.7 Coefficient of correlation between population growth and infrastructural variables in class I towns of Rajasthan.
- 5.8 Coefficient of correlation between population growth and infrastructural variables in class II towns of Rajasthan.
- 5.9 Coefficient of correlation between population growth and infrastructural variables in class III towns of Rajasthan.
- 5.10 Coefficient of correlation between population growth and infrastructural variables in class IV towns of Rajasthan.

LIST OF FIGURES

1. Distribution of Small and Medium Towns in Haryana, 1981.
2. Names and distribution of Small and Medium Towns in Haryana, 1981.
3. Distribution of Small and Medium Towns in Rajasthan, 1981.
4. Names and distribution of Small and Medium Towns in Rajasthan, 1981.
5. Growth Rates of Population in Small and Medium Towns of Haryana, 1971-81.
6. Growth Rates of Population in Small and Medium Towns of Rajasthan, 1971-81.
7. Haryana : Proportion of Urban Population in each class to total urban population, 1971, 1981.
8. Haryana : Growth Rate of Urban Population according to class size of Towns, 1971-81.
9. Rajasthan : Proportion of Urban Population in each class to total urban population, 1971, 1981.
10. Rajasthan : Growth Rate of Urban Population according to class size of Towns, 1971-81.

CHAPTER - 1

INTRODUCTION, REVIEW OF LITERATURE, OBJECTIVES AND HYPOTHESES

Urbanization is a relatively recent but by far the most dominant social transformation of our times. From an overwhelmingly rural, the world has fast transformed itself into an urban society. In 1980, more than 40% of the world population lived in urban settlements. In case of LDC's population which was classified as urban was only 30.5% . The developed countries on the other hand had 70.7% of their population as urban , however there is marked difference in the nature of urbanization between the two set of countries.

Though the developed countries are more urbanized but the above cited data shows that the growth in developing countries has been at inprecedented scale. Nearly 96.6% of this increase that took place between 1950 - 80 was absorbed by cities of 100,000+ while the growth rates of cities in 20,000 - 100,000 has declined sharply since 1950. The million cities account for 64.1% of total urban population of the developing countries (from 49.6% in 1950).

In India, the picture is no better as during 1971 - 81 the countries urban population increased from 5 million per annum or at the average growth rate of 3.81% as against 1.78% of rural population. On an average 13,500 persons were

added everyday to Indian urban areas, i.e. 9.4 persons per minute.

In 1980 the 12 metropolis (0.34% cities) accounted for 25% of the total urban population while class I cities and above accounted for 60.37% of total urban population while they are just 6.6% of the total number of urban settlements i.e. 6.6% cities account for 60.34% of the total urban population.

Thus India's urbanisation structure is marked by high concentration of urban population in a few large cities. These large cities are of higher order as they became the centres of concentration of both public and private investment in new enterprises and also in the infrastructure to support them. While the lower order cities depend on local or regional level of economy. The economy is of subsistence nature as it does not have adequate productive resources or capital and hence grow much slower than the higher order cities. This results in migration from lower order cities to higher ones. Since most of the new employment opportunities are created in these higher order cities/towns, the most ambitious housing projects are executed in them, the best and the biggest hospitals, colleges and universities have been established. Industry, trade and commerce continually increase in high order cities.

The big cities inspite of having high rates of unemployment have been termed as reception centres for rural poor. Much of the cityward migration has only pavements to work and seek shelter in sub-standard dwelling units.

The main reasons that small towns are unable to act as the countermagnets to the migrants heading towards large metropolis is that they are awfully inadequate in social and economic infrastructure. In order to stem the tide of migrants towards large cities and to correct the skewed urban distribution, it is important that smaller urban settlements are made more attractive by strengthening their economic base and improving their urban infrastructure, so they can absorb the excessive migration movement directed otherwise towards bigger towns and cities.

The present exercise therefore aims to study the spatial distribution of small and medium towns and the pattern and trends of their growth so as to determine the factors contributing to their growth or decline as the case may be. The states of Rajasthan and Haryana have been chosen because these two states present two different sets of problems related to urbanisation. In case of Haryana,

nearness to Delhi has led to an explosive growth in the ringside towns of adjoining districts. The growth has been contributed to by not only the spillover effects of Delhi but the industrial development in these areas owing to the nearness of a metropolitan city, while the districts further away languish under low growth rate. In case of Rajasthan, the urbanization is essentially based on agriculture. The eastern part of the state with good soil and availability of water has a large number of towns with very high rates of growth, while the western Rajasthan has smaller number of towns and stagnation and decline is on the anvil.

II LITERATURE SURVEY :

I Problems of urbanization and Indian Urban Scene

The problem in most third world countries is the unbalanced urban growth. Though they are characterised by low level of urbanization, there is a marked concentration of urban population in a few large urban centres leading to what has been termed as Pseudo urbanization or "Urban Accretion" (Kundu 1978). The bigger urban centres attract migrants not only from rural areas but also from smaller urban centres who are in search of jobs, better education, better living conditions etc.. However since these cities are not equipped to sustain such large numbers, thus the infrastructure breaks down leading to an escalation in land prices, cost of living and increase in slums and squatter settlements.

Problems of urbanization in the third world countries is extremely lopsided with highly distorted population in the urban centres (ESCAP 1986)

The massive size of urban population occupied with the staggering annual increments to it has resulted in severe strain on the urban resources particularly in that of housing, transport, water supply, sanitation power and employment sectors giving rise to the norm that India is overurbanised (Kingsley Davis & Hilden Golden 1954).

Population of Bombay, Delhi & Calcutta combined is already in excess of 101 of 128 countries of the world (Mathur 1988)

Prevailing urbanization rate is exerting increasing pressure on existing/available urban infrastructure & services. About half of India's population lives in dwelling less than 20sqm while 20% lives in slums. Less than 1/3rd have direct access to sanitation and 1/3rd don't get safe drinking water. Further the problem of congestion, pollution and other environmental problems are pointing towards the deteriorating quality of urban life (Urban data sheet NIUA).

Though there is uneven/skewed distribution of population with a bias towards large cities, it would be incorrect to say that India is overurbanised, when Muktha S. Adi (1991) draws attention towards the problem of urbanization where in 1981, 26% of urban population resided in the 12 metropolitan cities with annual growth rate varying from 2.7% in Calcutta to 5.8% in Bangalore. By the year 2001, 35% of the total urban population would be accounted for by these metropolises causing serious problem in terms of providing basic amenities and local infrastructure. 67% of households and 65% of the married couples in Bombay live in one room dwelling while 25 - 30% of metro population doesn't have electricity, 33% are without independent toilet facilities. As a solution she suggests that greater employment opportunities created in rural areas

and small towns through developing industries, providing education, basic amenities i.e. greater social investment because only through them would a greater impetus be given to small & medium towns who could in turn absorb the excess population directed towards the metropolis and big cities. Rondinelli (1983) cites the stronger economic base better education, health facilities, greater employment opportunities as the reasons which give the big cities an edge over the smaller ones. Being greatly endowed with such facilities the bigger towns exert greater pull and in the process the migrants bypass the small towns and cities.

According to the UN Monitoring Report on World Population Trends & Policies (1979). Urban population is unevenly distributed in centres of different sizes and there was a heavy concentration of population in few metropolises caused by the outflow & uncontrolled migration from rural & urban centres. This is so because both the public and private investment in new enterprises and infrastructure to support them was concentrated in a relatively few large urban centres.

Safa & Du Toit (1975) have discussed the urban problems of developing countries. The economic factors attract migrants causing surplus labour in urban areas leading to problems of unemployment, squatter and generally deteriorating quality of life. Facilities are provided to

these large and growing urban areas at the cost of rural areas and small urban centres thereby increasing the gap between the two.

II Role of Small & Medium Towns and Problems Faced by Them

Mukherjee and Morille (1973) point out the distorted growth pattern of Indian urbanization where bigger towns grow at the expense of smaller towns and the solution would be only through the planned development of small and medium towns. According to Ashish Bose the growth of medium towns helps in balanced urban growth through controlling migration, redistribution of population, encouraging the development of surrounding rural hinterland. With a greater proportion of urban population accounted for by a few metropolitan cities. This tendency towards the primacy can be checked through the development of small & medium towns. Rashmi Mayur (1978) points out that the staggering growth in absolute numbers of India's populations not just a development imperative, it is more a result of absence of development in rural area and the outflow of the rural poor to the urban slums. Limits should be set to the urban growth and we should not permit the policy of locational drift and infrastructural imbalance that can only result in furthering the appalling conditions. Therefore there should be a deliberate policy of encouraging small and medium towns and

placing an effective restriction on growth of big cities.

And this can be done by the development through :

a) Growth Poles and growth centres

b) Induced dispersal of industrial units) Decentralisation of Industrial Activity

d) Promotion of small and Cottage Industries) Use of labour intensive technology

f) Greater investment in infrastructural facilities

These are all part of ammunition to increase the number of small and medium towns in the urban areas. V.V. Joseph

(1978) points out as to why do some cities grow at higher rate than others. It is mainly due to a sound economic base, capacity to exploit the regions resources and attracting investment organisation, better provisions for exchange facilities (i.e. trade), market arrangements, basic infrastructure, social institutes, consultancy firm, skilled manpower, transport and communication system and a variety of other services, that a city grows. Unbalanced distribution of such facilities amongst the cities and towns results in the neglect of smaller towns. Creation of metropolitan counter magnets or satellite/small towns in suburbs, a network of hierarchical towns should be promoted in order to achieve equitable and well distributed urban settlement systems.

The greater tendency towards primary leads to

disparities in the regional development. Shah(1985) emphasises the role of growth centres and growth nodes in form of small and medium towns where the small towns could act as service centres and the medium towns as growth centres.

While the bigger cities are getting choked to death due to continuously increasing population, the smaller towns and cities are being starved since the able bodied workforce outmigrates to bigger cities. As a result the Indian Urban scene presents what looks like small stream in the wilderness so in order to achieve a more balanced urban growth and uniform regional development, Jha proposes the development of small and medium towns.

Singh(1990) suggests that the small and medium towns should be developed on priority basis in order to reduce the burden on the metropolises and the fast growing big cities.

Sethi (1992) talks about the imperative need for urban decentralisation to check the urban collapse. Small & medium towns have been decaying for decades and have been starved support direct as well as infrastructural investment. Migrant from rural areas jumped to big cities bypassing small and medium towns because the latter lack the employment opportunities and avenues and elementary basic infrastructure such as housing sanitation, drainage etc.; And without the development of small and medium towns it

nonsensical to talk about urban decentralisation. Decentralisation would help generation of employment through tiny and small industries or units in a manner that would provide maximum employment, would get the support of decentralised infrastructure and contribute to run the city services thus giving the small and medium towns greater leverage.

Vishvakarma and Jha (1980) believed that the public intervention for planned development in Indian urban sector has been confined to the metropolises or large sized towns and cities, while small and medium towns are being left to develop and grow rather spontaneously on their own.

Mathur (1982) concludes that small cities are not a homogenous group. They differ greatly in their physical, demographic and economic attributes. He has identified a number of factors which are responsible for the performance of individual cities:-

a) Location : Specifically two attributes of location. First was related to nodal significance in national or regional infrastructure of transport and communication and power (irrigation in case of agricultural areas). Second is the location of the city in the urban hierarchy.

b) Hinterland: Extent of natural resources the hinterland possesses.

c) Infrastructure of basic amenities and social

services: It is because the infrastructure is grossly underdeveloped which hampered the city to improve the quality of life and provide efficient performance of it's economic functions.

d) Historical Evolution.

e) Administrative Status: Whether it is a headquarter of a district of a district, tehsil or subdivision, also helps in the growth of a city. Kundu and Thorat (1990) have found that the correlation between urban growth and infrastructural facilities is higher for fast growing towns of India compared to that of slow and medium growing towns. While in the former there is a lot of immigration (since their growth rate is higher than their rate of natural growth), the latter mainly exhibit the natural growth rate of the city.

Vishvakarma (1984) points out towards the need for integrated development of small and medium towns. This would lead to the improvement of quality of life through the employment generation as well as the provision of basic amenities and facilities. Task force on planning and development of small and medium towns in India(1983) discussed the conditions in selected towns in India and shows that most of these towns suffer from lack of adequate facilities like civic amenities, transport infrastructure, medical, electricity and employment.

Mathur (1984) has summarised the findings of U.N. Centres for Regional Development (UNCRD's) research project on small and medium sized urban centres in national development. It has addressed the questions regarding the position and share of small cities in overall hierarchy, their growth patterns and performance and the factors affecting therein. The location and regional context of cities together with general development environment seems to influence the growth rate of cities more than the size. Small cities in fast growing regions tend to grow faster than the slow growing regions. Gupta(1984) has discussed the relationship between industrialisation, urbanization and rural development. She has selected 18 variables depicting levels of industrial and economic development. Large scale industrialisation plays important in speeding up the process of urbanization. It speeds up not only the urban growth but also helps in rural development. In order to experience a more balanced process of urbanization, both structurally and horizontally, it is desirable to have more balanced regional industrial development.

In "Urban development and Metropolises in India", Dr.Awasthi has made an effort to study the problems vis a vis role of municipal corporation. He deals with population growth, industrial development, employment pattern, migration trends, demographic structure, housing facilities,

civic amenities like road and transport, water, drainage and sanitation and environment management. He has discussed the important role that the municipal corporation can play in the city administration. The excessive increase in the number of big cities cannot be dealt with only by the efficient organisation of municipal machinery but in the smaller urban centres, they can help in making them attractive for inflow of people from other areas thus reducing the burden on their bigger counterparts.

H.U.Bijlani(1982) has discussed the problems and bottle-necks faced by the small and medium towns. They can be summarised as:

- a) Low priority within allocated resources for development of small and medium townships.
- b) Inadequate finance at local level to generate resources to help mobilize project cost financing from institutes.
- c) Weak institutional structures to formulate, implement and monitor projects.
- d) Lack of effective institutions.

In order to make small and medium towns an attractive proposition for growth, the quality of life has to be improved. Mathur (1984) stresses that small city development warrants greater emphasis than in past. For this purpose the decentralisation in decision making and self reliance are important preconditions. The development strategy should build upon the complementarities among measures for rural development and small city promotions and

strengthening national, regional urban hierarchies. Higher and more equally distributed incomes in the rural sector will strengthen the economic base of small cities. He has stressed upon indigenous development in form of small sector units and informal sector activities. Industrial promotion activities in small cities need to be combined with an acceleration in the rate of investment in the infrastructure. Higher levels of investment in the intraregional transport and communication should be a high priority for strengthening the rural-urban linkages.

III CASE STUDIES:

Rajbala (1988) has studied the urbanization in Rajasthan. It has been pointed out that due to inherited legacy of backwardness, coupled with financial stringency, poor infrastructure that have slowed down the development works in Rajasthan, the level of urbanization in the state continues to low. Owing to historical factors (since Rajasthan was formed by the merger of many states), dominance of one city is not visualised. The urban nodes which were capital of native states; make a multinodal pattern in the state. Due to the privileges bestowed upon a few selected cities, they become the points of great urban concentration. The physical background also plays a significant role in that, the plane dynamic areas experienced relatively high rates of growth than hilly or

dry areas.

However there is no significant correlation between the class size of towns and the rates of growth. Both large cities and medium towns are growing fast. In case of small towns, their location, function and nodality seem to be the decisive factors in their growth behaviour. District headquarters which are usually medium sized towns have emerged as regional centres to provide services and scenes of new industrial establishments and record exceptionally high rates of growth. N. Bhaskara Rao has examined the linkages between agricultural prosperity and growth of towns. If an area stands high in the scale of agricultural production there would be marketable surplus which is traded in the urban centres of the region providing scope for growth and expansion of a variety of agrobased units. Also the increase in demand for agricultural inputs like seeds, fertilizers, implements, machinery etc. in a region where a scale of increase in agricultural production is expected to be substantial there is a strong case for the integrated development of urban centres particularly small and medium towns.

Prabhu Deva (1976) has studied the area of Raichur and has delineated factors contributing to rapid growth of towns namely:

a) Initial population: Since manufacturing and

servicing units as well as the other related development activities get concentrated in towns with reasonably large population.

b) Agricultural Prosperity: Influences the growth of small and medium sized towns but not very large towns or cities with diversified economic structure.

c) Availability of Infrastructural Facilities: They provide the initial push for subsequent developmental activities and population growth.

Bhalla and Kundu(1982) have done the case studies of two towns of Punjab: Moga and Batala. They tried to find out how far do the intermediate towns play a positive role in the development of regional economy of the area where they are located and to what extent is their own growth determined by the prosperity of surrounding region. While Batala town is highly industrialised Moga has more of agricultural development. They found out that even the rural hinterland boasts of industrial unit. High rates of agricultural growth leads to agricultural prosperity which inturn supports the high degree of industrialisation leading to high rate of urban growth.

H.N.Saxena proposes the market town strategy for regional development and planning, with a three tier system of market centres i.e. the rural markets, urban markets and market towns in Rajasthan. The market towns provide:

- a) Trade and Commerce service to the region. b)
- Acts as a nodal centre for transportation.
- c) Serves as a growth centre for providing various services to the region.

The market towns act as indicators of economic development as there is a very strong positive correlation between road length and number of towns in each district. Also a close relation between net sown area and number of market towns as the net sown area indicates the expansion of agricultural activity which helps in growth and development of towns. He emphasises the need for a widespread network of hierarchical centres in order to achieve proper integration in development.

R.N.Mishra (1980) has identified service centres in Banswara district by using the prevalent methodology like population threshold, Guttman scalogram technique and centrality score method. The study reveals that the distribution of service centres is related to the level of development in the various parts. In northwest area, with good physical conditions of non-tribals has better distribution pattern while in the northeast region people have to travel 20-30 kms to reach service centres of second order where they can have regular market, secondary schools, dispensary etc.. This uneven distribution has resulted in

spatial disequilibrium in socio-economic growth and quality of life in human habitat.

Rajbala (1990) discusses some of the problems of urbanization in Rajasthan. While Jaipur and some other cities are experiencing explosive growth, towns in western part of Rajasthan are experiencing stagnation. The number of towns compared to the area are few pointing to a low density of number of towns. There has been a "Top-Down" strategy of development, as a result importance of small and medium towns has not been recognised. N.R.Kasdwan cites historic factors as the cause of industrial backwardness of the state. There was practically no industrial base and near total absence of infrastructure at the time of independence, combined with the shortage of power and water. Therefore there was a lack of impetus for the growth of cities.

R.L.Pitale has attempted to analyse the interrelation between informal sector and industrial growth and development of small and medium towns with special reference to Haryana. When employment opportunities are not available in rural areas of small towns, people move to big cities in search of excessive population over there. If this movement is considered undesirable and costly, the alternative is to develop locations away from large cities to absorb the excess population. The growth of small towns is a strategy of locating employment opportunities where the unemployed

and the marginally employed population abounds. He has also worked out a relationship between Industrial Intensity Factor and the informal sector and also the decadal growth rate of population. When the Industrial Intensity Factor is high, it denotes high population in the informal sector. Raj Nandi(1985) has stressed upon the organisational structure and government policies for the development of small towns. He has studied the town of Karnal, a fast growing town of Haryana. Owing to the governments policy of locating a few national level research institutes; encouragement to industrial units and planned residential sectors. In fact the growth rate was higher in the planned residential sectors. R.C.Gupta has studied the trends in urbanisation in the national and state level. He concludes the Indian rate of urbanization has showed a marked increase in the last four decades but much of this increase is in the nature of concentrated urbanization; slow at the level of small urban settlements and fast at the level of large ones. As a result of the growing urbanization; has proved more of a liability than a asset leading to an ever increasing polarisation of life in cities. Unless urban growth is adequately backed industrial development i.e. diversification of workforce from primary to tertiary sectors, urban growth will be more parasitic than generative in its import. The small towns can be made use of in

spreading the effects of development over villages and making our program of rural development more meaningful.

Lalta Prasad (1984) in his case study of Balia a small town in U.P., has focused attention on the role that small urban unit can play in regional development. He has identified a few factors which help in the growth of small towns:

- a) Occupational or economic factors like the growth in secondary sector employment.
- b) Increased road and rails that is great accessibility and better connected.
- c) Increased in communication network i.e. it should be well linked in telephone services, telegraph, better circulation of dailies etc..
- d) Banks and other financial institutions.
- e) Improved power supply.

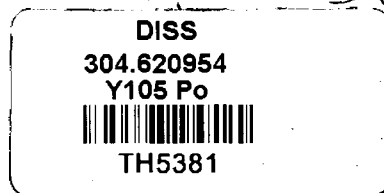
These factors give fillip to industry, trade and commerce in the area enabling it to grow at faster pace. In order to be generative a town must develop a highly diversified occupational structure with the highest proportion of population engaged in secondary and tertiary occupations.

The literature survey shows that there is scarcity of empirical works regarding the explanation of small and medium towns. Even in the few empirical studies that have been carried out by task force (1977) Bhalla & Kundu (1980),



21

TH-5381



37 N9

Kundu (1984) etc., the pattern of growth of the small and medium towns has been analysed not taking into account their detailed regional characteristics. Other studies which are regional specific, have not paid much attention to the empirical part of analysis. The present study, therefore, attempts a region specific empirical study for the States of Haryana & Rajasthan.

OBJECTIVES

Keeping the above in view, the following objectives have been set up for the present study:-

1. To study the spatial distribution of small and medium towns in the states of Haryana & Rajasthan (1981).
2. To examine the rate of growth of these small & medium towns.
3. To determine the levels of various socio-economic and demographic characteristics of these towns.
4. To identify the relationship between population growth of small and medium towns during 1971-81 and infrastructure facilities in each of these towns in 1981.

The hypothesis which has been formulated for the present study are as follows:

Hypothesis-1-

There is a greater concentration of small and medium towns around the metropolitan cities of Delhi and Jaipur in

case of Haryana and Rajasthan respectively.

Rationale

These cities are overburden with heavy population pressure. There is little scope for accommodation of ever increasing population (which is attractive owing to the fact that they are the centres of major industrial, commercial and varied other activities). This will leave to the emergence of numerous satellite towns in form of small and medium cities in the surrounding areas.

Hypothesis- 2.

The population growth rate will be higher in the small and medium towns located in the vicinity of these two metropolitan cities than those not located in their influence zones.

Rationale

Since these metropolises are the prime centre for various activities and that the industries are concentrated in the neighboring areas which provide cheaper land, labour, low cost of accommodation as well as located close enough to these big cities to take advantage of their market and transport network. Moreover commuters find it cheaper to stay in the satellite towns and commute daily for work on account of the scarcity and greater expense on housing in

the metropolises itself.

Hypothesis-3

The small and medium towns surrounding Delhi and Jaipur will have a low level of infrastructural facilities as compared to other towns.

Rationale

The small and medium town situated near to Delhi and Jaipur can avail the better facilities available in these cities which would not be possible in case of the towns located further away. Hence they will have higher level of infrastructural services.

CHAPTER - 2

STUDY AREA, DATABASE AND METHODOLOGY

Rajasthan is located between 23 degree 4' 10" N - 30 degree 15' 5" N latitude and 69 degree 35' 5" E to 78 degree 16' 50" E longitude. With a tropic of cancer passing through the southern most tip of the state thereby placing the state into sub-tropical and tropical zones of Northern hemisphere. The state is situated in North-Western part of the Indian Union covering the complete arid great Indian desert and parts of semi arid climatic zones.

Rajasthan covers 10.3% area of the Indian union ranking second in terms of area. It stretches 826 Kms. North-South and 869 East-West. It is nearly 5 times the size of Srilanka, two times that of U.K., seventeen times that of Israel and equal to that of Japan.

Physical Division

That state of Rajasthan can be divided into three main divisions namely;

- a) Arid/Marusthali and semi-arid plains of Rajasthan
- b) Aravali range and hilly region
- c) Eastern plain
- d) Hadoti Platau

Of these four, eastern plains is most fertile and most densely populated region comprising of the distt. of Bharatpur, Tonk, Jaipur, Alwar, Sawai Madhopur, parts of Chittaurgarh, Bhilwara, Bundi and Sriganganagar. The desert area includes Jaisalmer, Bikaner, Jodhpur, Barmer, Nagaur and parts of Churu. The semi arid areas include the distt. of Jalaur, Pali, Sikar & parts of Sirohi. The predominantly hilly districts are Dungarpur, Chittorgarh, Pratapgarh, Udaipur, Amer, Jaipur, Alwar and Dhaulpur while Hadoti or Decan platau region is comprise of Jhalawar, Kota and parts of Bundi.

Historical Perspective

In the ancient period Rajasthan had many flourishing urban centres like Ahar (Udaipur), Pillibanga, Kalibangan (Sriganganagar), Naliasar (Sambhar) etc. Due to climatic shifts or vagaries, dry and wet phases, it underwent an epoch of severe decay, disintegration and deformation. During the fudal period, there were a large number of clans, leading to a fragmented polity and clan rivalry. Land was considered to the private property, trade and commerce were considered to be below dignity of the marshall relations. Therefore the major occupations was agriculture. Paucity of water, uncertainty of rainfall, frequent famines, draughts, epidemics etc. badly affected

the economy and also hindered the process of organisation except the fort towns and transport head centres.

During the Mughal period the conditions remains almost stagnant. The fall of Mughal empire brought down another setback and broke the economic and social structures of many states patronized under their influence. Trade and Commerce between Delhi and Gujarat and Sindh continued and several towns developed. Most of these were either political fort towns or commercial marts, junction of caravan routes.

Thus there were some favourable axes of urbanization in the past:

1. Aravali hill axes piedmont and intermontane valleys.
2. Along major rivers and tributories.
3. Rocky tops and higher slopes.
4. Fresh water and salt plains.
5. Caravan route crossings.

Important towns were Jaisalmer, Bikaner, Rajgarh, Bhilwara, Churu, Malpura, Pali, Anupgarh, Sadhu, Ratangarh, Suratgarh, Hanumangarh, Sambhar, Lunakaransar. Availability of water to a great extent control the emergence of urban centres.

Pre-Independence Phase

Rajasthan faced perpetual famines and draughts. The general economic conditions of people was poor and the gross

productivity had negligible surplus. Against the break subsistence agrarian and pastoral background and mass illiteracy, due to shortage of tertiary occupation, unemployment etc. organization could not get a much better staff. Besides the infertile desert soil, scarcity of water for irrigation did not provide conducive conditions for trade commerce and early industrialisation. After the arrival of railways in last quarter of nineteenth century a new wave of urbanisation set in. Towns appear along the railway routes like Phulera, Mantown, Marwar, Rai-ka-Bagh, Bandikui, Ringus, Mauli, Ratangarh etc. Post independence phase

In this phase there was an expansion in the number of towns with increase in industrialization and socio-economic transformation etc. old towns grew into bigger towns and cities, due to the advantages they already had. Expansion in administrative needs, industrial and commercial activities and development in the communication gave new impetus to the growth of new towns. However, owing to the comparatively low level of industrialisation, low level of agricultural development, scarcity of water and generally not to favourable condition led to a lower rate of organisation in the state of Rajasthan as compared to Haryana. Haryana

With an area of 44,056 sq. kms. Haryana forms parts of northern regions of Indian union. It shares its borders

with Punjab, Himachal Pradesh in North, Uttar Pradesh in East and Rajasthan on West. Haryana binds the national capital of Delhi from three sides.

Physical Divisions

The area comprising state of Haryana is a broad level plain standing nearly on the water shed between the basins of Ganga and Indus. It is largely a monotonous plain area covered with alluvium. The most important river of the state is Ghaggar, Yamuna forms its eastern boundary with the state of U.P. Haryana has two hilly regions a) in the distt. of Gurgaon, these hills are actually the outliers of denuded aravalies b) outer himalayan or shivalik ranges extent into the Ambala distt. as Morni hills. Historical background

Haryana in its present form was carved out in 1966 from the multilingual state of Punjab. Haryana as a distinct social and cultural region goes back to the ancient times. During proto historic period Haryana was the main centre of Aryan settlements. Haryana was a part of the Sapta Sindhu valley. The great Mahabharat war was fought at Kurukshetra. Due to its strategic position, Haryana has always occupied a key position in the political history of India. It was a part of Mauryan Empire, while Harshwardhana made Thanesar the capital of his empire. All the decisive battles which change the fate of India were fought in Har-

yana at Panipat. Every invador and aspirant to loot and power after traversing Punjab had to fight a pitched battle in Haryana before reaching Delhi.

Though a small state, with a area of only 44,056 sq.kms. Haryana has great strategic importance surrounding Delhi on three sides. About half of the NCR falls within the state of Haryana.

Most of the towns here, since historical period have been political capital like Thanesar, Hissar, Jahejgarh, Jhajjar, Rohtak, Ballabgarh etc. In time they grew as a commercial towns. There also emerge some towns along the main road or routes for example Karnal and Sonapat along the Shershah Suri Marg. At present the NCR has great potential for industrial and economic growth, Haryana with its strong infrastructure power, water and transport provides great attractions to industrial enterprises leading to a faster rate of growth of cities like Gurgaon, Fari-dabad, Rewari, Karnal etc.

Thus, we find that Rajasthan with its subsistence agriculture economy and low level of industrial development presents the case of less developed states which accounts for low levels of urbanization. There is a primate city in form of Jaipur. We find that some important distt. headquarters are not even class I cities. In fact the size of cities is smaller and their number fewer in the Arid

swestern Rajasthan like Jaisalmer (III), Barmer (III) etc. The eastern parts with more rainfall, better agricultural development etc. has a larger number and larger size cities.

In case of Haryana, the spillover effect of Delhi, has led to a burgeoning of settelite towns in the neighbourhood which exhibit very higher rates of growth. Moreover, Haryana is agriculturally very well developed state and making giant strides in the field of industrial development leading to higher levels of urbanization.

DATABASE

The data for this study are collected at two different levels i.e. at State level and at the town level.

The data collected at state level are as follows:-

1. Total population
2. Urban Populatin
3. Decadal variation of urban population
4. Number of towns in each class
5. Percentage of population in each class to total urban population.

The data collected at town level for population and available facilities are given below:-

On Population

1. Population and growth rate of towns since 1901 to 1981.

On facilities

2. Road length (per 100 square km.of area of town)

3. Number of latrine (per 10000 of population)
 - a) Water borne latrine
 - b) Number of service latrine
 - c) Number of other latrine
4. Protected water supply system with capacity.
5. Electrification (No. of connections per 10000 of population)
 - a) Domestic
 - b) Industrial
 - c) Commercial
 - d) Road Lighting
6. Number of beds (per 10000 population) in medical institutions.
7. Educational Institutions (per 10000 population)
 - a) Primary Schools
 - b) Middle Schools
 - c) Matriculation Schools
 - d) Higher Secondary Schools
 - e) Art Science and Commerce Colleges
 - f) Medical Colleges
 - g) Engineering Colleges
 - h) Polytechnics; Shorthand, typing and other institutes
8. Working Women hostels

9. Cultural and recreational facilities (per 10000)

a) Number of cinema halls and auditoriums

b) Stadiums

c) Library and reading rooms

10. Other factors like:

a) expenditure on public works

b) expenditure on public healths

c) expenditure on public institutions.

With the help of the population data and the data on available facilities, seven variables are formed, which show the facilities per ten thousand of population. These variables are:

a) health facilities

b) educational facilities

c) pucca road availability

d) electrification facilities

e) sanitation facilities

f) cultural recreational facilities

g) per capita public expenditure.

The above mentioned data for this study are mainly collected from the Census of India publications. The major portion of the data are collected from the Census of India publications, District Census handbooks of the Districts of two states, provisional population table, series 1, India,

1983, Census monographs no. 1 (Urban growth of India, 1901 to 1981).

Limitations of Data

The data regarding the infrastructure facilities is not available for 1991 hence the exercise is carried out on the basis of the 1981 data. At the town level the available data is not adequate. Data on economic activities, particularly for main workers is given only in four categories in 1981 that restricts one from understanding the pattern of workforce distribution and the main activities of the town. The lack of migration data at the town level is also another problem to study small and medium town. If more detailed information is given at the town level, it would be easier to understand the process of the development of the towns. In the present study, the data constraints are faced and that restricts the study within a certain limits.

Methodology

Rural and Urban classification of population is an accepted demographic practice but there has been varying criteria adopted for the recognition of unit as urban in Census of different countries. In India before the Census of 1961, the definition of urban area varied from state to state the uniform and somewhat rigid tests were sought to be applied throughout the country for the first time in 1961

Census. The definition adopted in 1981 Census follows the definition of 1961 and 1971 Census with minor deviations.

In Census terminology, by urban units what it means is either a) of municipalities and other bodies of equivalent status (like Notified Areas etc.) which have been created by a definite legislation as urban areas or (b) such area which are urban as per the census definition. In order to be considered as urban unit, as per the census definition, a specific geographical area must fulfill the following three conditions simultaneously.

1. a population of at least 5000.
2. a density of population of at least 400 per sq. km.

and

3. at least 75 percent of the male working person in that area must be engaged in non-agricultural pursuits.

This study is done in the context of small and medium towns development in Haryana & Rajasthan. Therefore, it would be better to discuss first, which are the towns considered as small and medium towns in this study. There is a difference in opinion among scholars regarding the concept of small and medium towns, in terms of their population. Here, in this study, the small towns are considered as those towns which have a population ranging from 10000 to 49999, i.e. class IV and III towns. The medium towns are the towns, where the population is within the range of 50000 to 300000

i.e. the class II and class I towns till a population of three lacs are considered as medium towns.

After defining the small and medium towns in the context of this study, it is worthy to move to the methodological aspects of this study.

A few aspects of urbanization are studied here for Haryana & Rajasthan as a whole and small and medium towns in particular. To discuss the urbanization pattern in Haryana & Rajasthan, a few indicators have been chosen. These indicators are, a) degree of urbanization; b) pace of urbanization and c) inequalities in urbanization.

The degree of urbanization is measured by the proportion of urban population to the total population. That proportion is converted into percentages. Therefore, degree of urbanization can be written as,

$$U = \frac{Pu}{Pt} \times 100$$

Where U denotes degree of urbanization, Pu denotes urban population in the state/district and Pt denotes total population of the state or district.

The pace of urbanization is shown by the growth rate of urban population. This also is expressed in terms of percentage. It can be defined as

$$Up = \frac{Put1 - Put0}{Put0} \times 100$$

Where Up denotes pace of urbanization during the concerned decade; Put1 is the urban population in the final year in that state/district and Put0 is the urban population in the initial year in that state/district.

The product moment coefficient of correlation has been used for the identification of variables experiencing significant relationship with the population growth rate. Using the same set of 31 variables as many as 11 variables were selected for a detailed correlation analysis.

COMPOSITE INDEX

A composite index has been worked out for the selected variables for computing the levels of development using the following formula:

$$CSI = \sum_{i=1}^n X_i$$

where,

CSI = composite index of development for the i'th town
 X_i = Z-score of i'th town

n = Total number of variables

CORRELATION ANALYSIS

The correlation analysis has been carried out at two levels namely (a) on the basis of all size class of town (b) on the basis of different size classes of towns. In order

to identify the dominant infrastructural variables to explain the population growth of towns a stepwise regression analysis has been carried out. For this purpose the following equation has been used:

$$\hat{Y}_i = a + b_1X_1 + b_2X_2 \dots\dots\dots b_nX_n$$

where \hat{Y}_i = estimate growth of town i

a = constant (i.e. intercept)

$b_1\dots\dots b_n$ = regression coefficient from 1 to n

$X_1\dots\dots X_n$ = variables 1 to n

The explanatory variables are added one by one in different steps, starting from the variable giving the maximum value for R square. At each step the adjusted R square and the F ratio are also calculated.*

* For a detailed discussion on R square refer to Aslam Mahmood, Statistical Methods in Geographical Studies, Rajesh Publishers, N.Delhi.

CHAPTER - 3

DISTRIBUTION AND GROWTH OF SMALL AND MEDIUM TOWNS IN
HARYANA & RAJASTHAN

The process of modern urbanisation can be said to have started in both Rajasthan and Haryana in post independence period only. Before that, urbanisation in Rajasthan was found in capital cities largely while in Haryana capital cities and cantonment areas mainly accounted for the urban areas. Tables 3.1 & 3.2 give the picture of urbanisation in India, Rajasthan & Haryana.

TABLE - 3.1

GROWTH OF URBAN POPULATION IN INDIA, RAJASTHAN & HARYANA

Urban Population

Year	India	Rajasthan	Haryana
1901	25851873	1550656	574074
1911	25941633	1475829	449704
1921	280861673	1475335	481195
1931	33455589	729205	564743
1941	44153297	2117101	705945
1951	62443709	2955275	968494
1961	78936663	3281478	1307680
1971	109113977	4543767	1772959
1981	159727357	7210508	2827387

than Haryana was, since Rajasthan shared its border with Pakistan. In case of India as a whole the rate of urban growth declined from 41.4% to 26%. There was a greater decline in case of Rajasthan from 39.59% to 11%. There was a marginal decline in Haryana from 37% to 35%. In 1961, it is interesting to note that the first time Rajasthan and Haryana showed a greater rate of urban growth than that of India as a whole. In 1981 the urban population growth rate for India was 46.39%, for Rajasthan 58.7% and Haryana 59.5%. Thus one finds that the two states experienced the same trend of urban growth as the country as a whole.

In order to determine the nature of urbanisation as to whether it is concentrated or has a proper hierarchical distribution let us take a look at the table 3.3, which gives the share of different size class towns in Rajasthan and Haryana for 1981.

Table - 3.2

% Decadal Variation in Growth of Urban Population

Year	India	Rajasthan	Haryana
1901	-	-	-
1911	0.35	-4.83	-21.66
1921	8.27	0.3	7.0
1931	19.12	17.21	17.36
1941	31.97	22.43	25
1951	41.42	39.59	37.19
1961	26.41	11.04	35.02
1971	38.23	38.47	38.58
1981	46.39	58.69	59.47

source : Census of India series 1, 1981.

The table shows that during the decade 1901-11 the urban population growth was 0.35% for India as a whole but there was actually a decline of -4.83% in Rajasthan and -21.66% in Haryana. The rate of population growth progressively increased till 1951 for India as well as Rajasthan & Haryana. The next decade saw an extreme reduction in the urban rate of growth which was caused due to the partition in 1947, leading to massive redistribution (mainly of urban population). Rajasthan was more affected

than Haryana was, since Rajasthan shared its border with Pakistan. In case of India as a whole the rate of urban growth declined from 41.4% to 26%. There was a greater decline in case of Rajasthan from 39.59% to 11%. There was a marginal decline in Haryana from 37% to 35%. In 1961, it is interesting to note that the first time Rajasthan and Haryana showed a greater rate of urban growth than that of India as a whole. In 1981 the urban population growth rate for India was 46.39%, for Rajasthan 58.7% and Haryana 59.5%. Thus one finds that the two states experienced the same trend of urban growth as the country as a whole.

In order to determine the nature of urbanisation as to whether it is concentrated or has a proper hierarchical distribution let us take a look at the table 3.3, which gives the share of different size class towns in Rajasthan and Haryana for 1981.

TABLE - 3.3

SHARE OF DIFFERENT CLASS SIZES IN TOTAL URBAN POPULATION OF THE STATE

Size class of town	I	II	III	IV	V	VI
% share of Urban population in Rajasthan - 1971	40.9	10.7	20	29.6	7.3	0.36
% share of Urban population in Rajasthan - 1981	45.8	9.1	23	19.2	2.7	0.06
% share of Urban population in Haryana - 1971	12.8	39.7	26	12.5	7.8	0.99
% share of Urban population in Haryana - 1981	47.1	16.8	17.7	12	6.1	0.27

From the table it is clear that the urban population has a tendency to concentrate in the large towns. In case of Rajasthan 50% of the total urban population was accounted for by class I and II towns, class III and IV towns accounted for 49% . In 1981 while the class I towns increased their shares to 45% there was a decline in the

proportion of urban population in class II towns. There was an increase in percentage share of population in class II towns. Rest of the towns i.e. class IV, V & VI experienced a decline. (class V & VI towns together accounted for less than 3% of total population).

In case of Haryana, in 1971, the class I towns accounted for only 12.8% of urban population which showed a dramatic increase in 1981 to more than 47%. This was owing to the fact that in 1971, there were only two class I towns, the numbers of which increased to nine in 1981 (i.e. class II towns turn into class I towns due to increase in population). This also accounts for the simultaneous decrease in the no. of class II towns whose share of urban population reduced from 39% in 1971 to less than 17% in 1981. The share of class III towns also decline while there was a marginal decline in the class IV towns' share of total urban population. Class V and VI together accounted for nearly 8% of the total urban population which declined to less than 6.5.

From the above table it becomes clear that the tendency towards a top heavy nature of urbanization is observed in case of both Haryana and Rajasthan. The class V & VI towns have a very less share of urban population.

SHARE OF TOWNS IN DIFFERENT CLASS SIZES TO THE TOTAL NUMBER OF TOWNS

If the distribution of population in each class size compared to that of distribution of towns in each category a peculiar picture emerges which will be clear from the following table:

TABLE 3.4

PERCENTAGE SHARE OF TOWNS IN EACH SIZE CLASS OF TOWNS (1971-81)

Size Class	I	II	III	IV	V	VI
% of towns						
in Rajasthan-71	4.4	4.4	19.7	42.6	26.1	2.5
% of towns						
in Rajasthan-81	5.47	4.9	27.4	50.2	11.4	.4

% of towns in Haryana-71	3.08	3.8	21.5	30.8	23.1	7.7
% of towns in Haryana-81	11.1	8.6	18.5	30.8	28.4	2.5

From the above table it becomes obvious that there is no symmetry between the number of towns of towns and their share in the total urban population. In 1971 the class I cities had a share of 4.4% of towns in Rajasthan and

3.08% in Haryana. Highest share was held by class IV towns in both Rajasthan and Haryana. The table shows that in case of Rajasthan 95% of the total towns lie between class II and Class VI towns while 66% is accounted for by class II, III & IV towns, thereby showing that maximum number of towns are either class III and/or class IV, V towns. The year 1981 shows an almost similar picture. Only, we find a decline in share of class V and VI towns now accounted for less than 12% while class III and IV account for nearly 78% of the total towns. Class I and II account for less than 10%.

Similarly, in Haryana, in 1971 class I towns held 3% share of total number of towns, highest percentage was that of class IV towns 67% was accounted for by class II, III & IV towns. However, in 1981 class I towns have increased to 11%. There was a decline in 1981 as compared to 1971 in the share of class II & III, . Still 60% is accounted for by class II and Class IV towns. According to the size classes of towns, the share of class III and class IV towns have been increasing in their percentage shares, whereas class II and class V & VI have been found to be losing their shares in the total number of towns. But it is interesting to note that the small number of class I towns accounts for the largest share of population i.e. less than 10% of the towns account for nearly 50% of the total urban population in case of both Haryana and Rajasthan. (Since

class V and VI towns contribute very little in terms of shares in the total urban population, in this study, we have considered only class I towns till a population of three lakhs, class II, III & IV towns)

From the above discussion, it is clear that the structure of urbanisation pattern is higherly distorted more so in Rajasthan than in Haryana, and that the hierarchical distribution of urban population does not conform to the heirarchical distribuion of towns in the state.

SPATIAL DISTRIBUTION OF SMALL AND MEDIUM TOWNS IN HARYANA AND RAJASTHAN

The study of the spatial distribution of the small and medium towns in the two states reveals that these towns have not come up in a haphazard manner or random fashion. Infact, the nature of distribution of these towns differs in both Rajasthan and Haryana. A list of small and medium towns of Haryana and Rajasthan is given in table 3.5.

RAJASTHAN
SMALL AND MEDIUM TOWNS, 1981

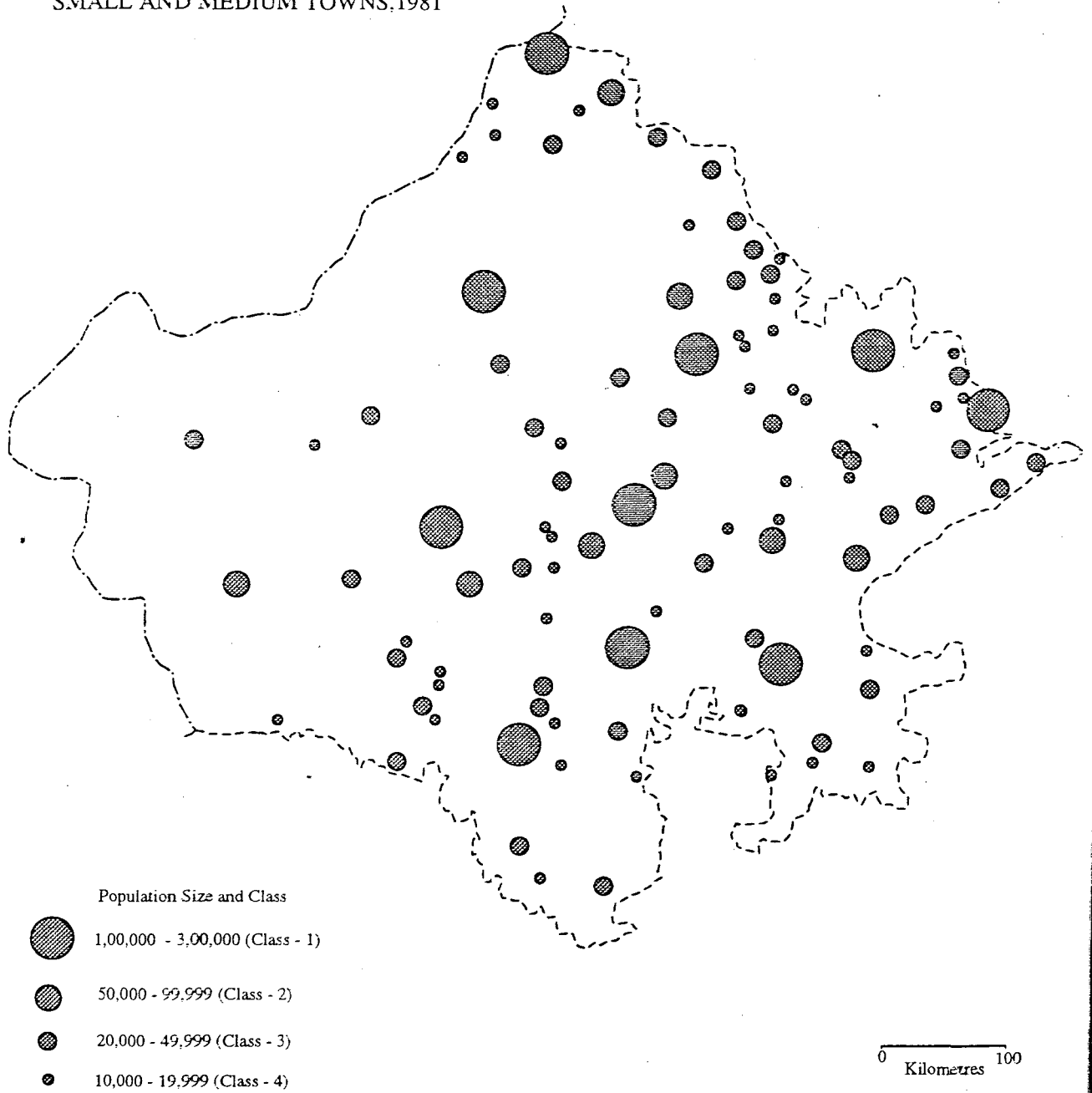


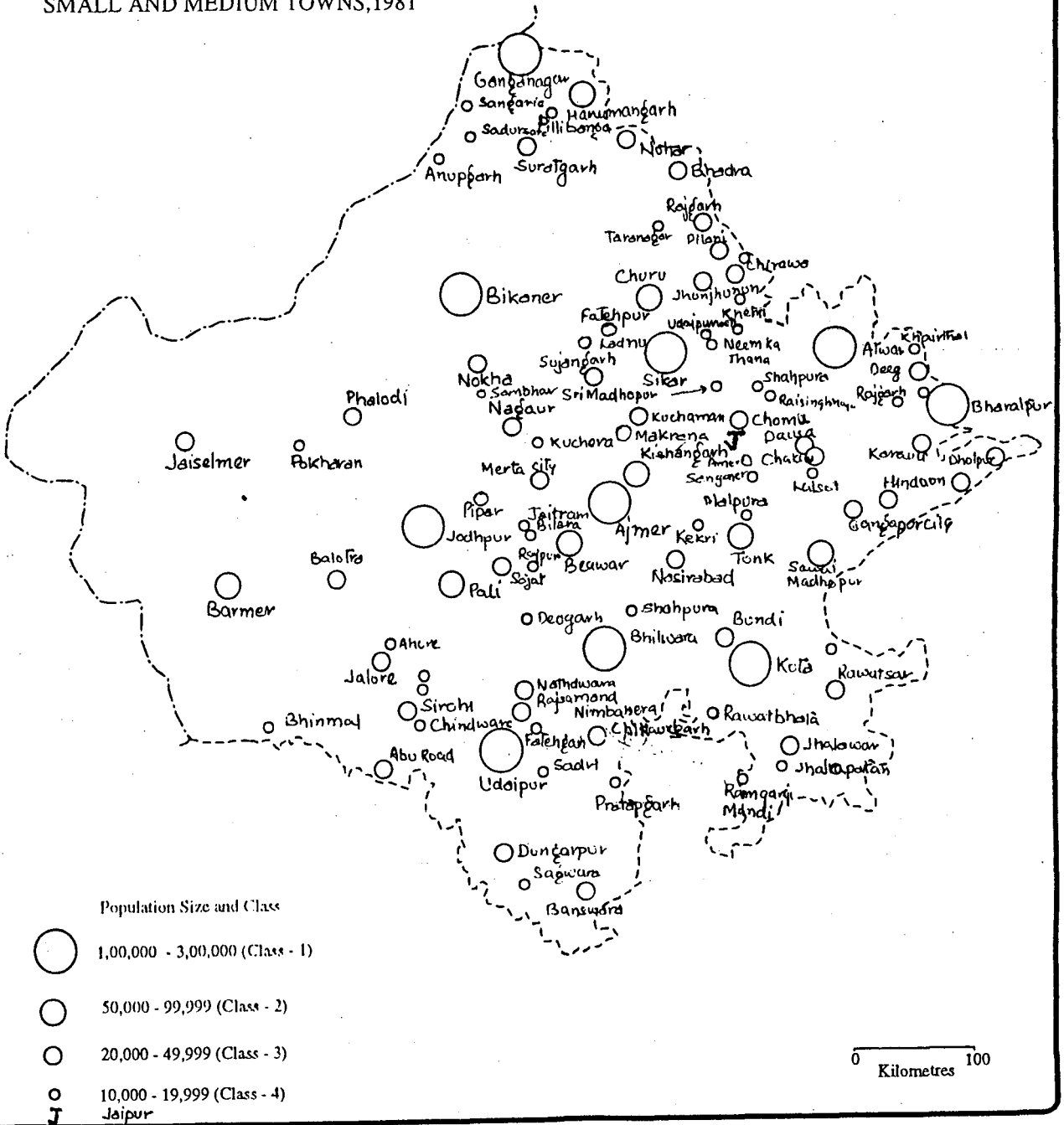
Fig-3

TABLE 3.5

SMALL AND MEDIUM TOWNS OF RAJASTHAN

NAME OF TOWN	CLASS
BARMER	II
BALOTRA	III
BUNDI	III
LAKHER	III
DUNGARPUR	III
JAGWALA	IV
ANUPGARH	IV
BHADRA	III
GANGANAGAR	I
HANUMANGARH	II
NOHAR	III
PILLIBANGA	IV
RAISINGHNAGAR	IV
RAWATSAR	III
SANGARIA	IV
SURATGARH	III
JAISALMER	III
CHIRAWA	III
JHUNJHUNUN	IV
KHETRI	IV

RAJASTHAN
SMALL AND MEDIUM TOWNS, 1981



NAME OF TOWN	CLASS
NAWALGARH	III
PILANI	IV
UDAIPURWATI	IV
AMER	IV
CHOMU	III
DAUSA	III
JAIPUR	I
KOTPUTLI	III
LALSOT	IV
MANOHARPUR	IV
SAMBHAR	IV
SANGANER	III
BIKANER	I
NOKHA	III
BARAN	III
KOTA	I
RAMGANJ MANDI	IV
BANSWARA	III
CHITTAURGARH	III
NIMBAHERA	III
PRATAPGARH	III
RAWATBHATA	IV
FATEHPUR	II

KHANDELA	IV
LACHMANGARH	III
NEEM KA THANA	IV
RAMGARH	IV
SIKAR	I
SRIMADHOPUR	IV
PALI	II
SADRI	II
SOJAT	IV
SUMERPUR	IV
JALORE	III
BHINMAL	III
BHAVANIMANDI	IV
JHALAVAR	III
JHALRAPATAN	IV
BILARA	III
JODHPUR	I
PHALODI	III
PIPAR	III
AJMER	I
BEAWAR	II
KHETRI	III
KISHANGARH	II
NASIRABAD	III
VIJAY NAGAR	IV

NAME OF TOWN	CLASS
GANGAPUR CITY	III
HINDAUN	III
KARALI	III
SAWAI MADHOPUR	III
DEEDWANA	III
KUCHAMAN CITY	III
LADNU	III
MAKRANA	III
MERTA CITY	III
NAGPUR	III
NATHDWARA	III
RAJSAMAND	III
UDAIPUR	I
ABU ROAD	III
SIROHI	III
BHILWARA	I
MALPURA	IV
AJWAI	IV
TONK	II
BIDASAR	IV
DUNGARGARH	III
RAJGARH	III
RATANGARH	III
SARDARSADIA	III

NAME OF TOWN	CLASS
SUJANGARH	IV
TARANAGAR	IV
ALWAR	1
BHARATPUR	I

TABLE 3.6

SMALL AND MEDIUM TOWNS IN HARYANA - 1981

NAME	CLASS
KARNAL	1
PANIPAT	1
GHARAUNDA	4
ROHTAK	1
BAHADURGARH	3
JHAJJAR	3
SIRSA	2
DABWALI	3
FARIDABAD	1
PALWAL	2
HODAL	4
AMBALA CITY	1
AMBALA CANTT.	2
KALKA	3
PANCHKULA	4
YAMUNANAGAR	1
JAGADHARI	3
BHIWANI	1
CHARKHI DADRI	3
GURGAON	2
JIND	2
NARWANA	3

HARYANA
SMALL & MEDIUM TOWNS
1981

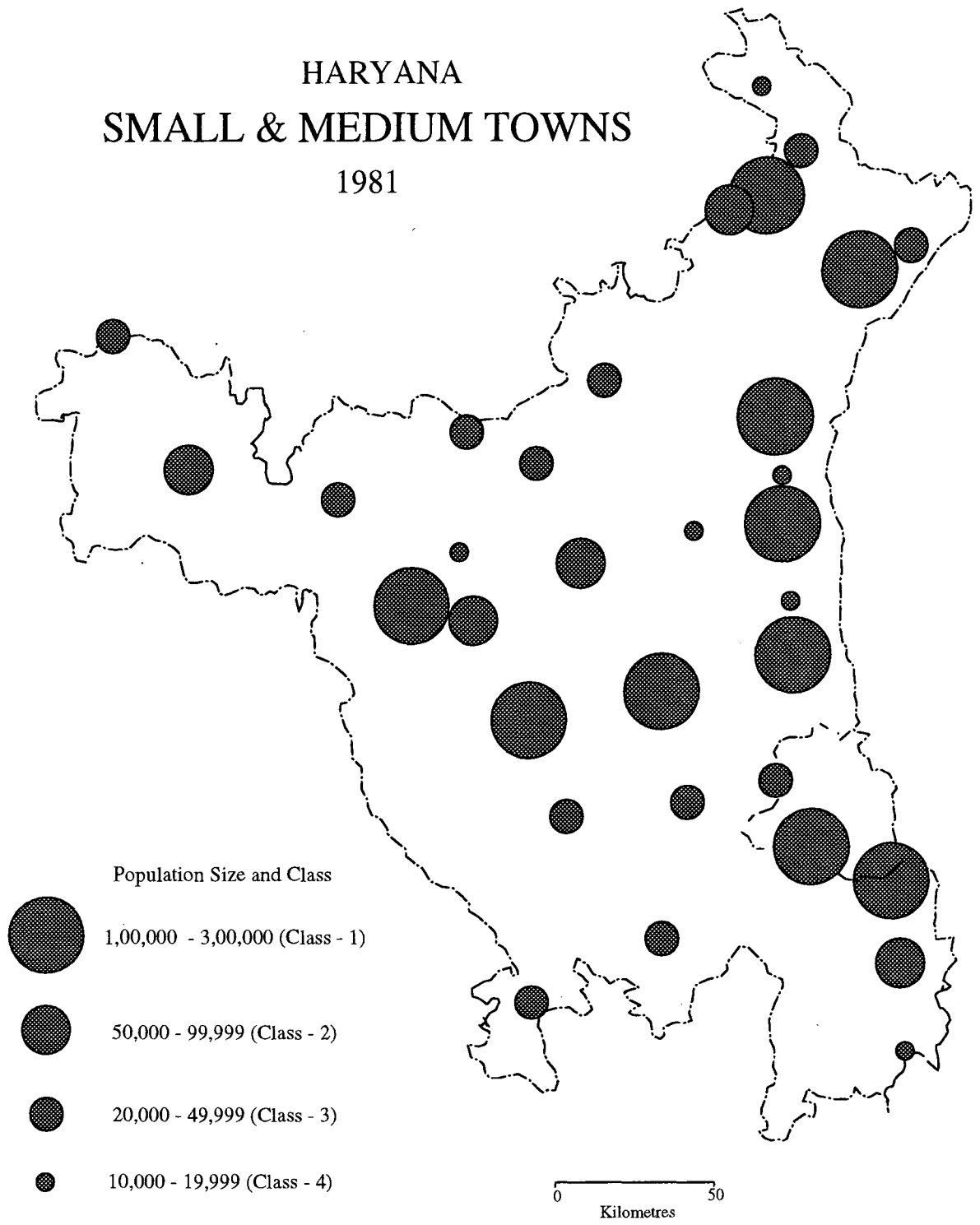
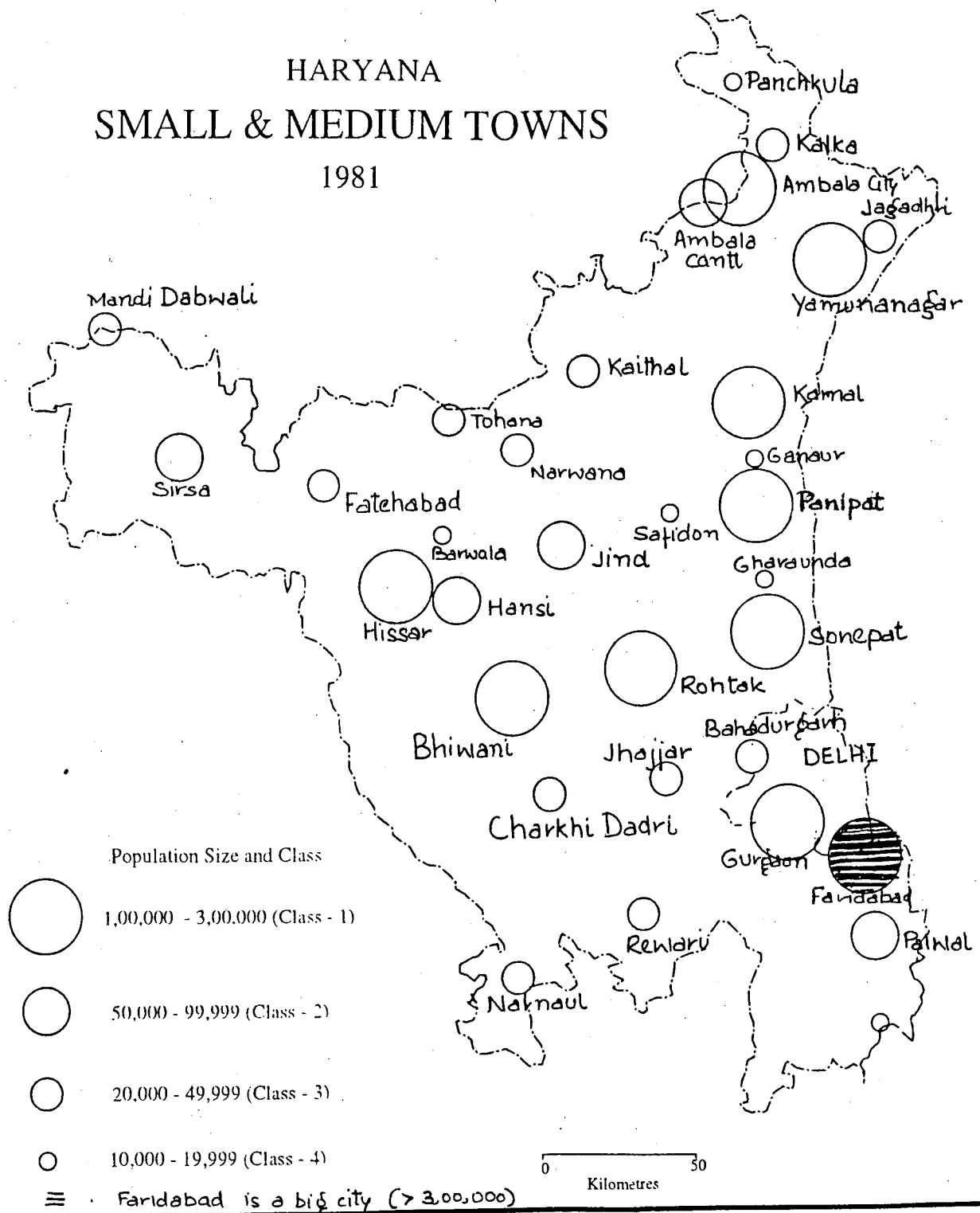


Fig-1

NAME OF TOWN	CLASS
SAFIDAN	4
BARWALA	4
FATEHABAD	3
HANSI	2
HISSAR	1
TOHANA	3
NARNAUL	3
SONEPAT	1
GANAUR	4
REWARI	3
KAITHAL	3

HARYANA SMALL & MEDIUM TOWNS

1981



RAJASTHAN

From the fig. and the table 3.5, one observes that most of the medium towns (Class I & II) are located in the eastern part of the state, while the western part of the state shows very few towns. There is a concentration of towns around Jaipur. The maximum number of towns are found in the districts of Jaipur, Churu, Nagaur, Ganganagar, Ajmer, Bharatpur, Kota and Tonk. These districts are located outside the semi-arid, arid, western Rajasthan. Ganganagar though located in the semi-arid north is well endowed with fertile soil of Ghaggar plains and adequate irrigational facilities. Even in Churu and Nagaur which are again semi-arid, the towns are concentrated in the east. The Rajasthan east of Aravallis has a greater degree of urbanisation and larger number of towns because this region has greater amount of rainfall, better accessibility in terms of national highway and inter-state, good inter-district roads, greater industrialisation and generally a higher level of development.

It is obvious from the map that in western Rajasthan there are hardly any major [large sized] towns and not many smaller urban centres either. Even many district headquarters in this region are not class I towns [e.g. Jaisalmer, Barmer, Pali etc. are class III towns

] Districts of Bikaner, Barmer, Jaisalmer, Jodhpur, Pali, Jalore, Sirohi etc. have a very small number of urban centres, owing to conditions of aridity and low availability of water. [i.e. Basically physical constraints] and low levels of agricultural and industrial development.

Udaipur, Jhalawar, Dungarpur, Dholpur, Alwar and Bundi are hilly or plateau districts with a high proportion of tribal population. These districts also do not have many urban centres. Thus, one finds that there are a very small number of towns in western Rajasthan, north central and south central districts of Rajasthan and that physical factors have, to a very large extent, determined the location and density of urban centres in Rajasthan.

TABLE - 3.7

NUMBER OF TOWNS ACCORDING TO THE DISTRICTS OF RAJASTHAN

Districts	No of towns
Jaipur	14
Ganganagar	8
Churu	7
Sikar	7
Bharatpur	5
Sawai Madhopur	5
Kota	5
Ajmer	5
Tonk	4
Nagaur	4
Jhunjhunu	4
Chittorgarh	4
Pali	4
Bhilwara	4
Alwar	3
Jhalawar	3
Sirohi	3
Dholpur	3
Udaipur	3
Bundi	2

DISTRICT	NO. OF TOWNS
Dungarpur	2
Barmer	2
Jaisalmer	1
Banswara	1

HARYANA

Haryana has a more balanced distribution of small and medium size urban centres than Rajasthan. However, they are not located uniformly all over the state as can be seen from the table no. 3.6 and the map. There is a concentration of towns in the eastern part of the state especially along a north-south axis comprising the districts of Faridabad, Gurgaon, eastern part of Rohtak, Sonapat, Panipat, Karnal and Ambala. The large number of towns is owing to agricultural development, industrial development and nearness to Delhi (National Highway No. 1 provides easy accessibility to Delhi). Interestingly, it is the district which comprise the National Capital Region of Delhi which coincide with the greater density of urban centres. Due to the decentralisation of industries from Delhi to neighbouring cities of Gurgaon, Faridabad, Sonapat, Karnal etc., industrialisation took place at a high rate leading to the emergence of a large of towns. Ambala is another

developed hub of northern Haryana. The western part has lesser density of urban centres as compared to the districts located near to Delhi. However, there is no extreme disparity in the levels of urbanisation as is the case in Rajasthan, since all of Haryana is a fertile alluvium plain with high degree of agricultural development. The western parts are in contiguity with the semi-arid areas of Rajasthan e.g. Bhiwani, Sirsa, Mahendergarh and Hissar etc. and levels of industrialisation were also comparatively low. The physical and topographical conditions alongwith the levels of development both agricultural and industrial, determine the distribution, density, and the levels of urbanisation.

TABLE - 3.8

NUMBER OF TOWNS ACCORDING TO THE DISTRICTS OF HARYANA

Districts	No. of towns
Gurgaon	3
Faridabad	3
Sonepat	2
Panipat	2
Ambala	6
Mahendergarh	2
Bhiwani	2

Rohtak 3

Districts	No. of towns
-----------	--------------

Hissar	5
--------	---

Sirsa	2
-------	---

Jind	2
------	---

Kaithal	2
---------	---

In Rajasthan, more than 20% or 1/5th of the total towns are situated within 100 Kms from Jaipur while more than 10% lie within 50 km. of Jaipur. In Haryana, out of the total towns in the study, 7 towns or nearly 20% lie within 50 Kms. radius from Delhi and 15 towns within 100 Kms. from Delhi. Hence, our first hypothesis that there is a greater concentration of small and medium towns in the vicinity of Delhi and Jaipur, is proved.

GROWTH OF SMALL AND MEDIUM TOWNS

The growth rate for 1971 - 81 for all the towns of India was 46.02%. It is interesting to note that amongst the four size classes of towns we are considering, the highest growth rates were found in the case of Class I towns followed by Class II, III & IV towns in that order. The growth rate of population of small and medium towns both for Rajasthan and Haryana is given in Table 3.9 according to different class sizes. It is also plotted in the graph (Figs.7 - 10)

TABLE 3.9

GROWTH RATES OF URBAN POPULATION 1971-81 ACCORDING TO THE CLASS SIZE OF TOWNS FOR INDIA.

CLASSES	INDIA	HARYANA	
RAJASTHAN			
I	56.83	244.6	77.48
II	51.22	-43.98	47.68
III	28.41	-2.2	70.08
IV	24.03	77.39	49.31
ALL CLAS	46.02	59.16	58.65

Fig. 7

Proportion of urban population in each class to total urban population (1971 - 81)

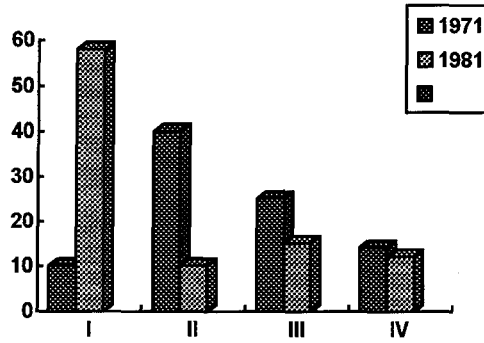
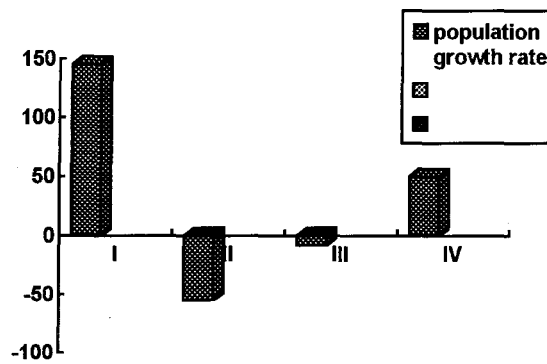


Fig. 8

Growth rate of urban population in different size class (1971-81)



RAJASTHAN

Fig. 9

Proportion of urban population in each class to total urban population 1971-81

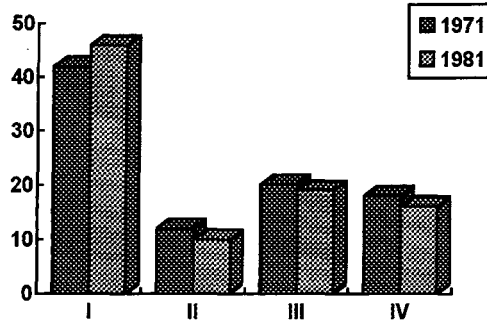
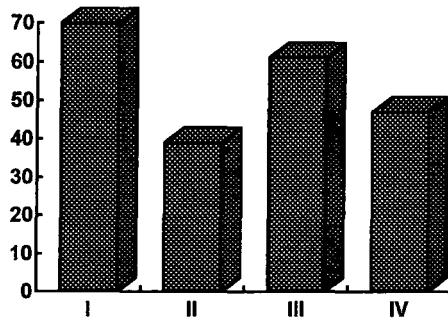


Fig. 10

Growth rate of urban population according to size 1971-

81



DYNAMICS OF SETTLEMENTS

All the small and medium towns in the study area have been divided into five categories on the basis of their rates of growth namely;

- a) Extraordinary towns: towns with a decadal growth rate of more than 50%.
- b) Dynamic towns: The towns with a decadal growth rate ranging from 35 to 50%.
- c) Normal towns: The towns with a decadal growth rate between 25 - 35%.
- d) Static towns: The towns with a decadal rate of growth ranging from 15-25%.
- e) Declining towns: The towns with a decadal growth of less than 15%.

HARYANA

The distribution of towns according to the decadal growth rate of population (1971-81) is given in Table-3.10 for Haryana

TABLE 3.10

CLASS SIZE		I	II	III	IV
Declining	No	-	1	-	-
	%	-	20	-	-
Static	No	1	1	3	-
	%	11	20	25	-
Normal	No	1	1	3	4
	%	11	20	25	57
Dynamic	No	2	1	5	1
	%	22	20	42	14
Extraordinary	No	5	1	1	2
	%	56	20	18	29

NUMBER OF SETTLEMENTS

From the table, it can be concluded that in Haryana more than half of the total class I towns are growing at a rate of greater than 50%, followed by 22% dynamic towns. There are no declining towns. The class II towns have equal shares of towns falling in all the categories there is one declining town where actually negative growth has taken place. In class III towns, the majority of towns come under the category of dynamic towns followed by equal number of normal and static towns. In class IV towns, the majority of the towns exhibits normal rates of growth. There are no

static or declining towns in this category and nearly 30% of its towns are growing in an extraordinary pace.

Of the total number of towns which fall under the category of extraordinary towns, more than half are class I towns, the lowest share is accounted for by class III towns. Of the total number of dynamic towns more than half were class III towns. In case of normal towns, class III & class IV towns together account for nearly 80% of the total towns. Of the total static towns, maximum were found in class III.

Thus we find that while the largest number of fast growing towns are class I towns, most of the static or normal growing towns are the smaller (class III & IV towns).

HARYANA
 SMALL & MEDIUM TOWNS
 1981
 GROWTH RATE OF POPULATION

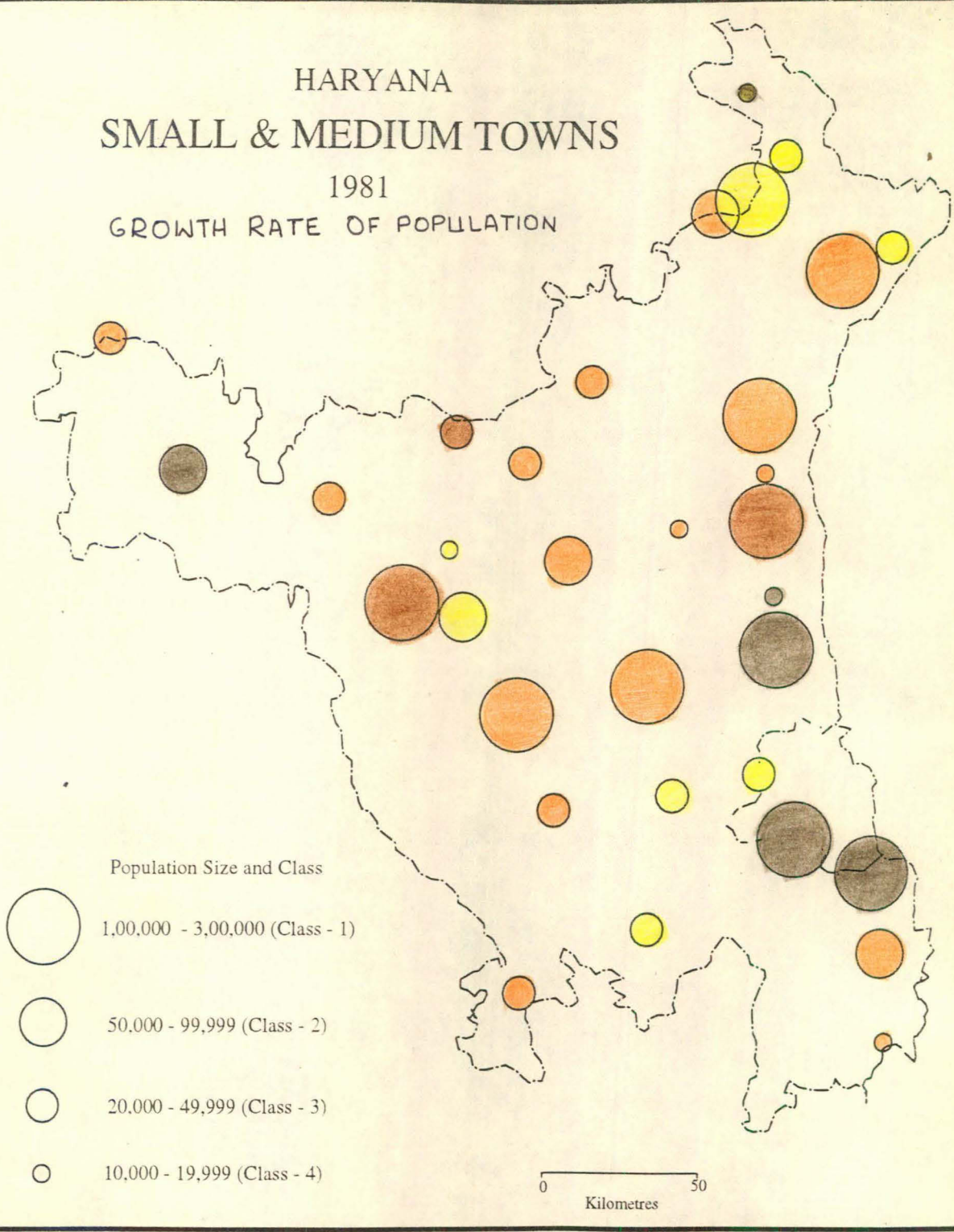


Fig 5

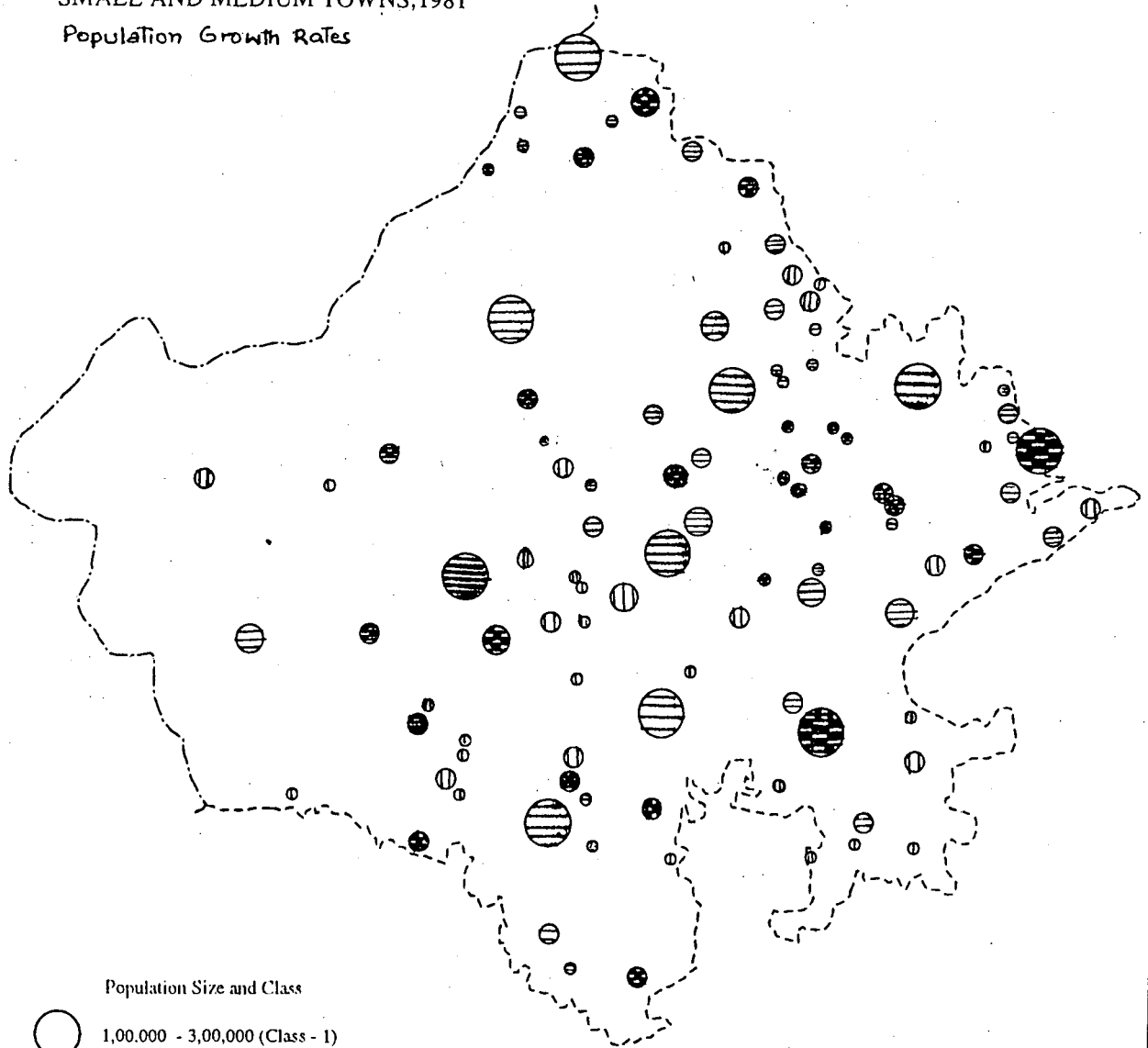
Table 3.11

LIST OF TOWNS ACCORDING TO THEIR RATES OF GROWTH (1971-81)





Catagory of towns	Growth rate	Class I	Class II	Class III	Class IV
Declining	< 15%	-	Ambala Cantt.		
Static	15-25%	Ambala City	Hansi	Jagadhari Kalka Rewari	-
Normal	25-35%	Rohtak Rewari	Palwal	Narnaul Kaithal Jhajjar	Gharaunda Hodal Safidon
Dynamic	35-50%	Karnal Bhiwani	Jind	Fatehabad Bhadurgar Charkhida ri Dabwali Narwana	Barwala
Extra-ordinary	< 50%	Gurgaon Sonipat Panipat Hissar Yamunanag r	Sirsa	Tohana	Panchkula Gannaur

RAJASTHAN
SMALL AND MEDIUM TOWNS, 1981

Population Growth Rates



Population Size and Class

-  1,00,000 - 3,00,000 (Class - 1)
-  50,000 - 99,999 (Class - 2)
-  20,000 - 49,999 (Class - 3)
-  10,000 - 19,999 (Class - 4)

0 Kilometres 100

Growth Rates





-  > 50%
-  35 - 50%
-  15 - 35%
-  < 15%

Fig. 6.

TABLE 3.12

CLASS SIZE		I	II	III	IV
Declining	No	-	-	-	1
	%	-	-	-	3.2
Static	No	-	-	2	2
	%	-	-	4	6.7
Normal	No	-	1	13	8
	%	-	12.8	27	26.7
Dynamic	No	7	4	17	11
	%	70	50	35.5	36.7
Extraordinary	No	3	3	16	8
	%	30	37.5	33.5	26.7

In case of Rajasthan, it can be seen that of the total towns under study more than 70% towns are either dynamic or extraordinary Indian nature of growth, 5% are either static or declining and more than one fifth exhibit a normal rate of growth.

In class I towns, 70% are dynamic and 30% extraordinary towns. There are no static declining towns. Most of the class II towns also exhibit very high rates of growth. In fact it is interesting to note that of the total number of towns growing at a rate of more than 50%, more than half are class III towns followed by class IV towns

which account for a quarter of the total towns in this category. Same is repeated in case of dynamic towns. Nearly one third of class III and IV settlements exhibit a population growth rate of less than 35%. Thus, on the whole most of the towns showed a high rate of population growth in 1971-81.

From the study above, we find that there has been no even spread of urbanisation in either Rajasthan or Haryana. For instance in case of Rajasthan, the most urbanised districts are Jaipur, Kota, Ganganagar, Ajmer which lie in the eastern part of Rajasthan in vicinity of metropolis of Jaipur, while the districts of the western or arid Rajasthan or hilly tracks have very low levels of urbanisation e.g. Barmer, Dungarpur, Jalore, Jhalawar, Chittor, Jaisalmer, Bikaner, Nagaur etc. Even in these districts, the greater proportion of the total districts urban population is accounted for by one or two major towns.

In case of Haryana, the districts in the vicinity of Delhi or the ones which fall under the NCR or the ones which exhibit greater degree of urbanization e.g. Gurgaon, Faridabad, Sonapat, Karnal etc. The western districts like Sirsa, Jind, Mahendragarh, Rewari etc. exhibit low percentage of urbanisation. Therefore, from the discussion till now, the picture which emerges for urbanisation in the two states is not a picture of even urbanisation pattern. A

strong regional disparity is existing in the distribution of urbanisation. The areas around Delhi in Haryana, around Jaipur in Rajasthan are enjoying the fruits of urbanisation whereas most of the districts away from these metropolises are deprived of it.

Thus in Haryana out of the ten (including Faridabad) towns exhibiting extraordinary growth, five are located within 100 Kms. radius from Delhi, 3 within 50 Kms. from Delhi. In Rajasthan out of 30 towns growing at an extraordinary rate 9 towns or 30% of total towns are located in the vicinity of Jaipur. This also shows that of the 20 towns located within 100 Kms. of Jaipur, more than 50% show an extraordinary growth rate. Hence, the second purpose of the study is that there will be a higher rate of population growth in the cities located near the 2 metropolitan cities of Jaipur and Delhi as compared to the towns located elsewhere. However, a difference is observed in the two states. While in vicinity of Delhi the towns exhibiting higher rate of growth are class I towns e.g. Faridabad, Gurgaon etc. while near Jaipur, the towns exhibiting high rate of growth are smaller towns (class III & IV e.g. Amer, Sanganeer etc.).

CHAPTER 4

DISTRIBUTION OF SOCIO-ECONOMIC AND INFRASTRUCTURAL FACILITIES IN SMALL AND MEDIUM TOWNS IN HARYANA AND RAJASTHAN

A town is distinct from a village essentially in terms of its social and economic structure. This structure provides a number of social, economic and civic facilities. The level of these facilities are basically indicative of the role of these towns in the surrounding region. In this chapter, therefore, an evaluation of such facilities in the small and medium towns of Haryana and Rajasthan is carried out by selecting some of such variables. The choice of these indicators, however, is also based on the availability of data through secondary sources. A detailed discussion on this has already been given in Chapter II (the data, however, relates only to 1981 since the 1991 data is not available yet as the district-wise census reports have not been published). The variables used in this analysis fall in the following categories:

1. Educational facilities
2. Electrification
3. Sanitation
4. Health/Medical facilities

5. Pucca road availability
6. Cultural-Recreational facilities
7. Public Expenditure

EDUCATIONAL VARIABLES

The levels of education in these towns is measured by 8 variables namely availability per 10,000 population of number of (a) Primary Schools (b) Middle or Junior Secondary Schools (c) Matric Schools (d) Higher Secondary Schools (e) Arts/Commerce/Science Colleges (f) Medical Colleges (g) Engineering College (h) Poly Technics, shorthand, typing or other vocational institutions. The distribution of towns in terms of various levels of these variables is given below in the table.

TABLE:- 4.1

NUMBER OF TOWNS ACCORDING TO LEVELS OF EDUCATIONAL FACILITIES

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Primary School	14	28	54	1	4	28
Middle School	13	34	49	2	9	22
Matric School	13	22	61	5	18	10
HigherSecondary	13	33	50	3	8	22
Arts/Commerce/ Science College.	10	22	66	1	2	30
Medical College	2	1	93	1	-	32
Engg. College	1	1	94	1	-	32
Vocational Inst.	8	7	81	1	3	29

RAJASTHAN

We find that 54 out of 96 towns have low levels of Primary School facilities, 49 have low middle schools, 61 have low levels of Higher Secondary Schools and 66 have low levels of college facilities. Only about 13% of towns have high levels of educational facilities, while 29% have medium level and 58% have low levels of educational facilities till higher secondary levels.

It is interesting to note that as the level of education increases from Schools to Colleges and to Professional Institutions, the towns which have high levels of these facilities.

HARYANA

More than 90% of the towns have low levels of educational facilities. Infact, only Rohtak and Bhiwani have a Medical College and Engineering College respectively. Even at lower levels of education, 80% of the towns are not well endowed with these facilities.

Infact, it is very interesting to note that in Rajasthan, the highest level of availability of educational facilities per 10,000 of population viz, primary, secondary and higher secondary are found in the smaller towns e.g. Jagwala, Sangaria, Amer, Dungarpur, Lachhmangarh, Rajgarh,

Khetri, Bhinmal etc. have higher levels of these facilities as compared to the bigger towns like Bundi, Bikaner, Kota, Jalore, Jodhpur, Ganganagar, Alwar etc. as compared to the number of schools. However, the higher order educational facilities have a greater availability in bigger towns.

In case of Haryana, however, the bigger towns have higher levels of availability of educational facilities of both higher and lower order e.g. Hissar, Gurgaon, Karnal, Rohtak etc. The smaller towns have also higher level of availability of lower order educational facilities but not the higher order i.e. Arts, Science, Commerce, Medical and Engineering Colleges.

ELECTRIFICATION VARIABLES

The levels of electrification are measured by the number of (a) domestic electrical connections (b) industrial electrical connections (c) street lighting (d) commercial electrical connections.

TABLE 4.2

NUMBER OF TOWNS ACCORDING TO NUMBER OF ELECTRICAL
CONNECTIONS

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Domestic	6	16	74	6	11	16
Industrial	12	12	72	3	1	29
Commercial	4	39	53	3	13	17
Street Light	10	32	54	3	7	22

Rajasthan

It is interesting to note that the number of electrical connections per 10,000 of population for domestic and commercial purpose are higher in the smaller towns while the number of industrial connections and street lighting are higher in smaller towns. More than 10% of the towns have a high level of industrial connections followed by street lighting. Only 6% of the towns have high level of domestic electricity availability.

Haryana

Same picture is repeated in case of Haryana with the industrial connections higher in the Class I towns while the number of domestic electrical connections is higher in smaller towns. Haryana as compared to Rajasthan, has more towns with higher level of availability of domestic and commercial connections, almost equal proportion of towns with high levels of street lighting. However, the number of towns with higher availability of electrical connections is likely more in Rajasthan than in Haryana.

SANITATION

The variables taken into account for gauging the levels of sanitation facilities in towns are (a) number of latrines, waterborne (b) number of latrine, service (c) Sewage.

TABLE 4.3

NUMBER OF TOWNS ACCORDING TO LEVELS OF SANITATION

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Latrines	8	30	58	1	1	31
Waterborne Latrine	5	18	73	2	10	21
Service Sewage	14	8	74	1	1	31
facilities.						

Rajasthan

In Rajasthan, more than 70% of the towns have low levels of availability of sanitation facilities and it is surprising to note that it is smaller cities i.e. Class III & IV towns e.g. Nokha, Baran, Sujangarh, Khetri etc. which have higher levels of sanitation facilities.

Haryana

Haryana also has low levels of availability of urban sanitation facilities. On an average, only about 25% of the towns have high to medium availability while more than 75% do not have adequate sanitation facilities.

HEALTH

The levels of health or medical facilities are measured by taking into account the number of beds per 10,000 of population in hospitals, dispensaries, T.B. clinics, nursing homes and allied medical institutions in all the towns.

TABLE 4.4

NUMBER OF TOWNS ACCORDING TO AVAILABILITY OF NUMBER OF BEDS IN MEDICAL INSTITUTIONS

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
No. of beds	12	22	62	2	9	22

The availability of medical facilities is higher in Rajasthan as compared to Haryana. While 12% of the total towns in Rajasthan have high levels of medical facilities per 10,000 of population, only 6% do so in case of Haryana. Nearly 64% of towns in Rajasthan and 67% of towns in Haryana

have low levels of these facilities. The higher availability of medical facilities is found in bigger towns. Haryana's low levels can be explained in terms of its vicinity to Delhi. On the one hand, Delhi provides better medical facilities to neighbouring towns as a result, fewer facilities in the towns themselves, on the other hand, due to the high growth rates experienced by these towns due to the spill over effect of Delhi, these facilities are not able to keep pace with the growing population.

PUCCA ROAD AVAILABILITY

The levels of pucca road availability are determined by the length of pucca road per 100 Sq. Kms. of the area of the town.

TABLE 4.5

NUMBER OF TOWNS ACCORDING TO AVAILABILITY OF PUCCA ROADS PER 100 SQ. KM. AREA OF THE TOWN.

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Road length	5	78	13	6	5	22

In Rajasthan, only about 5% of towns have high pucca road availability. However, most of the towns (nearly 80%) have medium availability of pucca roads. Less than 15% of the towns have inadequate levels of pucca roads. In Haryana, a little less than 20% of the towns have a high ratio of pucca roads per 100 Sq. Km. area of the town. 61% of the towns do not have adequate pucca road length. Infact, it is interesting to note that it is the towns lined on the eastern side of Haryana like Karnal, Sonapat, Faridabad etc. which have higher pucca road length ratio to their area.

CULTURAL-RECREATIONAL FACILITIES

The variables selected for determining the levels of availability of facilities are a)stadium b)cinema (c) auditorium (d) library (e) reading room.

TABLE 4.6

NUMBER OF TOWNS ACCORDING TO LEVELS OF CULTURAL -
RECREATIONAL FACILITIES

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Stadium	8	11	77	2	2	29
Cinema	14	31	51	4	13	16
Auditorium	13	11	72	1	-	32
Library	7	28	61	1	3	29
Reading Room	9	28	59	3	7	23

It is interesting to note that amongst all cultural recreational facilities the availability of cinema halls per ten thousand of population is highest amongst all other facilities in both Haryana and Rajasthan. About 15% of the towns in both the States have a high availability of cinema halls and about half of the total towns have low availability of number of cinema halls. The number of auditoriums per ten thousand of population is high in a greater percentage of towns in Rajasthan than in Haryana. About 75% of towns in Rajasthan and more than 90% of towns in Haryana have low levels of availability of auditorium facilities. The higher levels are found to be in Class I cities of both Haryana and Rajasthan. More than 70% of towns of both Haryana and Rajasthan have low levels of availability of statia per ten thousand of population.

PUBLIC EXPENDITURE

The levels of public expenditure in the various towns are measured by examining the following variables (a) expenditure on public health (b) expenditure on public institutions (c) expenditure on public works. The table below shows the number of towns where the levels of expenditure are high, medium and low.

TABLE 4.7

NUMBER OF TOWNS ACCORDING TO LEVELS OF PUBLIC
EXPENDITURE

VARIABLES	RAJASTHAN			HARYANA		
	High	Medium	Low	High	Medium	Low
Public works	23	30	43	8	12	13
Public health	16	16	64	6	10	17
Public Instt.	2	13	81	5	8	20

The levels of expenditure on public works are high in Haryana and Rajasthan as compared to that on public health and public institutions. About 40% of towns have low level of per capita expenditure on public works. In fact these levels are higher in fast growing towns. Also they are

higher in Haryana than in Rajasthan. In Rajasthan the levels are higher in the smaller towns which exhibit a higher growth rate. In Haryana generally the Class I and II growing towns have a higher level of public expenditure. Interestingly these levels are higher generally in towns away from Delhi.

The per capita availability of educational facilities till senior secondary level is higher in smaller towns (class III and IV) as compared to class I and II towns and the towns situated in close vicinity to Delhi and Jaipur. However, professional institutions have a greater presence in Class I towns which are located away from Delhi, in case of Haryana. In Rajasthan the town of Pilani which specialises in educational facilities, the professional institutions have a greater presence. This town is also not located near Jaipur.

The per capita availability of domestic and commercial electric connections is higher in class III and IV towns while the electrical industrial and street lighting connections are greater in class I and II towns. Greater availability of medical facilities is found in class I towns away from Delhi in case of Haryana and away from Jaipur in case of Rajasthan. The availability of beds per ten thousand of population is less in class III and IV towns.

Thus it is found that the distribution of various socio-economic, civic and infrastructural variables do not follow a uniform pattern in terms of class size of towns. However, there is uniformity in distribution as found in lower per capita availability of these facilities in the towns near Delhi and Jaipur, irrespective of their class sizes. In fact this is also supported by the composite index of infrastructure development (see Appendix) where the towns near Delhi in case of Haryana and Jaipur in case of Rajasthan show lower levels of development in terms of these facilities. This proves the third hypothesis proposed in the study that the small and medium towns surrounding Delhi and Jaipur have a lower level of infrastructural facilities as compared to other towns.

CHAPTER 5

SOCIO-ECONOMIC AND INFRASTRUCTURAL CORRELATES OF POPULATION GROWTH OF SMALL AND MEDIUM TOWNS OF HARYANA & RAJASTHAN

In the previous two chapters we have discussed the population growth and socio-economic and infrastructural profile of the towns. In this chapter an attempt has been made to establish a relationship between these two, taking population growth as dependent variable. The analysis has been carried out by correlation and step-wise regression. The coefficient of correlation of the selected variables with population growth rate is given below :

TABLE - 5.1

Coefficient of correlations between population growth and different socio economic and infrastructural variables of small and medium towns of Haryana and Rajasthan.

VARIABLE NAME	COEFFICIENT OF CORRELATION
Primary Schools	0.1423*
Middle Schools	-0.0599
Matric Schools	0.0840
Higher Secondary	-0.1698
Arts/Commerce/Science College	-0.0863
Medical College	-0.0845
Engineering College	-0.0813
Poly-technic etc.	-0.1444

Roadlength Kachha	0.0953
Roadlength Pucca	0.1018
Latrines Waterborne	-0.0456
Latrines Service	-0.0627
Latrines others	0.1896
Electrical domestic	-0.0511
Electrical Industrial	-0.1752
Electrical Commercial	-0.0391
Electrical Roadlighting	0.1107
Medical beds	-0.1893
Stadium	0.1616
Cinema	0.0231
Auditorium	-0.1369
Library	0.0139
Reading Rooms	0.0315
Women Hostels	-0.0705
Expenditure on public health	0.0711
Expenditure on public works	0.3324**
Expenditure on public institutions	0.0471
Number of banks	0.0754
Agricultural credit societies	-0.1396
Non-agricultural credit societies	-0.0577
Population growth rate	1.00

* = .05 level of significance, ** = .01 level of significance

The list of infrastructural variables for this purpose was found to be too long . It was therefore reduced with the help of a priliminary regression before a detailed regression analysis. In the priliminary analysis , a step-wise regression was carried out by taking the population growth (1971-81) as dependent variable and all 31 indicators as independent variables . In all the 31 steps the change in their adjusted R square was noted and the analysis was trunkated at the step where the change was found to be negative. The variables selected by the regression analysis before this step were retained as relatively more important variables. These variables are listed in the table 5.2 below along with the final results of stepwise regression.

TABLE - 5.2 Results of preliminary regression analysis

Name of variables	B	SEB	Beta	T
values				
Expenditure on public works	4.95044E-05	2.5689E-05	.19866	1.920
Primary School	3.03662	1.55429	.21287	1.954
Electric Indl.	.11795	.04372	.27481	2.698
Electric Domest.	-5.9274E-03	2.5370E-03	-.33410	-2.336
Higher Secondary	-15.41063	7.94571	-.20650	-1.939
Agri. Credit Soc.	-27.4529	11.0861	-.27456	-2.455
Stadium	5.57390	5.27947	.10374	1.056
Matric	8.56925	6.53532	.15036	1.311
Middle School	-4.67550	2.82905	-.17056	-1.653
Banks	7.08285	3.56314	.36694	1.988
Latrine Service	-7.6570E-03	4.2239E-03	-.2868	-1.813
Latrine Waterborne	12.4213	7.84593	.17479	1.583
Roadlength	-10.37597	9.41946	-.11932	-1.102
Expenditure on public health	2.68270	1.35693	.09890	1.086
Colleges	-3.84220	1.08367	-.13056	-1.063
Adjusted R square	= .24866	F = 3.24575		

These relatively important explanatory variables are however highly aggregated, since they include towns of all sizes and all levels of development. In the subsequent part

of the analysis, a further stepwise regression analysis was proposed using these selected variables for towns of different size categories for Haryana and Rajasthan. It was however found that number of towns in most cases was not enough for carrying out the stepwise regression analysis. It was therefore decided to carry out only the correlation analysis for this purpose. The results of this correlation analysis are discussed below.

HARYANA

Class I Towns:

The coefficient of correlation of the population growth with proposed socio economic and infrastructural variables given below in table 5.3.

TABLE - 5.3 Coefficient of correlation between population growth and socio economic and infrastructural variables in class I towns of Haryana

Variable	Coefficient of Correlation
Primary School	-.4717
Middle School	-.3791
Matric School	-.1449
Higher Secondary	-.4027
Colleges	-.2346
Roadlength	-.2095
Latrines Waterborne	.0585
Latrines Service	-.0931
Electric Industrial	-.7474*
Electric Domestic	-.0528
Expenditure on Public Health	.0413
Expenditure on Public Works	.0927

* = significant at 5% level of significance.

The above correlation analysis shows a very weak correlation. The only significant correlation is found to be between population growth and industrial electrical connections which is significant only at 5% level of

significance. Since the number of observations is small in the case, no further regression has been attempted. The very fact that almost all the variables have shown negative relationship with the population growth indicates that with the population growth the per capita availability falls down. This may also be interpreted as the overall stagnation in these facilities in class I town in comparison with the population growth.

Class II towns:

The urbanisation in Haryana interestingly does not show any significant primacy as has been mentioned earlier. Number of class II towns is 6. This number is not large enough for any meaningful correlation or regression. However, the correlation coefficients of population growth with the same set of variables is given below in the table 5.4 to identify any tendency if present.

TABLE - 5.4 Coefficient of correlation between population growth and socio economic and infrastructural variables in class II towns of Haryana

Variable	Coefficient of Correlation
Primary School	-.607
Middle School	-.598
Matric School	.027
Higher Secondary	-.0961
Colleges	-.3039
Roadlength	.0175
Latrines Waterborne	-.3973
Latrines Service	.4389
Electric Industrial	.4202
Electric Domestic	-.0682
Expenditure on Public Health	.4264
Expenditure on Public Works	.5102

The above table shows that there is not much significant relation between population growth and the socio-economic and infrastructural variables. The position of class II towns is however slightly better than class I towns in the sense that there are atleast 4 variables that

have shown a positive relationship with population growth. These variables are expenditure on public works, public health, sewage (Service Latrines) and industrial electrical connections. Thus in terms of class II towns there is some evidence of correspondence between availability of some civic facilities & public expenditure and population growth.

Class III towns

The coefficient of correlation of the population growth with selected variables in class III towns is given below:

TABLE - 5.5 Coefficient of correlation between population growth and socio economic and infrastructural variables in class III towns of Haryana

Variable	Coefficient of Correlation
Primary School	-.7960**
Middle School	-.2447
Matric School	.0527
Higher Secondary	.2739
Colleges	-.2071
Roadlength	.1559
Latrines Waterborne	.389
Latrines Service	-.3121
Electric Industrial	.2035
Electric Domestic	-.0185
Expenditure on Public Health	-.1207
Expenditure on Public Works	.3834

** = significant at .01% level of significance.

The above table shows that the most significant relationship is with primary schools and population growth is negatively related with primary schools. Even the middle

schools and colleges have a tendency of negative relationship. Class IV towns

The relationship between the various socio-economic & civic variables and population growth can be studied from the table below:

TABLE - 5.6 Coefficient of correlation between population growth and socio economic and infrastructural variables in class IV towns of Haryana

Variable	Coefficient of Correlation
Primary School	.5996
Middle School	.2404
Matric School	-.7651
Higher Secondary	-.7651
Colleges	.3407
Roadlength	.3180
Latrines Waterborne	.1339
Latrines Service	.6534
Electric Industrial	.6241
Electric Domestic	.9543*
Expenditure on Public Health	.9414*
Expenditure on Public Works	.9276*

* - Significant at 1% level of significance

From the table above it is found that highest level of correlation of population growth in class IV towns of Haryana is found domestic electrical connections, expenditure on public health and expenditure on public works. All of which are significant at 1% level of significance. Other important variables showing positive correlation are the availability of latrines and number of industrial electrical connections. It is interesting to note that unlike the class I, II and III towns of Rajasthan the education variables show a positive correlation with population growth. This points out towards the adequate availability of lower order education facilities i.e. till Middle school in class IV towns. There is negative correlation between population growth and matric and higher secondary schools. Thus it is seen that the civic facilities, electricity availability, sanitation and public expenditure are positively correlated with population growth suggesting that the availability of these facilities encourages greater population growth in class IV towns.

RAJASTHAN

Class I towns

The relationship between population growth and infrastructural facilities in class I towns of Rajasthan can be studied through the correlation coefficient given in the table below:

TABLE - 5.7 Coefficient of correlation between population growth and socio economic and infrastructural variables in class I towns of Rajasthan.

Variable	Coefficient of Correlation
Primary School	.0490
Middle School	-.0034
Matric School	.0490
Higher Secondary	-.2458
Electric Industrial	.1561
Electric Domestic	-.3753
Expenditure on Public Works	.3268
Stadium	.4861
Banks	-.3795
Agril. Credit Society	.0470

The above table shows that there is a negative correlation between population growth and middle and higher secondary schools, domestic electrical connections and number of banks. A positive relationship is observed with number of stadia, expenditure on public works. It is interesting that in Rajasthan also the education variables do not positively affect the population growth. Other variables show very insignificant relationship.

Class II towns

In case of class II towns of Rajasthan only two variables namely; matric and primary schools experienced significant but negative relationship with population growth rate. It means growth in the number of higher secondary and primary schools does not correspond with population growth rate of class II towns.

TABLE - 5.8 Coefficient of correlation between population growth and socio economic and infrastructural variables in class II towns of Rajasthan.

Variable	Coefficient of Correlation
Primary School	-.3403*
Middle School	-.2067
Matric School	-.3403*
Higher Secondary	-.1353
Electric Industrial	.1836
Electric Domestic	.1595
Expenditure on Public Works	.3077
Stadium	.2811
Banks	.2683
Agril. Credit Society	-.0925

* - Significant at 1% level of significance.

Expenditure on public works shows a positive relationship with population growth, which means increase in expenditure in public works promotes and increase in population growth rate. Other variables have insignificant impact on population growth rate.

Class III towns

As can be seen from the table below, the highest coefficient of correlations are found to be with matric and primary schools though they are negatively related. Other variables related to education like middle and higher secondary also show a negative relationship. The next highest correlation in expenditure on public works followed by pucca roads and number of banks. Electrical connections both domestic and industrial also have a positive relationship. It is interesting therefor, to note that in Rajasthan also the education variables have not gone a long way with the growth of population, they have shown a negative relationship whereas the levels of public expenditure have in Rajasthan also as in Haryana shown a positive correlation with the population growth.

TABLE - 5.9 Coefficient of correlation between population growth and socio economic and infrastructural variables in class III towns of Rajasthan.

Variable	Coefficient of Correlation
Primary School	-.340
Middle School	-.207
Matric School	-.340
Higher Secondary	-.135
Electric Industrial	.184
Electric Domestic	.160
Expenditure on Public Works	.308
Stadium	.281
Banks	.268
Agril. Credit Society	.095

Class IV towns

The relationship between population growth and infrastructural facilities in class IV towns of Rajasthan can be studied through the correlation coefficient given in the table below:

TABLE - 5.10 Coefficient of correlation between population growth and socio economic and infrastructural variables in class IV towns of Rajasthan.

Variable	Coefficient of Correlation
Primary School	-.194
Middle School	.179
Matric School	-.194
Higher Secondary	-.016
Electric Industrial	.147
Electric Domestic	-.014
Expenditure on Public Works	.385
Stadium	-.210
Banks	-.117
Agril. Credit Society	-.066

The above table shows that highest correlation of population growth exists with public works which is .385, followed by pucca road length which has negative relationship, matric and primary schools (negative relation) while positive correlation is found with middle schools. The above results again shows the tendency of educational facilities having negative relationship and public expenditure showing positive correlation with population.

Thus it is found that in both Haryana and Rajasthan, the education variables have negative relationship with population growth. This points out towards the fact that there are inadequate educational facilities and that educational facilities have not increased in commensuration with the increase in population, especially in the towns where the population growth is very high. So it can be said that the availability of civic amenities, electricity and high levels of public expenditure seem to contribute the most to population growth in small and medium towns.

CHAPTER 6

SUMMARY AND CONCLUSION

Summary

The present study starts with the role of small and medium towns in arresting the lop-sided urban growth with a heavy concentration of population in metropolitan cities and the large class I cities, leading to a top heavy nature of urbanisation .It was found that these towns were getting lesser attention from the planners resulting in a lower levels of infrastructural development .As a result these towns were less preferred for migration.this study has therefore tried to establish the relationship between the population growth rate and infrastructural facilities in Haryana and Rajasthan . These two states vary greatly in their physical conditions, their levels of economic development both agricultural and industrial and present two different sets of urbanisation scenario.However the urban growth in both the states has been dominated by two metropolitan cities . In case of Haryana the proximity to Delhi has led to an explosive growth in the ringside towns and in Rajasthan the towns surrounding Jaipur are growing at a very fast rate.

Chapter I and II are introductory and deal with the literature survey ,objectives and hypotheses, study area ,data-base and methodology.

Chapter III deals with the pattern of urbanisation in Haryana and Rajasthan .The distribution of small and medium towns has been discussed in detail. The patterns of growth of these towns has been studied in order to identify the rapidly growing ,normally growing and the stagnating towns.

It was found that both in Haryana and Rajasthan there is no uniform distribution of the small and medium sized urban centres .Infact there was a visible concentration in the districts surrounding the metropolitan cities of Jaipur and Delhi . The rapidly growing small and medium towns also showed a bias towards these two metropolises.Hence the hypothesis relating to

distribution and growth of small and medium towns holds true.

Chapter IV discusses the availability of different types of infrastructural facilities for the small and medium towns of the two states.The levels of development according to the availability of these facilities has been identified by computing the composite index thus revealing the spatial pattern of infrastructural development .

The spatial pattern of infrastructural facilities in small and medium towns shows that the towns which are located in districts situated further away from Delhi and Jaipur ,enjoy higher levels of these facilities. The general level of facilities are low in most of the towns .Only a few

towns show a high level of infrastructural facilities. The composite index of infrastructural development reveals lower levels of development in the towns around Delhi and Jaipur. Thus the hypothesis related to distribution holds true.

Chapter V deals with the relationship between population growth and distribution of infrastructural facilities in the small and medium towns of Haryana and Rajasthan. It is interesting to note that most of the infrastructural facilities do not exhibit a significant relation with population growth. In fact educational facilities show a negative relationship with population growth. This implies that the educational facilities are not keeping pace with population growth. Certain other facilities also reveal negative relationship like the electrical domestic connections, electrical commercial connections, medical facilities etc. This implies that these facilities are also inadequate. The highest correlation is observed with the expenditure on public works. Other positively related variables are roadlength, sanitation facilities, industrial electrical connections, cultural recreational facilities, expenditure on public health and public institutions etc. Thus it is seen that civic facilities, availability of electricity and public expendi-

ture seem to be the most contributing factor to the population growth rate.

Conclusion

From the above discussion, it is clear that the urbanisation pattern in both Haryana and Rajasthan is highly distorted with an extreme bias both in their spatial distribution and population growth towards the districts surrounding Jaipur and Delhi. The towns located away from these two cities have a higher level of infrastructural facilities in relation to their population. However, this could be because they have a lower rate of growth as compared to the towns neighbouring Jaipur and Delhi and as a result the per capita availability of services is high here as compared to the later. This imbalance in the pattern of services and urbanisation must be removed with proper policy measures.

In the present study it is found that some of the facilities show a positive and significant correlation with population growth in case of certain categories of towns but the same facilities show a negative relationship with other towns. In order to have a positive relationship it becomes imperative that the level of these facilities should be increased, thus making them more attractive for migration

and in the process checking the tide of migration towards the already overcrowded metropolises. This would rectify the regional imbalances in urbanisation. Though it seems that the levels of infrastructural facilities is higher in towns located away from Delhi and Jaipur this is mainly because of their low population and not actually due to a very high level of these facilities. Hence, in order to increase their population more of the facilities should be provided.

It is imperative to note that it is the economic factors which play a more important role as can be seen from the bias nature of urban distribution and growth hence it becomes important that along with improving the infrastructural facilities, the economic base of small and medium towns should be improved in order to promote their growth. So there should be comprehensive programme of development of small and medium towns and compassing the strategies for both economic as well as infrastructure facilities.

In this study a modest attempt has been made to study and understand the development of small and medium towns in Haryana and Rajasthan. However, the study has its own limitations owing to the data constraints. A further detailed study is necessary for a better understanding and

insight into the development of small and medium towns of these states.

BIBLIOGRAPHY

BOOKS

- Bhalla & Kundu (1982): Growth of Small and Medium towns in India. O.P. Mathur ed Small Cities and National Development 1982.
- Bijlani, H.U.(1982) : Integrated Development of Small & Medium towns - Some Policy Issues ed Vishwakarma
IDSMT, IIPA, New Delhi
- Bose, 1978): India's Urbanisation 1901- 2001, Insti
tute of Economic Growth, New Delhi.
- Bose, A. (1982) : Role of Medium Cities in Urbanisation Process, Third Asian and Pacific Population Conference, Colombo, September-1982, ESCAP, Bangkok, Thailand, U.N.
- Buch, M.N. (1980) : A Policy of Urbanisation: The Role of Small and Medium Towns, Nagarlok Volume VII No. 4

Chandrashekhar, C.S.(1975) : Planning for Urban India,
Nagarlok Volume-VIII No. 4 Page 26-
35.

ESCAP POPULATION DIVISION (1982) :Urbanisation in Escap
Region, TIIRD Asian and Pacific
Population Conference, Colombo, U.N.

Gupta, R.G. (1983) : Planning and Development of Towns.
Oxford and IBH Publishing Co., New
Delhi.

Harday & Satterthwaite (1986) : Small and Intermediate
Urban Centres, Their Role in
National and Regional Development in
the Third World. Sage, Beverly
Hills, London.

Kundu, A. (1978) : Analytical Frame for Studying the
Process of Urbansation in India.
Ph.D Thesis, J.N.U., New Delhi.

Kundu, A. (1987) : Measurement of Urban Processes,
Popular Praka- shan, Bombay.

- Mahmood, A. (1977) : Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.
- Mathur, O.P. (1982) : Small Cities and National Development, UNCRD, Nagoya, Japan.
- Mathur, O.P. (1984) : Role of Small and Medium Cities in Regional Development, UNCRD, Nagoya, Japan.
- Mayur, R. ed. (1978) : A Profile of Urbanisation, National Society of Urban Development, Hospet.
- Mukherjee, D. and Morrille(1973) : Urbanisation in a Developing Economy: Indian Perspectives and Patterns, Sage Publications, Beverly Hills, London.
- Muktha, S. Adi.(1991) : A Strategy for Urban Development, Mysore Economic Review,76 (5), May, 1991 pp 5- 9.

Nandy, R. (1985) : Development of Small and Medium Towns
CVS, IIPA, New Delhi.

Pitala, R.L. (1982) : Industrial Growth, Informal Sector
and Development of Small and Medium
Towns, in Vishwakarma ed. Integrated
Development of Small and Medium Towns
IIPA, New Delhi, pp 181-201.

Prasad, N.K. (1978): Housing in Urban Development-Role
of HUDCO on National Scale, Nagarlok
Vol. X, No. 1, 1978.

Prasad, K.(1982) : Development of Tertiary Sector in
Small and Medium Towns, in
Vishwakarma ed. Integrated
Development of Small and Medium
Towns, IIPA, New Delhi.

Premi, M.K. (1986) : Urban Outmigration, Rejesh
Prakashan, New Delhi.

Raj Bala. (1986) : Trends in Urbanisation in India, 1901
- 1981, Rawat Publication, Jaipur.

- Rondinelli, D.A.(1983) : Secondary Cities in Developing Countries: Policies for Diffusing Urbanisation, Sage, Beverly Hills, London.
- Rondinelli, D.A. (1985) : Applied Methods of Regional Analysis: Spatial Dimensions of Development Policy, Westview Press, Boulder and London.
- Shah, S.M. (1985) : Growth Centres for Rural and Urban Development, Abhinav Prakashan, New Delhi.
- Sharma. (1978) : Integrating Urban and Rural Development, Nagarlok, Volume 7, No.4, page 55-59.
- Singh, S.(1990) : Growth and Developmental Problems of Small and Medium Towns in India- Review and Suggestions. A Paper Published by TCPO, New Delhi.
- Suri, K.B.(1968) : Towns:Size, Economic Structure and Growth. Economic and Political

Weekly, Vol. 32, No. 3, Page 1247-2125.

Task Force on Planning and Development of Small and Medium Towns in India - A Report, 1983, New Delhi.

U.N. (1987) : The Prospects of World Urbanisation, 1984-85, New York.

Varghese, M. (1982) : Integrated Development of Small and Medium Towns in Kerala, Vishwakarma ed. Integrated Development of Small and Medium Towns, IIPA, New Delhi.

Vishwakarma. (1982) : Integrated Development of Small and Medium Towns, IIPA, New Delhi.

Vishwakarma & Ajay Prakash (1984): IDSMT: Programme Implementation and Its Evaluation and Impact Analysis, Centre for Urban Studies. IIPA, New Delhi.

ARTICLES

Berry, B.J.L.(1964) : "City Size and Economic Development" Economic Development and Cultural Change.

Chandrashekhar, C.S. (1972) : "The Role of Growth Focii in Regional Development Strategy" URPT Vol. 15, No. 1.

Mohan, R. & Pant, C.(1979) : "Morphology of Urbanisation in India: Some Results from 1981" Economic and Political Weekly, Vol. 17, No. 34-39, pp 1579 - 1580.

Munshi, S.K. (1975) : " Problems of the Third World Urbanisation- Illusion and Reality" Mainstream August, 1975.

Nag, A.(1977) : "Lopsided Urban Growth" Financial Express, 25th May, 1977.

Premi, M.K.(1981) : "Role of Migration in Urbanisation Process in the Third World

Conference: A Case Study Of India"

Social Action, No. 31, Vol. 3.

Singh, R.R.(1985): "Balanced Urbanisation" Yojna, Vol.
29, No.13 Page 28-31.

GOVERNMENT DOCUMENTS

Census of India, 1971, Series 6, Haryana, District Census Handbooks for various Districts.

Census of India, 1981, Series 6, Haryana, District Census Handbooks for various Districts.

Census of India, 1971, Series 18, Rajasthan, District Census Handbooks for various Districts.

Census of India, 1981, Series 18, Rajasthan, District Census Handbooks for various Districts.

Statistical Abstract of India, 1981-82, New Delhi, 1982

Report of the Task Force on Planning and Development of Small and Medium Towns and Cities, Vol. 1 and Vol.2, Ministry of Works and Housing, Govt. of India, 1977.

APPENDIX 1**CLASS, POPULATION AND GROWTH RATE OF SMALL AND MEDIUM TOWNS
OF HARYANA 1981**

NAME	CLASS-81	POPULATION-81	GROWTH RATE
KARNAL	1	132107	4
PANIPAT	1	137927	5
GHARAUNDA	4	17332	3
ROHTAK	1	166767	3
BAHADURGARH	3	37488	4
JHAJJAR	3	24247	2
SIRSA	2	89068	8
DABWALI	3	29071	3
FARIDABAD	1	330864	16
PALWAL	2	44328	3
HODAL	4	18740	3
AMBALA CITY	1	104565	1
AMBALA CANTT.	2	121203	-6
KALKA	3	21359	2
PANCHKULA	4	11239	10
YAMUNANAGAR	1	43102	5
JAGADHARI	3	19304	2
BHIWANI	1	27315	3
CHARKHI DADRI	3	7247	4
GURGAON	1	89115	7
JIND	2	56748	4

NAME	CLASS-81	POPULATION-81	GROWTH RATE
SAFIDAN	4	15116	2
BARWALA	4	17648	3
FATEHABAD	3	33049	4
HANSI	2	50365	2
HISSAR	1	137369	5
TOHANA	3	25487	5
NARNAUL	3	51562	3
SONEPAT	1	109369	7
GANAUR	4	16489	9
REWARI	3	51562	1
KAITHAL	3	58385	2

APPENDIX 2

CLASS, POPULATION AND GROWTH RATE OF SMALL AND MEDIUM

TOWNS OF RAJASTHAN 1981

NAME	CLASS-81	POPULATION-81	GROWTH RATE
BARMER	II	55554	4
BALOTRA	III	28070	6
BUNDI	III	47736	3
LAKHER	III	20060	3
DUNGARPUR	III	27556	3
JAGWALA	IV	16570	3
ANUPGARH	IV	12997	18
BHADRA	III	22568	6
GANGANAGAR	I	123692	3
HANUMANGARH	II	60071	8
NOHAR	III	22680	3
PILLIBANGA	IV	17852	4
RAISINGHNAGAR	IV	17069	5
RAWATSAR	III	25914	2
SANGARIA	IV	19002	4
SURATGARH	III	29815	6
JAISALMER	III	22041	3
CHIRAWA	III	20841	3
JHUNJHUNUN	IV	47177	4
KHETRI	IV	12594	4

NAME	CLASS-81	POPULATION-81	GROWTH RATE
NAWALGARH	III	38727	4
PILANI	IV	17027	3
UDAIPURWATI	IV	16819	3
AMER	IV	16054	6
CHOMU	III	28822	4
DAUSA	III	27212	4
JAIPUR	I	977165	5
KOTPUTLI	III	21716	7
LALSOT	IV	15297	3
MANOHARPUR	IV	14916	3
SAMBHAR	IV	17633	1
SANGANER	III	21941	8
BIKANER	I	25374	3
NOKHA	III	24119	11
BARAN	III	42000	4
KOTA	I	358241	6
RAMGANJ MANDI	IV	15530	3
BANSWARA	III	46749	7
CHITTAURGARH	III	42332	7
NIMBAHERA	III	27763	6
PRATAPGARH	III	22903	3
RAWATBHATA	IV	17700	5
FATEHPUR	II	51084	4
KHANDELA	IV	15763	2

NAME	CLASS-81	POPULATION-81	GROWTH RATE
LACHMANGARH	III	29215	3
NEEM KA THANA	IV	15266	3
RAMGARH	IV	19570	3
SIKAR	I	102970	4
SRIMADHOPUR	IV	18461	7
PALI	II	91568	8
SADRI	II	18468	2
SOJAT	IV	24292	4
SUMERPUR	IV	15246	4
JALORE	III	24100	5
BHINMAL	III	24339	7
BHAVANIMANDI	IV	16928	5
JHALAVAR	III	29257	4
JHALRAPATAN	IV	16805	3
BILARA	III	24006	3
JODHPUR	I	506345	5
PHALODI	III	28539	6
PIPAR	III	20955	3
AJMER	I	375593	4
BEAWAR	II	89998	3
KHETRI	III	20393	4
KISHANGARH	II	62032	6
NASIRABAD	III	34616	3
VIJAY NAGAR	IV	15191	7

NAME	CLASS-81	POPULATION-81	GROWTH RATE
GANGAPUR CITY	III	46026	4
HINDAUN	III	40407	5
KARALI	III	42706	3
SAWAI MADHOPUR	III	59083	3
DEEDWANA	III	23937	3
KUCHAMAN CITY	III	26973	4
LADNU	III	35972	2
MAKRANA	III	40663	7
MERTA CITY	III	22120	3
NAGPUR	III	48005	3
NATHDWARA	III	24856	3
RAJSAMAND	III	27492	9
UDAIPUR	I	232588	4
ABU ROAD	III	31280	2
SIROHI	III	23903	2
BHILWARA	I	122625	4
MALPURA	IV	17994	2
AJWAI	IV	15961	4
TONK	II	77653	3
BIDASAR	IV	17814	5
DUNGARGARH	III	29076	3
RAJGARH	III	30379	3
RATANGARH	III	43366	3
SARDARSADIA	III	55473	6

NAME	CLASS-81	POPULATION-81	GROWTH RATE
SUJANGARH	IV	55546	3
TARAAANAGAR	IV	15435	2
ALWAR	1	185295	4
BHARATPUR	I	143822	5