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HUMAN RESOURCE DEVELOPMENT *

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May I, first of all, say how deeply beholden I am to the organisers of the 16th Indian Geographers' Meet for inviting me to deliver the keynote address at the inaugural session. I took it as an honour not only to myself personally, but also to the Geography Department of the Panjab University with which I had the pleasure of being associated for nearly three decades.

I also wish to compliment the executive committee of the Institute of Indian Geographers for choosing "Human Resource Development" as the focal theme for this Meet — a theme which is of perennial importance. Man is at the centre of the whole drama of spatial development and the totality of life on the earth. His is a pivotal role of multiple dimensions. There is an old saying that "resources derive their significance from man". To the Red Indians living in North America for centuries, coal was only black stone. But the European immigrants after landing in the new continent found it as a precious source of energy. All students of Geography are aware how the knowledgeable, adventurous, and innovative migrants from Europe made use of this source of energy in developing the U.S.A.

into an economically strong land and, by that token, into one of the most powerful countries of the World politically. Also it is widely known how through a process of assimilation and promotion of human qualities these immigrants were able to build a progressive and ever forward looking nation. The quality of man, no doubt, is the key factor in the totality of regional development.

Human population is not to be placed alongwith natural resources on the same plane in the developmental process. It is commonly believed that population is not only a resource, but an "active" resource for that matter. Man is the "doer" or the "chief actor" in shaping or reshaping of the regional landscapes. What a region looks like in its totality, or in its sectoral segments, bears an indelible imprint of the Man involved in the process. All the non-human resources are "passive". These non-human resources are important but not entirely (and always) indispensable. What is indispensable is the fine quality human beings. You can do with inadequate or deficient resources, but there is no substitute for innovative, educated, hardworking, determined, disciplined and forward looking human beings. There are many examples in the world where dynamic and innovative people have

* This paper was presented as a keynote address at the 16th Indian Geographers' Meet held at the Panjab University, Chandigarh from 12th to 14th February, 1995.

produced unmatched socio-economic assets and quality of life in the midst of scarcity of natural resources. Among such cases, Japan and Switzerland are shining examples. This is not to minimise the importance of natural resources, but only to put the human resource in its correct perspective. The adequacy or abundance of natural resources is an enabling or facilitating factor in the developmental process provided the desired kind of human beings are on the scene to make use of them.

The quality of human population is not only measurable in terms of literacy, education, technology, health and nutrition, but it also includes among its determinants traits like values, ethics, culture and a sense of pride in belonging to one's country. In sum, the quality of human resource is a comprehensive concept.

The quality of population is inter-related with its numbers. Quality can be promoted with appropriate measures if the numbers are not too large. Quality gets diluted, or is difficult to be achieved in full in the midst of a massive population witnessing accelerated growth over a long period of time. India is caught up in such a trap at the moment. With the world's second largest population consistently growing at high rates throughout the post-Independence period (21.5% during 1951-61, 24.8 during 1961-71, 24.6% during 1971-81, and 23.85% during 1981-91), it has experienced staggering increases in its absolute numbers decade after decade. The explosion from about 360 million in 1951 to 846 million in 1991 (913.7 million according to the 1994 ESCAP Population Data Sheet) has created wide ranging implications for the country. Among many consequences of this bewildering growth, the fact that as much as about 37 per cent of India's total population is below 15 years of age is a great stumbling block in the way of bringing any significant decline in birth rates immediately. If this trend continues, India is threatened to become the most populous country in the World, bypassing even China, sometime during the thirties of the 21st century. Despite respectable achievements in absolute terms in the

socio-economic sphere during the past about 40 years, the average Indian does not seem to feel better off in several crucial aspects of life. Such has been the neutralising effect of the rapid strides of population growth during the four decades of our planned development. To avoid further dilution of gains towards the qualitative improvement in the various facets of life of the people, highest priority has to be extended to the control of numbers. Despite the provision of family planning programmes ever since the very first five-year plan the crude birth rate in India has remained high. It has started declining only recently but at a snail's pace. It has dropped from 39.9 per thousand in 1951 to 29.3 per thousand in 1991. Only in Kerala, Goa and Tamil Nadu has it come down appreciably by 1991 : to 18.1, 16.8 and 20.7 per thousand of population respectively. But Kerala and Goa are only small states accounting for a small fraction of the total population of the country. Consequently their achievement has not made any material impact on the overall national fertility rate. No doubt they are showing the desirable direction to the rest of the country. The large states like Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan in the north have still very high birth rates ranging between 34 and 36 per thousand of population, as in 1991. In most others the corresponding figures are between 26 and 29. Unless the large states register appreciable decline in their birth rates, the national scenario is not expected to change much in this regard.

The death rate in the country as a whole, on the other hand, has come down significantly, from 27.4 per thousand of population in 1951 to 9.8 in 1991, with inter-state variations showing a much shorter range. The decennial population growth rate of 23.85 per cent during 1981-1991 in India demonstrates that the country has still to go a long way before achieving substantial reduction in birth rates so as to be able to bring the demographic transition to an advanced stage. It is clear that the country is racing against strong currents in its fight against escalating numbers. Till the demographic situation comes under control, the progress toward the multifaceted

improvement in the quality of human resource is most likely to remain slow, and the process of neutralisation of the benefits of development is bound to continue. This scenario is in marked contrast to what has been accomplished in several of the eastern and south-eastern Asian countries (Japan, South Korea, China, Taiwan, Singapore etc.). There a large part of the demographic battle has been won within far shorter periods and most effectively. Their efforts to improve the quality of human resource are getting visibly reflected in their socio-economic achievements.

The exacerbation of the employment problem is a direct consequence of accelerated population growth, as has been experienced in India in recent decades. The adverse effect of population explosion on the quality of nutrition, health facilities, extension of literacy and educational facilities and public services is now commonly realised. It follows from the above that rapid population growth is a great stumbling block in the way of human resource development and in the attempts to improve quality of life.

Population geographers should investigate into the regional variations in fertility rates and the social, economic, cultural and demographic factors associated with these variations, so as to provide a basis for planning measures of population control. Dependence on economic development for reducing birth rates to low levels is only a long term perspective. Quick results in this direction may be obtainable from development of education both among men and women, raising age of marriage through legislation and its effective implementation, provision of employment facilities for women outside the home, raising their social status, expansion of health care programmes and improvement of nutritional standards. Removal of illiteracy among women in all sections of the society is of special urgency. In a large country like India, with great spatial diversity in social, economic and cultural milieu, the geographers have a distinct role to play in this vital sector of human resource development. Formulation of precise and sound policies for human development

must be based on extensive empirical research into the spatial patterns and processes relating to the various facets of life.

Among the important factors associated with resource development, education is the most pivotal. The extension of educational facilities to all regions, all social groups and to both men and women received priority consideration in developmental planning in all the countries which are among the most advanced today. In all developed parts of the world, human resource development was considered basic to socio-economic progress. This realisation is gradually dawning upon the developing countries now, although in varying degrees. However, in India even literacy — the ability to read and write with understanding in any of the languages — has not as yet been extended fully despite regular provision of literacy programmes in all the five year plans. There are wide spatial, sectional and male-female differentials in this regard. As per 1991 census only 52.19% of the population aged 7 years and above is literate. With 89.8% of its population (aged 7 and above) literate, Kerala leads all other states and union territories in the country, followed by Mizoram (82.2%), Lakshdweep (81.7%), Chandigarh (77.8%), Goa (75.5%), Delhi (75.29%), Pondicherry (74.29%), Andaman & Nicobar Islands (73.03%), Daman and Diu (71.20%). But these are all very small areal units and account for only a small fraction of the country's total population. Large states like Uttar Pradesh (41.06%), Bihar (38.48%), Rajasthan (38.55%), Andhra Pradesh (44.09%) and Madhya Pradesh (44.20%) are a way behind in their literacy progress which is only an elementary effort toward human resource development. The slow growth in knowledge is an especially severe restraint to material progress. The economic achievements of population remain meagre when there is little knowledge of the available natural resources and when understanding of the alternative production techniques and necessary skills is lacking. Lack of education also results in ignorance of the

existing marketing conditions and opportunities, as also the institutions that may be recreated to favour economising effort and economic rationality. The progress in knowledge and the diffusion of new ideas, innovations and technologies are necessary to remove economic backwardness and to instill human abilities and motivations that are favourable to economic advancement.

The ability to read and write with understanding in any of the languages is the very minimum required to move in the direction of socio-economic progress. The inter-state disparities even in this elementary requirement are glaringly large in India and the degree of achievement in most cases still quite low. In addition, the male-female differential in literacy is not only large but has also wide range of variation. In Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan general female literacy rates are woefully low, between 20 and 25%, and this after 40 years of planned development. Among scheduled castes and scheduled tribes the female literacy rates are still far lower. In India as a whole, while 64.13% of the males aged 7 years and above are literate, the corresponding figure for the females is only 39.29%. Likewise, the rural and urban areas stand apart in literacy - 44.69% in rural areas and 73.08% in urban areas can read and write with understanding. In Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan the rural literacy rates (for the total rural population) range between 30 and 37% while in Kerala it is as high as 88.92%. The situation with regard to rural female literacy rates is far worse, and spatial disparities therein far larger. Whereas in Kerala as much as 85.12% of the females (7 years and above) in villages can read and write, the corresponding proportions for Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan are as low as 17.95%, 19.02%, 19.73% and 11.59% respectively. In a predominantly rural country like India, rural female literacy rates provide a sensitive index of socio-economic progress. If the country is to move ahead socially,

economically and demographically, rural female literacy must spread extensively and intensively and spatial disparities therein must be narrowed down substantially and in the minimum of time.

In the urban areas, on the other hand, literacy rates are much higher and inter-state differences in them much smaller. In urban India as a whole 81.09% of the males (7 years and above) and 64.05% of the females are literate. In Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan urban male literacy rates are 77.72%, 69.98%, 81.32% and 78.50 respectively. As against these the urban female rates in these states in that order are 55.94%, 50.38%, 58.92% and 50.24%. In Kerala, on the other hand, 95.5% of the males and 89.06% of the females in urban areas are literate. These figures bring out clearly that although literacy is far more diffused among males and females in the urban areas and male-female differential relatively small, much still remains to be done for the females in their ability to read and write with understanding in any of the languages even in towns and cities in most parts of the country.

The complexities of the situation in this regard are further heightened by the persistently high disparities in literacy among the various sections of the society (scheduled castes, scheduled tribes, backward classes etc., vis-a-vis the rest of the population). It emerges from the above that even in this elementary aspect of human resource development, that is literacy, the level of achievement in the country as a whole leaves much to be desired and that the rural areas and the females need to be brought under a special focus in this regard. It is an Herculean task which must be pursued with urgency.

With a view to accelerating development, the immediate need is to lay emphasis on vocational and technical training and adult education rather than on a greatly expanded system of formal education. In other words, the problem of human resource development in developing countries has to be assaulted from all angles.

For a broader understanding of educational requirements, there is a need to conduct "manpower surveys" from time to time to identify principal skill shortages so that training activities may be planned accordingly. The nature and quality of skills required will change with changing development patterns and processes in each country. Instead of imitating the educational system of developed countries, therefore, newly developing countries may find it more appropriate to concentrate, at least in the early phases of their developmental programmes, on methods of informal education and on the objectives of functional education.

Putting all these ideas together, it may be noted that the concept of human resource development is not a static one. Rather, it is a dynamic concept. The measures of improving the quality of human resource have to continue to change from time to time in accordance with the changing needs of the countries. An individual once educated is not educated for all time. He must continue picking up new ideas as they emerge in order to be up-to-date in his learning process. That is the only way of surviving in a fast changing world. Lack of dynamicity leads to stagnation. Human resource development, therefore, should be a continuing process.

Even in the U.S.A. there has been a persistent demand for restructuring education in recent years to make it directly more responsive and relevant to the changing needs of the country. In several cases general disciplinary departments in universities and other institutions have been closed to divert available funds for strengthening courses or educational programmes of practical utility. Within individual departments old courses have been restructured to make them practically relevant, of course retaining the substantive academic contents. This is being done to produce the kind of manpower which is

required for restructuring the economy and maintaining its position in the current highly competitive world. With the slogans of globalisation which we are hearing all around, there is no occasion to sit idle and be complacent. Inter-regional and intra-regional relations must be understood and regulated appropriately. The whole concern for survival is involved. For developing countries like India, in particular, the challenge is real and it must be met with courage, conviction and determination.

Nutrition and health care programmes are equally important constituents of human resource development. Able bodied and healthy men and women can be more productive and willing to meet challenges than those who do not remain well and suffer from malnutrition. It is necessary to give attention to the development of nutrition-oriented programmes. Through suitably planned investigations food deficit areas and people should be identified so as to ensure that food reaches those who are in need of it. Similarly food subsidy programmes should concentrate on those who are poor and in real need of help, rather than all the people in an area or a social group. Also, food subsidies should be planned for lean periods rather than the whole year. In other words, misuse or wastage should be meticulously avoided in such programmes. This is possible by organising comprehensive nutrition surveys and by making use of their findings. Such surveys must cut across various sections of the society, different income groups and all agro-meteorological zones.

Likewise, there should be a network of health care centres extending over all areas to ensure diffusion of available medical facilities. Spatial disparities in health care programmes should be identified and remedial measures taken to achieve complete coverage.

Lastly, but not the least, there is a need to put special focus on the development of women's programmes as an integral part of human resource development. Throughout the world, disproportionately large sections of women are among the poor, illiterate, unemployed and underemployed and suffer from malnutrition and poor health. With a view to redressing these imbalances, it is necessary to give considerably more attention to (a) women's productive role in the national economies (b) gender differences in income earned (c) place within the household and (d) men's and women's access to adequate nutrition and health services. It is also important to ensure women's participation in development planning programmes. In sum, the development of a balanced society in social, economic and cultural terms requires equality of opportunity to both men and women in all spheres of life.

All the parameters of human resource development are inter-related among themselves directly and indirectly, and should, therefore, constitute an integrated unit in the total developmental process.

The discipline of Geography, which is essentially anthropocentric, has a special interest in: (a) assessing the quantitative and qualitative aspects of the human resource, (b) identifying spatial disparities in the various attributes of the population, (c) discovering associations of these disparities with all sectors of the total environment, and (d) making recommendations and prescriptions for minimising the inequalities as well as for accelerating progress. These may become the basis of plans, programmes and policies for a qualitative betterment of the human resource. Such an approach is sure to contribute in a substantial measure to the creation of a happy world to live at all spatial levels.

TIBETAN IMMIGRANTS IN INDIA

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Abstract

This paper documents the current evidence on the state of the Tibetan society in India with special reference to the trends in social transformation, livelihood patterns and cultural adaptation to a geographically alien environment. Tibetan migration to India started in the wake of India's granting of political asylum to His Holiness the Dalai Lama in March, 1959. Under an arrangement between the federal government and the concerned state governments, lands were leased out to the immigrants in different parts of the country from Ladakh in Jammu and Kashmir to Karnataka in the south.

Three-and-a-half decades of living in India has demonstrated how a culture group can survive by carving out ecological niches in ethnically segregated social space and yet adapt to a new cultural environment without losing its identity. Totalling 97,783 as in June 1993, the Tibetans are scattered all over the country. The essential elements of continuity are seen in the layout of a Tibetan settlement which is a recreation of Tibetan images of a cultural landscape, based on the principles of co-operative farming. Each settlement ensures the continuation of their traditional modes of agriculture although within a highly diverse agro-climatological context and a significantly differentiated cropping-pattern. A Tibetan settlement is culturally, and in terms of religio-administrative set-up, centred on a monastery. The other essential elements of this habitat unit are a Tibetan school and a handicrafts centre. The settlement officer is appointed by H.H. the Dalai Lama's Central Tibetan Administration - an arrangement which keeps the scattered community tightly knit and linked to a typically Tibetan ethnic tradition. Linkages with the economies of the regions in which the Tibetan settlements are nestled are quite many, as the produce from the Tibetan co-operative farms and handicraft centres is brought to the neighbouring market places. It is this mechanism which helps in engineering cultural change. The Tibetan school, within the settlement or outside, is modern in its curricular content and pedagogy. The continuity of Tibetan religion, language and culture is ensured through this system of schooling which promotes modernization without eroding the healthy elements of the tradition.

Introduction

The title of this paper poses a semantic problem of sorts. The term immigrant has been used deliberately although the Tibetans are not immigrants on their own choice but political refugees living in exile. However, political refugees are also immigrants of a kind. Ever since India granted them political asylum, they

have been living in a segregated social space thus retaining their cultural identity. This arrangement has not been disturbed despite the upheavals that time has brought with it. All through these years the accent has been on cultural preservation through the mechanism of spatial segregation. The limited opportunities of interaction between the Tibetans and Indians exist,

although they are confined to exchanges of goods in the market place. This is not a sufficient condition for crossing the cultural barrier.

The Tibetans are scattered all over the country (Fig. 1). There is a regular annual movement of the dealers in handicrafts, particularly knitwear and carpets who move to warmer places during the winter months. This implies interaction with diverse cultural groups. The cultural exposure has led to linguistic change which the puritans of the Tibetan language describe as linguistic degeneration. But this is inevitable because earning a livelihood is more important than language preservation.

The economic life of the Tibetans has also undergone a process of diversification. The Tibetans who have been living outside the regular settlements on a self-supporting basis have entered into a variety of professions, trades and services. However, Tibetan and Himalayan antiques, garments and objects used in worship continue to be their main specialisation in trade. The bulk of the Tibetan community within the regular settlements is dependent on farming while handicrafts, such as making of rugs, carpets and knitwear remain important supplementary activities. A certain proportion of Tibetans, estimated to be about 5 per cent of the population, consists of lamas who lead a life of celibacy, and are teachers and religious leaders.

This paper evaluates empirical evidence to throw light on the demographic structure of Tibetans, and their employment status, livelihood classes as well as the extent of their exposure to education, religious as well as secular, and the mechanisms of social and cultural change. The study is, however, confined to the Tibetan settlements in the Indian peninsula (Karnataka), the Himalayan North-west (Himachal Pradesh and Uttar Pradesh) and Lakakh. The study is based on the data obtained from the Central Tibetan Administration of H.H. the Dalai Lama in Dharamsala. It is also based on my prolonged discussions with Mr. Jampal Chosang, Secretary of the Bureau of H.H. the Dalai Lama in New Delhi.

Distribution

The population of Tibet is roughly estimated at 6 million. A census count of the Tibetans living outside Tibet shows their total strength as 1,16,981 persons. Their country-wise break-up is given in Table 1.

Table 1

Distribution of Tibetans outside Tibet, 1993

Countries	Population
India	97,783
Nepal	12,895
Bhutan	1,657
Other Countries*	4,640
Total	1,16,981

Source : Bureau of H.H. the Dalai Lama, New Delhi.

Other countries include the U.S., Canada, U.K., France, Germany, Switzerland, Austria, Norway, Sweden, Finland, Russia, Mongolia, Japan, Australia and New Zealand.

The Tibetan influx into India started in March 1959. His Holiness the Dalai Lama left Lhasa on March 17, 1959. He reached Tezpur, in eastern Assam, the same month. The Government of India immediately granted political asylum. There were many Tibetans who came along with him and many followed him. By 1961 the Tibetans numbered 43,000. The population increased to about 50,000 by 1971. A recent census conducted by the Central Tibetan Administration enumerated 97,783 Tibetans in India.

The Indian Tibetans are living in their own settlements or in camps outside the urban centres (Fig. 1). Besides, there are exclusive Tibetan educational centres with boarding facilities. There is also a substantive proportion of Tibetans who have been living on a self-supporting basis independently. Politically all of them have a refugee status. To stay in India each Tibetan adult needs a registration certificate which is issued by the Government of India. It is on the

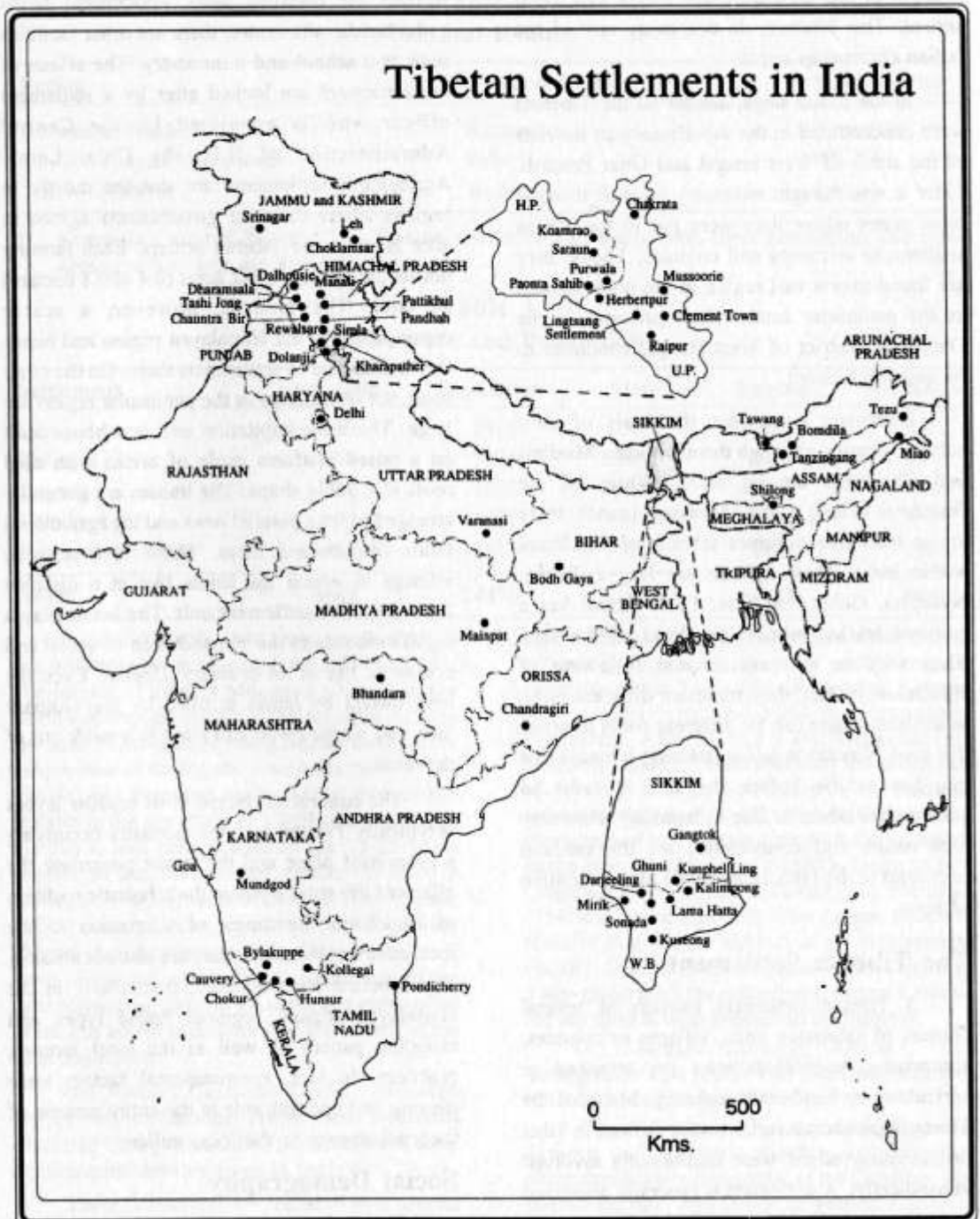


Fig. 1

strength of this certificate that he/she can travel abroad. The Tibetans do not enjoy any of the Indian citizenship rights.

In the initial stage, almost all the Tibetans were concentrated in the sub-Himalayan districts of the states of West Bengal and Uttar Pradesh. Later it was thought necessary to shift them to other states where they were put in the Tibetan settlements or camps and colonies. Today, they are found over a vast region in the north as well as the peninsular south. Their presence in the Darjeeling district of West Bengal continues to be quite significant.

Buddhism constitutes the basis of their cultural identity, although there are some Muslims and Christians among them. While all the Buddhists belong to the Mahayana branch, there are at least five different schools of Buddhism within India. These schools are Kagyu, Sakya, Nyingma, Geluk and Bon. Each school has a spiritual teacher who is the head of the sect. They vary in the practice and following of Buddhism. In fact, they represent different paths to nirvana. There can be different paths to attain this goal. Nirvana is self-sustaining; it means that one has to die before the self in order to accommodate others to live in harmony. Harmony with nature and co-existence are the cardinal principles of the faith, irrespective of the variation of sects.

The Tibetan Settlement

A Tibetan settlement consists of several clusters of habitation units, villages or colonies, comprising households who are engaged in agriculture or handicrafts industry. Many of the Tibetan agricultural workers were farmers in Tibet just as many others were traditionally involved in handicrafts. A settlement is generally organized on a co-operative basis and the co-operative society is registered with the state government.

Besides the dwelling units, agricultural farms and a handicrafts centre, there are other facilities such as a school and a monastery. The affairs of the settlement are looked after by a settlement officer who is appointed by the Central Administration of H.H. the Dalai Lama. Agricultural settlements are situated mostly in regions where the state governments agreed to allot lands to the Tibetan settlers. Each farming household possesses 1-2 acres (0.4 to 0.8 hectare) of land. The land is, however, a scarce commodity in the Himalayan region and hence the smaller size of settlements there. On the other hand, the settlements in the peninsular region are large. The basic habitation unit is a house built on a raised platform made of bricks with tiled roofs in a gable shape. The houses are generally arranged in long parallel rows and the agricultural fields lie behind them. There is a separate village in which the lamas live at a distance from the other settlement unit. The lamas play a significant role in the organization of social and economic life of an ordinary Tibetan. Even the land owned by lamas is tilled by the ordinary men and women who carry out this work out of devotion.

The cultural landscape in its broader layout is typically Tibetan with the monastery occupying a prominent place and the lamas governing the affairs of life strictly within the scholastic tradition of Buddhism. Examples of adaptation to the local environment and culture are also not missing. The Tibetans have adopted, particularly in the Himalayan region, regional house types and cropping pattern as well as the local farming practices. In fact, environmental factors were playing an important role in the entire process of their adjustment to the local milieu.

Social Demography

The study is restricted to the three cultural realms of India as given in Table 2 below.

Table 2
Cultural Realms

Region	Cultural Realms	State/District
Peninsular South	Kannada	Karnataka
Sub-Himalayan North-west	Pahari	HP, UP
Trans-Himalayas	Buddhist	Ladakh

(a) *Kannada Cultural Realm* : The Tibetan settlements of Karnataka, their population and other demographic data are given in Table 3.

Table 3
Households and Population

Settlement	Households	Population	Male	Female	Sex Ratio
Dickyi Larsoe	916	3910	2019	1891	937
Kollegal	674	5121	26661	2460	924
Lugsum	600	4886	2507	2379	949
Mundgod	908	7041	3646	3395	931
Rabgyaling Hunsur	464	3517	2021	1496	740
Total	3562	24475	12854	11621	904

Karnataka settlements are generally large in size with population ranging from 3,517 to 7,041. The largest of them is Mundgod situated in the North Kanara district. While the sex ratio remains low in all of them, Rabgyaling Hunsur displays the unique case of having the lowest sex ratio of 740 females per thousand males. Males outnumber females in the age group of 18-59 years, although the gap is less conspicuous in the 16-25 years cohorts. In fact, the situation remains the same in Kollegal, Lugsum and Mundgod. The female deficit remains quite significant in Rabgyaling Hunsur in this cohort as well. Children below 6 years of age account for about 10 per cent of the total population; those in the senile age group of 60 years and above constitute 12-16 per cent of the total population.

(b) *Pahari Cultural Realm* : Tibetan settlements in Himachal Pradesh and Dehradun district of Uttar Pradesh, their population and other demographic data are given in Table 4.

These settlements are scattered over several districts of the state of Himachal Pradesh. They are also situated in many towns, including the state

capital Shimla. Barring Dharamsala where there is a sizeable population, the hilly settlements are generally small. The population ranges between 239 in Lingsang and 1644 in Dickeyling. Lingsang, Kamrao and TWC Dehradun are relatively smaller. Dharamsala has the distinction of having a high sex ratio with females outnumbering males. All other settlements are characterised by a female deficit - the most acute cases being Lakhanwala (608), Dege (680), Lingsang (745), Clement Town (746), Puruwala (754) and Tashijong (759). This general deficit of females may be the subject of an independent enquiry. Since males outnumber females in the 0-3 age-group in all the settlements, except Kamrao, the sex ratio at birth appears to be distorted.

(c) *Ladakhi Cultural Realm* : The demographic data for the two Tibetan settlements in Ladakh are given in Table 5.

Tibetan Settlements in the Ladakh region of Jammu and Kashmir display demographic characteristics similar to those of the Ladakhis. The overall sex ratio is in favour of women. However, the situation remains varied in different cohorts as well as between the two settlements.

Table 4
Pahari Cultural Realm : Households and Population

Settlement	Households	Population	Male	Female	Sex Ratio
BTS	130	693	364	329	904
Dege	105	845	503	342	680
Dharamsala	500	5045	2480	2565	1034
Dalhousie	92	1129	624	505	808
Kamrao	60	345	178	167	938
Nangchen	109	700	355	345	972
Paonta Sahib	105	600	332	268	807
Puruwala	136	812	463	349	754
THC Shimla	186	544	299	245	819
Sirmur	100	497	264	233	883
Tashijong	85	408	232	176	759
Clement Town	260	1365	782	583	746
Dickeyling	444	1644	842	802	952
Lakhanwala	125	680	423	257	608
Lingsang	41	239	137	102	745
Ravangla	171	910	480	430	896
TWC Dehradun	-	376	202	174	861
Total	2,649	16,832	8,960	7,872	879

Table 5
Ladakhi Cultural Realm : Households and Population

Settlement	Households	Population	Male	Female	Sex Ratio
Changthang	450	2226	1108	1118	1009
Sonamling	485	3388	1681	1707	1015
Total	935	5614	2789	2825	1013

Livelihood Patterns

The occupational structure of Tibetans in India show notable variations from one cultural setting to another (Fig. 2). In the Kannada realm in South India, agriculture absorbs the major share of

workers followed by sweater knitting and carpet making. Similarly in the Trans-Himalayan Ladakhi cultural area, primary activities claim a very large share of the Tibetan population. Animal husbandary followed by carpet making and services also emerge as important chores.

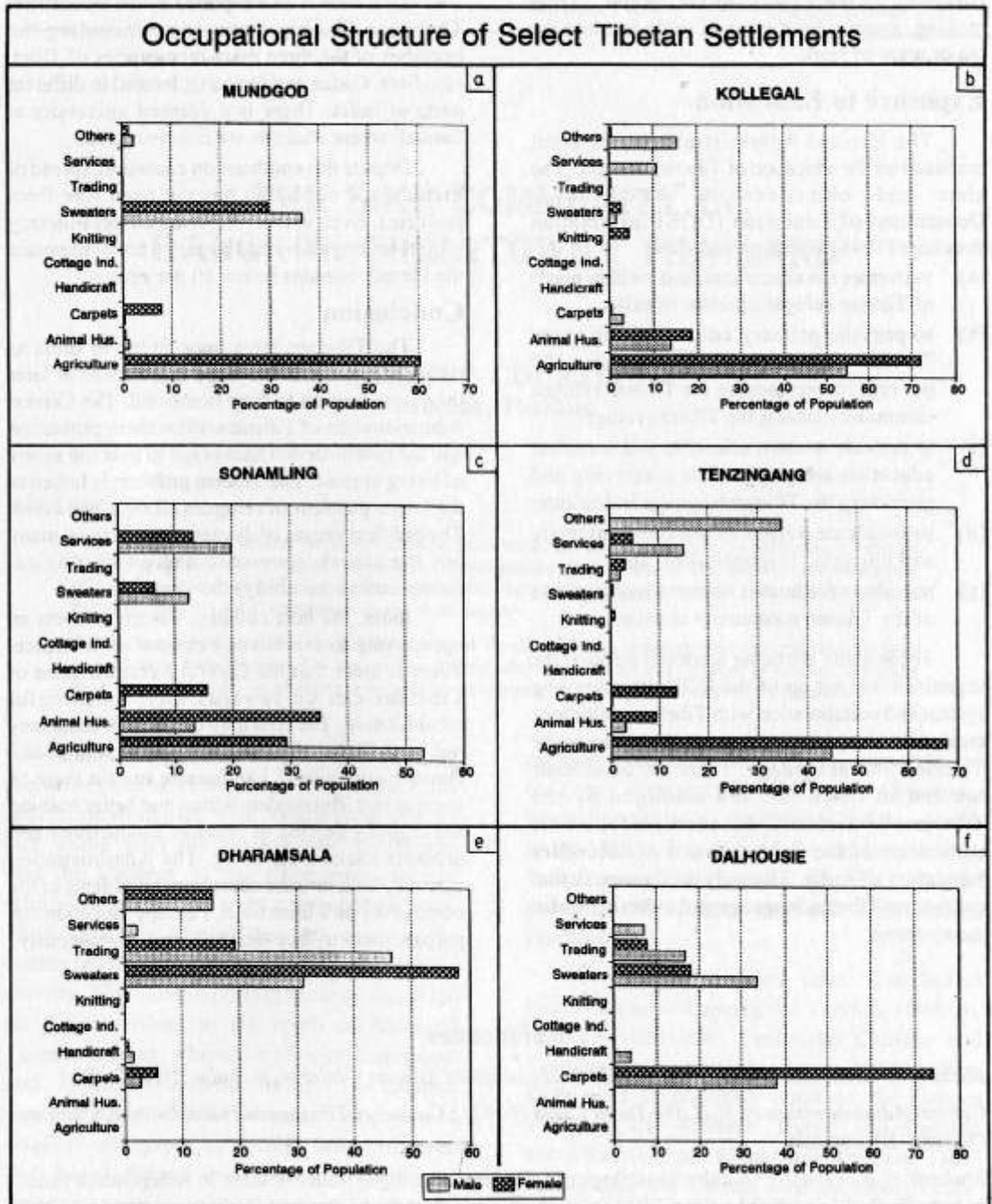


FIG. 2

However, in the Pahari cultural realm, carpet making, sweater knitting, and trade become the major areas of work.

Exposure to Education

The Central Administration lays great emphasis on the education of Tibetans in exile. The aims and objectives as stated in a Department of Education (DOE) Information Brochure (1995-96) are given below:

- (a) to oversee the educational and welfare needs of Tibetan refugee children in exile;
- (b) to provide primary education for every Tibetan refugee child in order to achieve 100 per cent literacy among the Tibetan refugee community; among the Tibetan refugee
- (c) to provide modern scientific and technical education and skills while preserving and promoting the Tibetan language and culture;
- (d) to inculcate values of personal integrity and universal responsibility; and,
- (e) to address the human resource requirements of the Tibetan community in exile.

These goals are being achieved through the organisational set up of the DOE, its schooling system and collaboration with Tibetan institutions created for the preservation and promotion of the Tibetan cultural heritage. There are 68 schools located in India run and managed by the Tibetans. By necessity, these schools follow the curriculum of the Central Board of Secondary Education of India. The only difference is that courses on Tibetan language and culture are also incorporated.

Education is also imparted by the monasteries. There are five big monasteries, including the branches of the three main monasteries of Tibet, viz., Sera, Gaden and Drepung, located in different parts of India. There is a deemed university at Sarnath where students are mostly monks.

Despite this emphasis on education, spread of literacy and education has not been free from problems. Even in the 5-25 years cohort illiteracy is quite unimpressive and barring a few settlements the literacy remains below 50 per cent.

Conclusion

The Tibetans have been living in India as refugees in exile in the hope that sooner or later they would return to their homeland. The Central Administration of Tibetans offers them protection and the much-needed anchorage to bear the agony of living in exile. The Tibetan problem is linked to the larger problem of refugees all over the world. The political causes of displacement may be many but the social, economic and psychological consequences are always the same.

India, the host country, has given them an opportunity to survive and eke out an existence. There is more that the Central Administration of Tibetans can do towards their meaningful rehabilitation. The land they cultivate in India may not be sufficient for their basic minimum needs. Besides agriculture, handicrafts sustain them to some extent. But modernisation and better training are urgently needed to improve productivity and promote social well-being. The Administration may also look into the educational problems of the community on a fresh basis. Perhaps education can prepare them to face the challenge courageously.

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THE SIKH COMMUNITY IN BANGKOK CHINATOWN : THAILAND

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Abstract

Based on data from several sources, including field work, the paper addresses the following aspects of the Sikh Population in Bangkok Chinatown; (i) immigration of the Sikhs to Thailand; (ii) the emergence of Sikh concentration in Bangkok Chinatown; (iii) their main occupations; (iv) their redistribution in Bangkok; and (v) their integration in the Thai society.

The Sikhs have done well in the cultural set up of Thailand. While retaining their cultural identity, they have become fully integrated in the society of their adoption. Though not so large in number, the Sikhs have been successful in attaining a notable socio-cultural and economic visibility in Bangkok.

When Bangkok was founded in 1782 on the western bank of the Chao Phraya river, the Indian communities were established side by side along with the Malays, the Westerners and the Chinese in the Chinatown district, which is the capital's most cosmopolitan area. Then, in the middle of the 19th century, the Indian settlements gathered in four parts within the city. The most important nucleus was fixed on the waterside, in the south of Sampeng Chinese market, where the Malays, Europeans and Tamils were also living. The second concentration, mixed workmen, shipowners, retailers and grocers, opened shops between the Royal Palace walls in the north and Sampeng located in the heart of Chinatown. This area, named 'Pahurat', became the Sikh center between 1856 and 1920 and still

remains. The third zone on the other side of the river (Thonburi City), in front of Chinatown housed one-third of the Indians and one-fourth of the Malays in groups of wooden huts. Lastly, Banglampoo and Samsen districts, situated north of the citadel included some Indian families.

Two hundred years later, five Indian minorities settled among the Taechiu, Hokkien, Hakka, Hainanese, Cantonese Chinese and Vietnamese households. Some Hindus from Delhi and surrounding areas of the Ganges Valley (Uttar Pradesh, Bihar) and Gujarat, some Tamils from South India (Kerala, Tamil Nadu) and Sri Lanka, and the most recent arrivals the Nepalese & the Bengalese. The Sikhs, the predominant ethno-religious group, emigrated from North-west India (Rajasthan,

Punjab, Himachal Pradesh) and Pakistani Punjab.

Out of the 10 million overseas Indians estimated by international statistics, about 60,000 Thai nationals of Indian origins are living in Thailand. But how many of them settled permanently in the Kingdom while keeping their original nationality? In fact, there are absolutely no reliable figures on the Indian presence in Thailand. If most of them have been granted Thai citizenship for generations, like the Sikhs, new immigrants are still not permanent residents.

About 10,000 Sikhs have become Thai nationals. According to the Siri Guru Singh Association of Pahurat, some 5000-6000 Sikh have settled in Bangkok and one-half of these reside and carry out economic activities in Chinatown.

The members of the Sikh brotherhood of Bangkok Chinatown have been integrated into Thai society for more than a century. Some came for commerce purposes, others were hoping for a better life abroad. A majority of them settled there permanently. They succeeded in maintaining an overseas traditional and religious community and are now at the head of the prosperous textile business.

Origins and history of the Sikhs in Bangkok

The links between India and Siam date back to Antiquity. One thousand years ago, the Indians knew Siam Territory as "Suvranavumi" or "Suvanabhumi". In 214 B.C., the emperor Asoka had sent his sons Sona and Uttara to Nakhorn Pathom to spread Buddhism in South-East Asia. This region well-known for its wealth was an attractive area for Indian merchants and adventurers, who came with Shamans from the first centuries onwards.

These brahmin priests had to protect seamen and vessels against the Andaman Sea pirates, with prayers and veneration of shipped statuettes. Therefore, the religious customs of India entered Siam and the Royal Court. Then, Indian factories, established before Sukhotai era (13th-14th centuries) expanded along the coasts of the Isthmus of Kra. The presence of Hindus at the Siamese King's court strengthened during U-Thong's reign (1350-1369) who brought eight brahmins from India for his coronation.

Others were advisers for the Kings from the 15th to the 17th century. During the 16th century, some Hindu legists were called to Ayuthaya to review the old siamese laws. Some experts were in charge of the Royal Navy until the 18th century.

The main market interests

When the first Portuguese travellers came to Siam in 1511, they attested that small Chinese and Indian communities living along the harbours of the Chao Phraya river and southern Siam were engaged in maritime business between India and China and also in inland commerce with Northern Thailand.

Until the 18th century, Indians were busy filling in professional gaps that the Chinese didn't occupy. But, this situation started to decline with the growth of the relations between Siam and Europe. These links brought about the ruin of the livestock breeding in the Central and North-Eastern parts of Siam, the collapse of the meat exports for the Indian moslem community, and the fall in trade of British-Indian textile and foodstuffs.

The main reason of the immigration was the Bowring Treaty. The effects on this agreement on free trade between England and Siam were beginning to be felt in April 1856. All British merchants could henceforth trade

freely with Siam. As a result, the Burmese and the Indian British subjects, enjoyed this privilege until 1947. From that year, arrivals decreased following independence of India from the British rule.

A call for labour force

After the abolition of slavery in 1905 by King Chulalongkorn, there was a lack of labourers in the countryside. The labour offer to the Hindu immigrants allowed them to employ miners and field day labourers in the Southern rubber and teak plantations. The first Sikh served in the Royal Police from the end of the 19th century. Most of Indians coming from overpopulated regions characterised by frequent natural calamities and low agricultural fields. The push factor was further provided by the inauspicious weather conditions especially floods and droughts which caused numerous deaths in 1770, 1784, 1804, 1837, 1867 in Bengal, in 1877, 1878, 1889, 1892 in Punjab and from 1887 to 1900 in Central India.

Two other socio-political factors can explain why people were leaving India. The caste system forbade taking up a different job from the one commanded by the ancestral community group. To take flight was the best way to accede to a new profession. At the beginning of the 20th century, some Sikhs abandoned their military service under the British and took refuge in Siam between 1868 and 1910.

In 1897 the British government in India promulgated a law to set right the departure of workers: the emigrant could leave his country only if he was supported by a recruiting agent who offered a work permit and an approved passage by sea. Working abroad was limited to 5 years and renewable for no more than a further 5 years. At the end of ten years in South-East Asia, Africa or England, the Indian

citizens were required to return to their home country. Many of them preferred to stay in Thailand. In 1922, a new Indian decree stopped the immigration, except for travels to Burma, Ceylon and Malaya. In 1938, an amendment stopped non-qualified workers' immigration and put a curb on legal departure to the detriment of the clandestine passages. In 1949, the Thai customs asked all potential immigrants to be affiliated to an employer who would be responsible for their professional activities in the Kingdom. Since the 1960s, a work permit can be issued for one year for all aliens working in Thailand.

The first definitive setting-ups

Descended from the Sikh Sehajdhari Pakistani family, Shri Kirparam Mandan, an active merchant born in the village Bhadowal in Sialkot district, undertook his first trip to Siam in the second half of the 19th century. He is now considered by the Sikhs of Thailand as the founder of the Pahurat community of Bangkok. Experienced traveller who made his way across Iran, Iraq, Afghanistan, he brought back to his Punjab homeland an arabic horse with which he came to Siam in 1884. He became the ambassador to King Rama V for the court of the Maharaja of Jammu State. He married with Shrimati Ram Kaur from the village Philloke in Gujranwala district and his father-in-law asked him to take care of his two sons who established a small import-export company in Bangkok. The money they earned working for three years in a British firm of Pahurat helped them to open their own business in 1890.

All their descendants have now lucrative businesses in the Indian area of Bangkok Chinatown.

Most of the newcomers came from tiny villages located in the north-west part, mainly Punjab, of the erstwhile British Empire, now divided into Pakistan and India (Fig. 1).

Fig. 1

Pre - Independence Punjab Partitioned in 1947



Source: Surya Kant (1988): *Administrative Geography of India*, Rawat Publishers, Jaipur, p. 54.

From the second half of the 19th to the early 20th century, Bangkok Chinatown, the first economic center of the Kingdom of Siam, represented the open door to the success. This district of the capital offered all the advantages for commercial activities, and the setting there was synonymous with future professional growth, i.e. a big consumer market, the most cosmopolitan area in the city where Westerners from Legations lived along with merchants from all origins and constituted a new commercial potential. From the years 1910-1920, the migrants started to proceed to other areas of Bangkok and to the inner provinces; the circulation was made easier by the railway. The quality of the Indian textiles sold in Chinatown shophouses gained a good reputation. Then, a brother, a cousin from Bangkok, a relative newly arrived from Punjab decided to make his business upcountry. A new promising market started in the main Siamese countryside cities such as Khon Kaen, Nakhorn Ratchasima, Ubon Ratchatani, Chiangmai, Lampang, Trang, Phuket, Yala, Hat Yai.

The policy of assimilation of the Sikhs began under the reign of King Vachiravuth between 1915 and 1920 with the consent of their successful community. The belated wave of naturalizations increased between 1941 and 1947 when some of the immigrants refused to join the Indian Independence League founded in 1941 in Bangkok to avoid all political compromise and to shield their interests. The integration of the Sikhs into Thai society is bilateral. The government allowed them the wearing of the turban in the administration and army and freedom of worship. In return, their children had to go to Thai schools and most of them now are more proficient in Thai and English languages than in their mother tongue. However, the Siamese culture, influenced by Indian traditions by its rich vocabulary and its legends inspired by the Ramayana epic, has greatly contributed to the

assimilation of the Sikhs. Today, Sikhs from India or Pakistan to Thailand come to visit relatives or friends who have had Thai nationality for generations.

Inflows of the Sikhs from the mid 19th century until the 1960

Carrying out a census on the immigrant households since the 19th century and on the families who have integrated into the local Thai community for many generations is a hard and time consuming research. However, certain sources can be taken into consideration. Data in this regard have been provided first by the works of Anglo-saxon missionaries commercial records (Siam Trade Statistics), Consular and Customs offices (Siam Consular Reports) for all the details dating from the end of the 19th until the first quarter of the 20th century; and secondly by the Immigration services and Thailand National Statistical Office for all recent data.

Thailand Statistics only take into account the nationality of the migrant (and not the region or province he comes from) and the poor written sources preserved by the local Indian community do not enable to establish with precision a schedule regarding the number of the Sikhs migrating to Bangkok. Therefore, all the data concerning the main inflows of the Sikhs in Thailand and their areas of origin have been mixed with those concerning the flux of migrants coming from India and Pakistan.

The little interest devoted to the study of the Indian population settled in the Kingdom is not sufficient to draw up a clear and complete chart of the different stages of the migration. About fifteen years or so questionable sources show the total number of Indians for a given year (see Table 1) but these figures do not specify if they are :

1. Indian Nationals, immigrants registered this very year (A)
 - scattered all over Thailand (A1)
 - living in Bangkok (A2)
 - established in Pahurat-Chinatown area (A3)
2. Indian residents with Thai citizenship (B)
 - in Thailand (B1)
 - in Bangkok (B2)
 - in Pahurat-Chinatown area (B3)
3. Thai-born, Indian Nationals (C)
 - in Thailand (C1)
 - in Bangkok (C2)
 - in Pahurat-Chinatown (C3)

An easy assimilation : Preserved familial legacy in a borrowed habitat

The Sikhs of Thailand are distinguished from the other Indian ethnic groups by a wheatish complexion, a bearing tending to obeseness, the wearing of Kameez or local tunic, salwar or modern trousers, and chunni for women. All men have the traditional turban and the five K symbols: long hair and beards (Keshas), a comb to roll their beard (Kangha), a steel bracelet to the right wrist (Kara), a fine vest (Kachha) and a small knife (Kirpan). The family structure sets the tasks of each member. The husband and father minds his trade and business while the wife and mother raises the boys, the girls on an equal status and takes part in all religious ceremonies. The first Sikh women came to Thailand after the second world war to join their husbands previously settled in the Indian area of the capital. Women enjoy freedom. They are not subordinate to their mother-in-law and as widows, they can marry again. They do not wear a purdah or jewels but they cannot divorce. They usually spend the day at home or in the shophouse near their husband.

The Indian immigrants of the last century lived in the same wooden houses where the Chinese had been living between Sampeng lane (see Fig. 2) and Pahurat area.

The better-off rented the premises from the Chinese. The wealthiest families directly purchased their shophouses, thus becoming owners. Moreover, the Sikhs solidarity helped the integration. The poorest were welcomed by neighbours or friends or relatives from the Punjabi village already settled in Bangkok or in the countryside, and were helped to be financially independent.

Among the ethno-professional activities of the Indian groups, the Sikhs have established their position in the following fields:

1. The Imports-Exports textile industry's main business produces 90% of the community profits. imported cloth from Europe and India or produced in Bangkok suburbs are sold in wholesale and retail chinatown shops and in all main cities of the kingdom. Some are exported to the neighbouring countries of the Indochinese peninsula.

2. Tourism has recently been developed in Pahurat-Chinatown area with the opening of small travel agencies along with the sale of arms (guns and fowling-pieces) by about twenty families. However, the younger generation prefers working in banking and insurance companies.

The community grew in two administrative districts of Bangkok Metropolis : Wang Burapaptirom and Chakkrawat joined by Soi Wanit (former Sampeng Lane). During the first half of the 19th century, the one-storey shop-houses surrounded the cloth market. The ground floor was comprised by the shop and its utilities (kitchen, store-room, bath room) and was used for the commercial activities while the first floor housed the family.

Table 1
Population of Indian origin in Thailand

Year	Source	Population	Possible interpretation
1921	Directory of Siam (Bangkok Times Press)	20764	- Total Indian population living in Siam but registered in Bangkok? - Unlikely number of immigrants who arrived this year
1931	-do-	1834	Immigrants
1947	National census	11189 (including 3388 women)	Residents in Bangkok
1959	Ministry of Interior Royal police Department Division of Immigration	5019	
1960	National census Immigration Division	6694 Indian, Pakistanis and Sri Lankan Nationals (including 1948 women)	
	Russel's analysis	60000	Total Indian population of Thailand
1961	Ministry of Interior Police Department Division of Immigration	5260	-
1962	-do-	5321	-
1963	-do-	5510	-
1964	-do-	5475	-
1965	-do-	5506	-
1967	V. Thompson (Thailand - The New Siam - N.Y.)	100000	V. high figure
	N.J. Nampara (The Overseas Indian - The Asia Magazine - H.K.)	slightly over 25000	Total Indian Community of Bangkok

Contd. on Next Page

Year	Source	Population	Possible interpretation	
1969	Ministry of Interior	6205	A1+A2+A3	
1970	-do-	6336	A1+A2+A3	
1971	-do-	6495	A1+A2+A3	
1972	-do-	6529	A1+A2+A3	
1973	-do-	2987	A1+A2+A3	
1974	-do-	2954	A1+A2+A3	
1975	-do-	2938	A1+A2+A3	
1976	H. Smith (Historical and Cultural Dictionary of Thailand - N.Y.)	75000/2902 3073	Estimate of the total number of Indians in the country	B+C
1977	Ministry of Interior	3055		
1978	-do-	3068		
1979	Ministry of Interior Department of Local Administration, 1979	599948 Sikhs and Hindus 0.13% of the total population	Muslim Indians excluded	B1+C1
1981	- Embassy of India in Bangkok - Zakir Hussain (Indian in Thailand (Chulalongkorn University, Bangkok)	Slightly over 20000 6625	Indians without Thai citizenship of Thailand or Bangkok?	B1+B2 C1 C2
1982	Immigration Department	6490	Indians without Thai citizenship	A2
1983	Ministry of Interior	6364	A1+A2+A3	
1984	-do-	6215	A1+A2+A3	
1985	-do-	6260	A1+A2+A3	
1986	-do-	6341	A1+A2+A3	
1987	Immigration service	6243 (4722 men and 1521 women) registered in Bangkok 6263	A1 or A2	
1988	-do-	6213		
1989	-do-	6156		
1990-1992	-do-	60000	Indians with Thai citizenship	B1+C1

In the 1990s, the only residential and commercial buildings left are in the northern part of the Chakraphet Street. These shops, called "Emporiums", offer clothes for children, traditional women saris, textiles, sport shoes and morocco trade items (as cloak-bags, women bags etc.) sold to Indian tourists.

In fact, four kinds of bazaars join each other : (i) The Pahurat cloth and textile market is located between Pahurat Road and Chakraphet Street, both covered by traditional moslem and Thai wedding clothes and souvenirs wholesalers. The first floor of the one-storey building displays stalls of local and imported goods sold by the meter or the yard, shoes, skirts, scarves, bags and fancy jewellery from India kept by retailers. (ii) At street level, a labyrinth of sheltered commercial passages lead to the main outside streets selling local colourful textiles. (iii) The air-conditioned emporiums with large window glasses on Thanon Chakraphet use the old Chinese shophouses of the 1920s as dwellings. These structures have a convex roof and a neo-classical architectural frontage, similar to the Soi Wanit, Leunrit and Paowpanit lane shops. (see Fig. 2); and (iv) This area located between Chakkawat Road and Soi Leunrit to the West, Thanon Rachawong to the South-West, Yaowarat to the North and towards Mahachak Street gathers the textile wholesalers. New recently erected multi-storey buildings stand in at the place of the old decrepit houses.

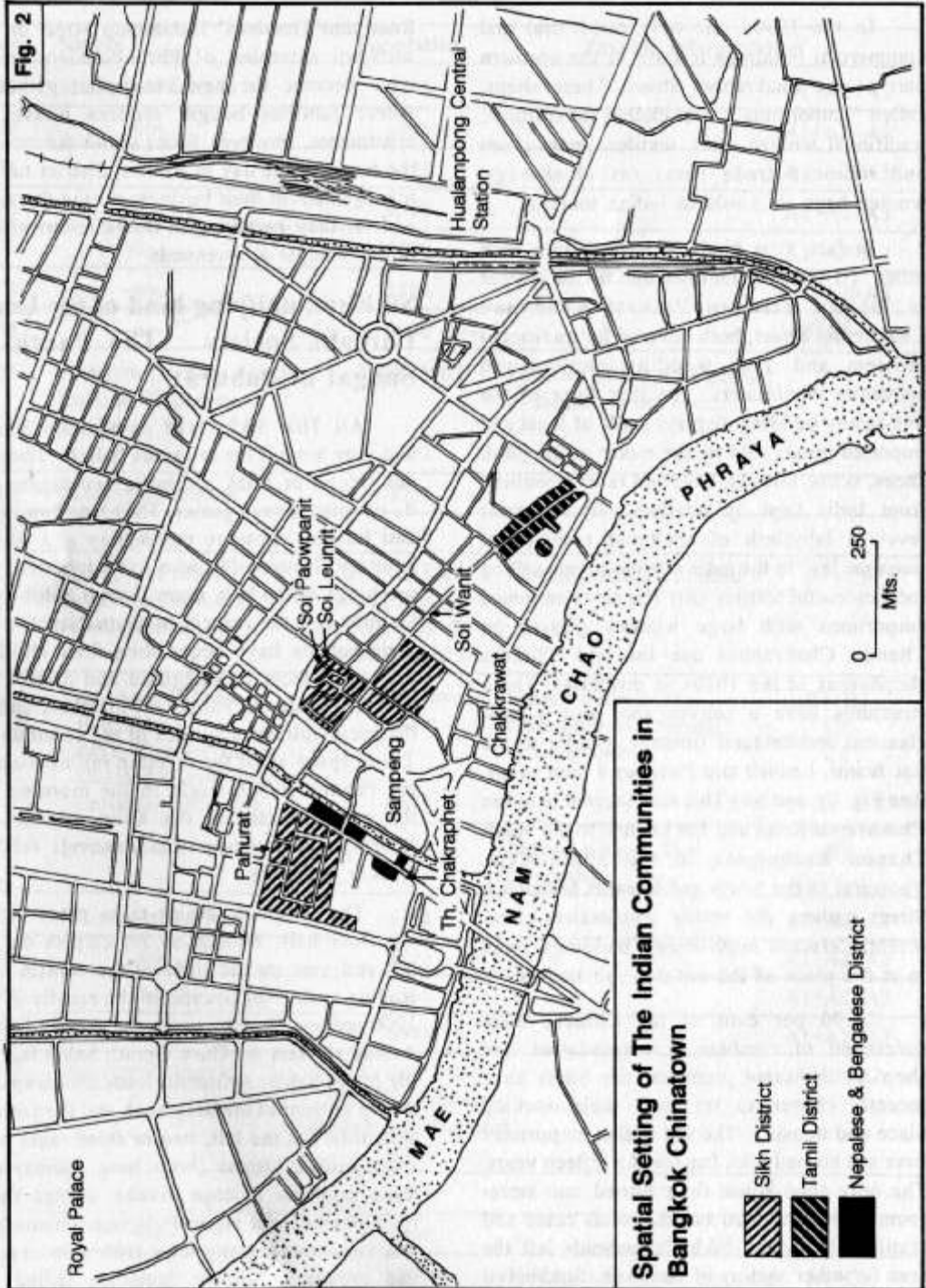
If 90 per cent of the Chinese have succeeded to combine accommodation and shop on the same premises, the Sikhs have recently chosen to set apart their working place and housing. The old Indian emporiums have not housed Sikh families for fifteen years. The only shop-house floor turned into store-room with cardboard boxes, goods cases and textile rolls. Many Sikhs households left the area for other sectors of Bangkok. Sukhumvit

Road and Thonburi' Isaranupap Street on the southern extension of Phra Pokklao Bridge have become the new residential gathering where families bought modern houses or apartments. However, Sikhs spend the most of the hours of the day in Pahurat district for the management of their business during the week and for their partaking in the religious affairs at the Temple at weekends.

Sikhism, unifying bind of the Local Punjabi Society : The Panth or Sangat of Pahurat

All Thai Sikhs take part in the Sangat and they honour the religious beliefs. They do not smoke or drink alcoholic beverages, and do not play money games. They hate hypocrisy and laziness, observe monogamy and banish adultery. Households who have inherited the teachings of the holy Guru Granth Sahib (Adi Granth) and the respect of Guru Nanak from their parents have bequeathed their children their knowledge to safeguard and protect the religion inside the Panth. All members endow the socio-cultural activities of the community. The keeping up of the worship rallies them to the Pahurat temple early in the morning for the paths or late in the afternoon for the Rehras, and every sunday mornings for the weekly gathering.

The religious service takes place in the 4th floor hall. Women sit on carpets on the left and men on the right of the central path leading to the Adi Granth. In the middle of the 1000 persons capacity room, the shining Diwan Asthan shelters the Guru Granth Sahib laid on the Manji Sahib. A Granthi leads the ceremony sitting in front of the holy book and the faithful assembly. On the left, two or three ragis on a stage invoke kirtans (holy lyric poems) and three ragis on a stage invoke kirtans (holy lyric poems) and ragas (religious chantings). The ceremony usually ends with a procession and prostration of the believers facing the



pavillon, ardas (peace verses) addressed to Waheguru. At the entrance of the sanctuary, a glass counter Golak receives the dominical donations. Then, the brotherhood proceeds to the Guru-ka-langar or pangat (lunch room) on the second floor to enjoy food offered by the Sikh Association. Members of other ethnic groups are welcome to share the meal. The Thai Sikhs observe all the stages of the socio-religious life at the temple: the traditional Amrit, the Samart communion and the Anand Karaj.

The 1909 Anand Marriage Act set up the rules of nuptial agreements. Child marriage is strictly prohibited. Men are allowed to get married at the age of 20 years and women at 18. In wealthy homes, parents choose the partners of their children according to physical appearance, age, education level and professional occupation. Today, the western influence, the urban way of life and the economic independence of youth modify those customs. Only men can get married with women from another ethnic group. The newly weds leave the parents house and rent an apartment outside Pahurat. Some will carry on the emporium's family affairs and others chose different ways of living.

The funerals adopt the Hindu ritual. Prayers from the Adi Granth, ardas and kirtans at the Gurdwara or at the home of the departed soul for 10 days are the only authorized comforts before the final ceremony in this regard. Thai Sikhs use the crematorium furnace of the Buddhist temple. Funeral urns are banished and most of the time ashes are thrown in a river in Thailand or repatriated to India. The whole life of a Sikh is ran through by the observance of festivities and anniversaries. Birthdays of Guru Nanak and Guru Gobind Singh are eagerly held. On the 13th of April, the Baisakhi day marks the glorious foundation of the Khalsa Panth in 1699.

In 1969, the Sikhs celebrated the anniversary of the Parkash Utsav, the 500 years of Guru Nanak's birth. A programme introducing the Sikh religion to the Thai society suggested several activities: the reading of kirtans in English and Thai at the Gurdwara, the broadcasting of Guru Nanak biography on a local radio, the publication of a book in Thai on the philosophy of Sikkhism, the foundation of a financial company, the Guru Nanak Memorial Trust, distributing scholarships to students, the Indian inter-ethnic gathering, the audience between His Majesty the King Bhumipol Adulyadej and the Sikh panth at the National Theater. At the occasion of Diwali/Deepavali, Sikhs meditate at the Gurdwara, swap presents, offer clothes to charitables organizations and money to the temple.

Bangkok Siri Guru Singh Sabha Association : A Multifunctional Building

Until 1911, the religious ceremonies were held in rotation at private persons' houses. A year later, the sangat decided to gather at one place and rent premises at the intersection of Pahurat and Chakraphet Roads. In January 1913, a wooden residence was built to house the holy book permanently at Italian Lane, a soi crossing Thanon Pahurat. Until 1932, the panth met and offered a refuge to homeless people. Endowments of wealthy households and the massive arrivals of families helped to build a Gurdwara. The community bought the land from a Siamese lawyer and a first three floor wooden structure was erected in 1933 with money collected from the panth by a committee of nine persons. The first board elected ran the temple, the new association, and a school where Urdu, Punjabi and English were taught. During the Second World War, the allied shelled Phra Putta Yodfa Bridge,

Wat Liab electricity power station and hit the Gurdwara terrace. Renovated after the war, an elevator was added in 1962. The building of the actual edifice, totally financed by donations has been standing at the site of the old temple since 1987. The white marble rectangular block looks like the Amritsar Harimandir. The glass fronton above the windows encircled by counterfeit columns and the style of the arches borrowed from the muslim art interfere with the ornament suggested by Hindu decoration.

Half hexagonal balconies covered by a semi-golden dome decorate the only front entrance located behind the ATM shopping center. Six golden pavillions cover the roof. The biggest cupola shields over the sanctuary hall. Opened days and nights, all the 24 hours or the day the seven storey structure is the seat of a powerful ethnic association.

Since 1925, the Gurdwara Act bestows the direction of Sikh temples of India into the hands of the Shiromani Gurdwara Parbandhak Committee which assigns priests to serve in overseas temples (5 to 8 in Bangkok Sikh temple). But, today the management of the Pahurat Gurdwara belongs to a 15 members council headed by a president. Sub-committees are in charge of religious, cultural and educational affairs. The administrative board registered about 10,000 members (Sikhs and other Indians) at the beginning of the 1990s. The morning and sunday alms are used to cover the electricity charges and to pay the langar. The association also runs 10 temples around Thailand. In 1985, a Gurdwara, similar to the Bangkok's one was built by the second largest Sikh community of the kingdom in Pattaya.

The main purposes of the association are to provide medical care, and food for the Sangat and needy people, to run a library and a primary school and to organize all religious ceremonies. On the ground floor, the Guru

Nanka Mission Sukhashala has been offering medical services since 1987 without any ethnic discrimination. The first dispensary was opened in 1955 in a small building near the temple. Then in 1964, a rented house started accommodating old people. They received food, clothes and medicines. This devotion towards the persons in need is looked as a duty for Sikhs.

The seat of the association and the Young Thai-Sikh Association also share the ground level. The YTSA was born in 1975. Today it comprises more than 250 members and shows concern about such matters as the struggle against fire, food distribution in the neighbourhood and closer ties with Indians of different beliefs. The library on the first floor with its 2000 books written in Hindi, Punjabi, English and Thai specializes in Sikh theology and is open to everyone. On the second floor, a conference room is used for marriages and all community meetings.

The Sikh Vidyalaya, primary school, has its eight classrooms on the upper levels. The first Sikh school opened in 1951 in a five storey building not far from the temple. About 700 pupils attended the secondary classes with 32 teachers following the Punjab school programmes. The college moved in the 1970's to Bang Na area (Eastern Bangkok) as Pahurat was too small to welcome new students. The remaining primary school was founded in 1985. The teaching methods are based upon the British educational system with the agreement of the Thailand Ministry of Education. The headmaster sent from Punjab supervises the school with 15 Thai-Sikh teachers, and boys and girls from families of Pakistani and Indian origins including muslims, Hindus, Sikhs, Christians.

The different origins of the immigrants, the social status of each one and the religious oppositions have divided the Indians of Bangkok Chinatown in four main groups. From

Southern Indian states, a few Tamils run the synthetic precious stones business in old shophouses in competition with the Hainanese Chinese families. Coming from Central India, the Hindu group forms the less well-off overseas Indians in Bangkok. Most of them rent a room in a small Chinese hotel and work as night watchmen or hawkers. New comers from Bengal and Nepal have recently opened small guest-houses and food stalls. But the Indians who have become most integrated into the kingdom are the Sikhs.

Set up in a land of tolerance, they were allowed to preserve their religion. Thanks to their hard labour, they have come to have the quasi-monopoly of the textile retail and wholesale trade in Bangkok and all the provinces for two generations. Wealthy, they have always been well-respected by the local and the Chinese people. As long as the young wish to uphold and hand down to their children their parents traditions, the Sikh community

of Bangkok will remain one of the most influential commercial group and a financial force with the Thai society.

Conclusion

Though it is difficult to arrive at the precise figure, it is estimated that 10,000 Sikhs are Thai nationals at present. The Sikhs in Thailand mostly live in Bangkok Chinatown, having particular concentrations in Pahurat, Sampeng, Soi Paowpamit, and Soi Leunrit. They have been a success story in Thailand in various ways - economically, socially and culturally. They have made their mark in trade and commerce, especially import-export of textiles as well as wholesale trade. In recent years, they, particularly the younger generation, are opting more for work in banking, insurance companies, and tourism business etc.

While retaining their religious and other cultural values, the Sikhs have become a worthy part and parcel of the Thai society.

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DYNAMICS OF EDUCATIONAL DEVELOPMENT IN THE CHHATTISGARH REGION, INDIA

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Abstract

The aim of this paper is to analyse the spatial patterns of the level of educational development along with the decennial change in the literacy rate in the Chhattisgarh region of Madhya Pradesh State. Eleven variables namely literacy rate, male literacy rate, female literacy rate, rural literacy rate, urban literacy rate, rate of literacy among scheduled castes and scheduled tribes population, number of students, number of teachers and teacher-taught ratio per institution, and interinstitution distance have been considered to find out the index of educational development in the tahsils of the region. The eighty two tahsils of the Chhattisgarh region are grouped into four categories namely Prosperous, Developing distressed, Potential distressed, and Distressed, on the basis of decennial growth rate in literacy during 1981-91 and the level of educational development obtained with the help of eleven variables.

Literacy is a reliable index of socio-economic and cultural development, whereas illiteracy restricts the success of development programmes. Education is an important medium to promote all round development (Singh and Singh, 1988). The socio-economic status of a man is influenced by the level of education, and the level of society and nation is influenced by the level of a man (Gosal, 1967). A minimum level of education is essential for overall development of any region so that people may be able to take decisions themselves. Therefore, education is an essential need of the society. Owing to the lack of appropriate spatial dimensions in the planning related to education and training there arise spatial differences in the qualitative and quantitative aspects of educational facilities.

Therefore, dynamics of educational development of any region is related with the qualitative and quantitative changes in educational and training facilities over time.

Methodology

This study is based on secondary data. The tahsilwise number of teachers, students, and educational institutions are obtained from Divisional Statistical Office and the rate of literacy from the Census Handbook, 1991. The level of education is derived from : (1) number of students per institution; (2) number of teachers per institution; (3) number of students per teacher; and (4) inter-institution distance (kms). The interinstitution distance has been obtained by the use of the following formula derived from the formula of nearest neighbour distance :

$$\text{Interinstitution Distance} = .5 \sqrt{\frac{\text{Area of the Tehsil}}{\text{Total No. of educational institutions in the Tehsil}}}$$

The standard index of educational development has been obtained by adding the averages of eleven variables, and with the help of quartile method the region is divided into four categories of high, medium high, medium low, and low level of educational development. Variation in decennial literacy rate and the level of educational development have been used to know the dynamics of educational development and the region is divided into four categories. The 'Chi' square test has been applied to know the significance between the literacy rate and the level of educational development.

The Study Area

The Chhattisgarh region is situated in the south-eastern part of the Madhya Pradesh State (17°46' - 24°06' N. Lat.; 81°15' - 84°51' E. Long; Area 1,33,135 Km² (Fig. 1). It is a socio-economically backward region because of its high percentage of scheduled castes and scheduled tribes population with low level of income. It has about 26.63 per cent population of the Madhya Pradesh state. Physiographically the northern part is a part of the Baghelkhand plateau, the middle part is a fertile land with relatively developed educational facilities.

As per 1991 census, 42.91 per cent people of the Chhattisgarh region are literate, which is slightly less than the state average of 44.20 per cent. The literacy rate among males and females is 58.07 and 27.52, rural and urban literacy rate is 36.72 and 71.37 and the literacy rate among scheduled castes and scheduled tribes is 38.67 and 26.70 per cent respectively. The low level of literacy in the region is because of its high percentage of poverty-stricken tribal population (32.46 per cent) living in the undulating and thickly forested northern and southern parts of the region.

Growth of Literacy in the Region

There has been high growth in literacy during last three decades in the Chhattisgarh region. The rate of literacy in the region in 1961 was only 11.77 per cent which increased to 42.91 per cent in 1991, i.e. an increase in the literacy rate of more than three times. The change in percentage of literacy rate in respect of males, females, and rural and urban areas during this period has been 38.96, 23.6, 26.54 and 42.46 per cent respectively (Table 1). The 1961-71 decade was marked with high growth rate of literates (72.39 per cent) caused by efforts made by Government and awakening of the people of the region. The decennial growth rate during 1971-81 and 1981-91 has been 59.39 per cent and 32.68 per cent respectively. The total growth in literacy during 1961-91 comes to 264.57 per cent (Table 1).

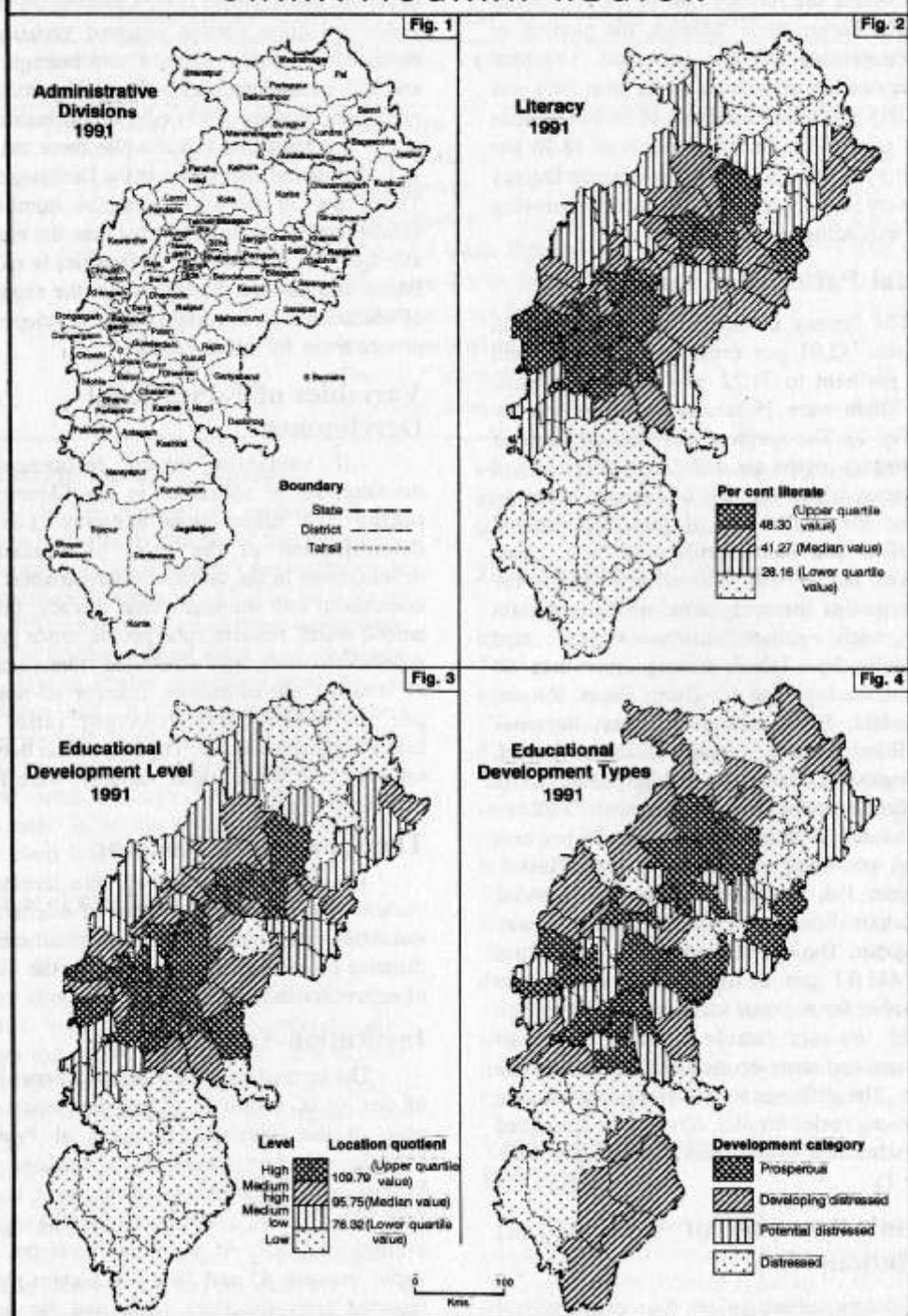
Table - 1
Growth of Literacy in the Chhattisgarh Region, 1961-91

Year	Literates (per cent of total population)							
	Total Literates	Decennial Growth Rate	Males	Females	Rural	Urban	Sch. Castes	Sch. Tribes
1961	11.77	-	19.11	4.46	10.18	28.91	7.72	5.17
1971	20.29	72.39	31.31	9.25	16.14	49.24	15.14	10.09
1981	32.34	59.39	44.41	18.62	26.87	61.80	21.72	14.36
1991	42.91	32.68	58.07	27.52	36.72	71.37	38.67	26.70
Changes during 1961-91	31.14	264.57	38.96	23.06	26.54	42.46	30.95	21.53

Source : *Census of India - District Primary Census Abstract, 1991*

Note : Till 1981 children above 4 years and in 1991 children above 6 years of age are included among literates.

CHHATTISGARH REGION



Though the literacy rate in the region has increased during these decades, the number of illiterate persons has also increased. The total number of illiterate persons in the year 1961 was 77,49,065 which increased to 1,14,96,644 persons in the year 1991, i.e. an increase of 48.36 per cent. It shows that all efforts to increase literacy rate were largely chased by rapidly growing rather exploding population.

Spatial Patterns of Literacy

The literacy in the Chhattisgarh region in 1991 was 42.91 per cent, which varied from 11.33 per cent to 71.22 per cent at the tahsil level. There were 29 tahsils with high literacy rate (Fig. 2). The northern and southern parts of Chhattisgarh region are undulating, forested and tribal areas where the rate of literacy is low in spite of the availability of many educational institutions and other facilities in these areas. However, literacy rate is relatively high in the middle part of the study area, which is a plain tract with greater urbanisation and industrialisation. Tahsils having more than 50 per cent literacy rate are Durg, Patan, Raipur, Gunderdehi, Balod, Gurur, Bilaspur, Rajnandgaon, Dondi Lohara, Raigarh, Dhamtari, Kurud, Dongargaon, Champa and Janjgir. Durg tahsil ranks first in literacy in the region with 71.22 per cent literates. Tahsils with less than 25 per cent literacy are Antagarh, Wadrappnagar, Keskhal, Jagdalpur, Pal, Pratappur, Dantewara, Lundra, Narayanpur, Kondagaon, Bhopalpatnam, Konta, and Bijapur. The lowest literacy is in the Bijapur tahsil (11.33 per cent). Among the factors responsible for regional variations in literacy are attitude towards female literacy, types of settlement and socio-economic conditions of the people. The difference of literacy can also be seen among males females, rural urban, scheduled castes/scheduled tribes general population lines (Table 1).

Spatial Patterns of Educational Institutions

Educational institutions from primary level to university level have developed under public

or private management in the Chhattisgarh region. There are quite notable regional variations in their distributional patterns. On an average, there are 325 educational institutions per tahsil. The maximum number of 994 educational institutions are in the Jagdalpur tahsil while there are only 117 educational institutions in the Deobhog tahsil. There are 33 tahsils where the number of educational institutions is more than the regional average. The availability of facilities is more in Bastar and Surguja districts where the expansion of education is an important part of developmental programmes for tribal people.

Variables of Educational Development

All variables which influence the development of education in the Chhattisgarh region are taken into account. For the determination of the level of educational development in the tahsils eleven variables have been taken into account : total literacy, literacy among males, females, rural people, urban people, scheduled castes, and scheduled tribes; number of students per institution, number of teachers per institution, teacher-taught ratio, and interinstitution distance. The correlation between total literacy and all other variables were found very high (Table 2).

The Quality of Teaching

The four factors namely the number of students per institution, number of teachers per institution, teacher-taught ratio and interinstitution distance have been used to derive at the quality of education in the region.

Institution-Student Ratio

The institution-student ratio is a better index of quality of education of any institution. The ratio in the Chhattisgarh region at Primary, Middle, Higher Secondary, College and Professional and training centres level is 105, 140, 392, 470, and 224 respectively. The regional average is 126.7. At the tahsil level the ratio varies between 45 and 361. The highest ratio is reported from the Durg tahsil and the lowest ratio is in the Bijapur tahsil.

Table - 2
Chhattisgarh Region : Correlation between variables

S. No.	Independent Variable	Dependent Variables	Correlation Value (γ)
1.	Total Literacy	Male literacy	+ 0.99
2.	- " -	Female literacy	+ 0.98
3.	- " -	Rural literacy	+ 0.99
4.	- " -	Urban literacy	+ 0.63
5.	- " -	Scheduled Cates literacy	+ 0.92
6.	- " -	Scheduled Tribes literacy	+ 0.97
7.	- " -	Institution-Teacher Ratio	+ 0.81
8.	- " -	Institution-Student Ratio	+ 0.91
9.	- " -	Teacher-Taught Ratio	+ 0.75
10.	- " -	Inter-institution distance	- 0.85

Institution-Teacher Ratio

The higher number of teachers in any institution indicates the quality of that institution. The average number of teachers per institution in the Chhattisgarh region is 3.27. The ratio varies as per different level of educational institutions. It is 2.5 at Primary school level, 4.14 at Middle school, 11.4 at Higher secondary level, 16.7 at the College and 10.6 at the professional and training institute level. At the district level the ratio varies between 2 and 29, while at tahsil level it varies between 1.59 and 10.29. The lowest ratio is at the Samri tahsil while the highest ratio is at the Durg tashil.

Teacher-Taught Ratio

The teacher-taught ratio in any region does not only show the education facilities but it also indicates about the quality of education the region has. The high value of teacher-taught ratio indicates the pressure of students on a teacher, whereas the low value indicates the high level of educational development in the region. The average teacher-taught ratio for the Chhattisgarh region is 38. The teacher-taught ratio at Primary, Middle, Higher secondary, College, and Professional institution level is 41.82, 33.83, 34.36, 28.16 and 21.10 respectively. The ratio decreases with the increase in the standard of education. At the tahsil level the

average ratio varies between 15 and 82. The highest ratio is in the Saja and the lowest ratio is in the Keskhal tahsil.

Interinstitution Distance

The interinstitution distance indicates the availability of educational facilities in the region. The intercollege distance is less in plain areas in comparison to hilly and forested areas. The interinstitution distance in the region is 1.27, 2.82, 5.26, 14.81, 26.53 kilometres at Primary, Middle, Higher secondary, College and Professional institution level respectively. The overall regional average is 1.13 km. At tahsil level the interinstitution distance varies from 0.43 km. to 1.98 km. The highest distance is reported from Bhatapara tahsil while the lowest is in Belha tahsil. The forest clad plateaus of Surguja and Bastar districts have the average distance 1.2 km. and 1.45 km. respectively. The interinstitution distance is less than a km. in the plain areas. The distance is naturally less in the case of primary schools and more in the case of higher education level.

Variables of Educational Development

There is interrelationship in between the rate of literacy and the availability of educational facilities. This hypothesis is tested by the X^2 test. It is surprising that the rate of literacy is low

inspite of having more educational facilities in the tribal areas in the region. the rate of literacy, quality of education, and the spatial patterns of the dynamics of educational development were tested separately. The results were significant upto 0.001 level which means a significant difference in the spatial patterns of the above variables.

The factors which hinder the development of education are the not so favourable attitude of parents towards female education, type of settlement and socio-economic conditions of the people. Because of these factors the rate of literacy is low inspite of the availability of educational facilities. Orthodoxy and conservatism of society resulted in the lag of female literacy rate. In urban areas the difference between male and female literacy rate is less because of greater awareness of people about the importance of education in comparison to rural areas, where the attitudes have not yet changed much inspite of the Government's efforts. The rate of literacy among scheduled castes and tribes is not encouraging and the growth rate in literacy is not significant.

The Level of Educational Development

The rate of literacy is the net result of the availability of educational facilities, which in due course influences the development and improvement in educational facilities. Separate indices of 11 variables mentioned earlier at tahsil level have been obtained to determine the level of educational development. The average index has been obtained by converting each variable as percentage of the regional average and adding all variables of the tahsil together in order to get an average index for the tahsil and grouped into 4 categories namely high, medium high, medium low, and low on the basis of quartile method (Fig. 3). The average index of tahsils varies from 47.97 to 169.91 in the region.

1. High Level of Educational Development

The tahsils having more than the upper quartile value (109.79) are grouped into the high

level of educational development. These tahsils are Durg, Patan, Gariyaband, Raipur, Balod, Bilaspur, Dhamtari, Gunderdehi, Kurud, Gurur, Rajnandgaon, Charama, Champa, Janjgir, Dhamdha, Korba, Tilda, Chauki, and Dongargaon. Durg tahsil is the most developed tahsil (index = 169.91), where the proximity of the Bhilai Steel Plant steered high degree of urbanisation and industrialisation resulted into high literacy rate.

2. Medium-High Level of Educational Development

The tahsils having index value between median and upper quartile (from 95.74 to 109.79) are grouped into this category. The tahsils are Pamgarh, Dondi-Lohara, Raigarh, Jaspur, Katghora, Dongargarh, Sakti, Bhatapara, Baloda Bazar, Simga, Kanker, Kharsia, Takhatpur, Mahasamund, Nagari, Kota, Rajim, Mungeli, Khairagarh, Saja, and Bemetara. These are the areas where educational facilities registered increase due to the higher degree of urbanisation during last decade.

3. Medium-Low Level of Educational Development

Tahsils with low degree of industrialisation and urbanisation are included in this category. These are the forested, hilly and plateau areas with more tribal population. Tahsils having index value between 76.32 and 95.74 are included in this category : they are Saraipali, Chhuikhadan, Berla, Sarangarh, Mohla, Lormi, Manendragarh, Dabhara, Pakhanjur, Pendra, Kunkuri, Patthalgaon, Gharghoda, Bhanupratappur, and Kawardha. Most of these tahsils have developed as administrative centres during last few years.

4. Low Level of Educational Development

All tahsils having values less than the lower quartile (76.32) are grouped into this category. The tahsils are situated in the forested hilly areas of Bastar and Surguja districts having concentration of tribal people. Kasdol and Pandaria tahsils are out of these areas. These areas failed to come up in literacy rate despite

notable availability of educational facilities there. However the low rate of literacy in Kasdol and Pandaria tahsils is due to paucity of educational facilities.

Dynamics of Educational Development

Following discussion on the spatial patterns of the level of educational development, it would be useful to analyse of trend of decennial variation in literacy rate. The level of educational development and decennial changes in the rate of literacy are taken as an index for determination of the dynamics of educational development in the region. The region is divided into two categories of high and low level of development on the basis of the median value of the spatial distribution of the level of educational development. Thereafter, the region is divided into areas of high and low literacy rate on the basis of the median value of tahsilwise decennial change in literacy rate during 1981-91. By putting the level of educational development in columns and decennial growth rate in literacy in rows the region is divided into the following four categories (Table 3, Fig. 4).

1. The prosperous Tahsils

Tahsils with high level of educational development as well as high decennial growth in literacy are grouped into this category. Most of the tahsils of this category are situated in the basin where levels of urbanisation and industrialisation are high, with attendant greater availability of educational facilities. These tahsils are Durg, Raipur, Bilaspur, Rajnandgaon, Mahasamund, Kanker, Khairagarh, and Bemetara. Tahsils with medium-high level of above factors are also grouped into this category, they are Balod, Raigarh, Korba, Katghora, Bhatapara, Dhamtari, Janjgir, Sarangarh, Kota, Belha, Kurud, Gurur and Dongargaon.

2. The Developing Distressed Tahsils

Tahsils with low level of educational development and high rate of decennial growth in literacy are grouped into this category. Most

of the tahsils of this group are situated in the northern and southern parts of the Chhattisgarh region where most of the population is of tribals. The growth in literacy rate is medium-high in tribal areas and high in plains but the level of educational development is low and medium-low in these tahsils respectively. The density of population is also low in the tahsils namely Ambikapur, Pal (Surguja District), Dantewara, Bhanupratappur, and Jagdalpur (Bastar District). The number of students per institution and teacher-taught ratio both are also low in these tahsils.

3. The Potential Distressed Tahsils

Tahsils with higher level of educational development and low rate of decennial growth are grouped into this category. Tahsils of this category are Tilda, Saraipali, Nagri, Simga, and Rajim (Raipur District), Patan, Gunderdehi, Dondi Lohara, Dhamdha, and Berla (Durg District), Dongargarh and Chauki (Rajnandgaon District), Kharsia, Jashpur, and Kunkuri (Raigarh District), Pamgarh, Dabhara, Champa, Takhatpur, and Sakti (Bilaspur District), and Charama (Bastar District). The level of educational development in these tahsils is high or medium-high. In the Jashpur and Kunkuri tahsils the availability of educational facilities is more under missionary programmes, the level of educational development is medium-high but the growth rate in literacy is low.

4. The Distressed Tahsils

The less developed tahsils with undulating terrain covered with dense forests and low density of population are grouped into this category where the level of educational development and low rate of decennial growth is marked. Self reliance and development in educational facilities is a great challenge in these areas.

Conclusion

It is obvious from the above discussions that there exist regional variations in the availability of educational facilities and the quality of education. Both the level of education and the growth rate in literacy are low in forested and tribal areas such as Bastar and Surguja Districts

Table - 3
Chhattisgarh Region : Dynamics of the Level of Education, 1991

Tahsilwise decennial growth rate in literacy	Level of Educational Development	
	High (Index > 95.74)	Low (Index < 95.74)
High (> 66.72 per cent)	Prosperous Tahsils Durg, Raipur, Balod, Raigarh, Korba, Katghora, Bhatapara, Dhamtari, Janjgir, Bilaspur, Mahasamund, Sarangarh, Kanker, Bemetara, Khairagarh, Kota, Belha, Rajnandgaon, Kurud, Gurur, Dongargaon.	Developing Distressed Tahsils Manendragarh, Baloda Bazar, Gariaband, Chhuikhadan, Lormi, Ambikapur, Kawardha, Surajpur, Samri, Bharatpur, Pal, Dantewara, Jagdalpur, Kondagaon, Konta, Mohla, Nawagarh, Saja, Pendra, Bhanupratappur.
Low (< 66.72 per cent)	Potential Distressed Tahsils Patan, Gunderdehi, Kunkuri, Dondi-Lohra, Kharsia, Dhamdha, Saraipali, Tilda, Chauki, Dongargarh, Charama, Berla, Jashpur, Simga, Nagari, Rajim, Pamgarh, Dabhara, Champa, Takhatpur, Sakti.	Distressed Tahsils Mungeli, Baikunthpur, Pakhanjur, Kasdol, Bilaigarh, Gharghoda, Bagicha, Dharmajaigarh, Lundra Patthalgaon, Pandaria, Sitapur, Deobhog, Antagarh, Narayanpur, Keshkal, Bhopalpatnam, Bijapur, Pratappur, Wadrafanagar.

Refer Map 4

in the region. The Chhattisgarh region is divided into four categories namely, Prosperous, Developing Distressed, Potential Distressed, and Distressed tahsils, on the basis of their level of educational development and decennial growth rate of literacy during 1981-91. The spatial variations in these factors are caused due to the variations in attitudes to female literacy, types of settlement and socio-economic conditions of the

people living in the area. In tribal areas the educational facilities should not only be increased but the local people should also be encouraged for the optimum utilization of these facilities. Special attention should be paid to educate the backward and poor people, and females, and national programmes like adult education, and distance education be firmly implemented simultaneously.

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POPULATION GROWTH IN UTTAR PRADESH SINCE 1872

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Abstract

The present paper aims to analyse district-wise decadal growth of population in Uttar Pradesh since 1872. It also attempts to identify population growth regions based on a suitable statistical technique. The spatio-temporal differentials are explained by the three interacting processes of birth, death and migration.

During hundred and odd years since the first census in 1872, the net gain in the population of India has been tremendous. It rose from 203 million in 1872 to 684 million in 1981 and 846 million in 1991. Almost same rate of increase was experienced in Uttar Pradesh where the population jumped up from 42.7 million in 1872 to 110 million by 1981 and further to 139 million by 1991. Uttar Pradesh is among the most thickly populated states of the country. In terms of size of population it ranks seventh among the countries of the world. It is marked by a wide range of variations in attributes of population, economy and society. As such, the state furnishes a good case after the present study. The present paper is attempted under two main sections. The first section deals with spatial aspects of population growth in four distinct time spans, and the second section identifies population growth regions.

Population Growth

The history of population growth during these hundred and ten years indicates that the population of Uttar Pradesh followed a fluctuating curve (Fig. 1). The entire growth curve may be conveniently arranged under four distinct span:

- I. *The Period of Low and Fluctuating Growth (1872-1921)*: The first three decades (1872-1901) of this period were marked with fluctuating low growth rate whereas the last two decades (1901-1921) with a progressive decline.
- II. *The Period of Early Demographic Recovery (1921-1951)*: During this period the population recovered from early losses and acquired a trend of moderate growth marked with fluctuations.
- III. *The Period of Accelerating Growth (1951-1981)*: It was characterised by a

INDIA AND UTTAR PRADESH Population Growth: 1872-1991

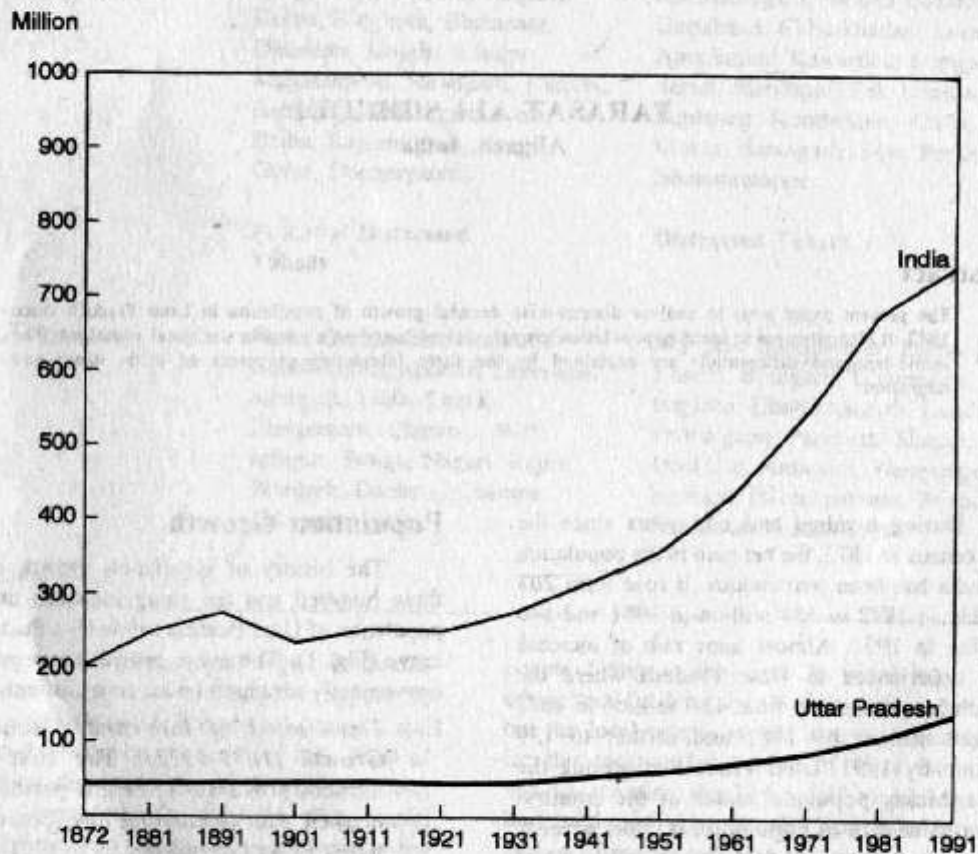


FIG. 1

steadily accelerating growth rate. The acceleration resulted from relatively high birth rates and rapidly declining death rates.

- IV. *The Recent Period (1981-1991)*: The decade ending in 1991 showed a relative decline in the population growth rate. Hopefully, it can be taken to have heralded a decelerating trend in the growth rate (Annex. 1).

First Span (1872-1921): The Period of Low and Fluctuating Growth

1872-1881

The average growth rate of +5.3 per cent in Uttar Pradesh during 1872-1881 varied among the districts within a wide range from -14.16 per cent in Mathura to +51.71 per cent in Uttar Kashi and Tehri Garhwal (District Gazetteers of United Provinces). It may be pointed out that about 30 per cent districts suffered from actual loss and about 70 per cent registered gain in population.

The very high growth region (15 per cent and over) comprising twenty per cent districts, had two components: one lay in the northwestern part of the state and included three districts of Uttar Kashi, Tehri-Garhwal and Dehradun, while the other lay in the eastern part and contained the majority of the districts of the eastern plain.

High growth districts (10 to 15 per cent) were rather scattered and only three districts, namely, Saharanpur, Garhwal and Chamoli formed a small region in the north. The non-contiguous districts of the category were Bahraich (13.15 per cent), Kheri (12.71 per cent), Mirzapur (11.79 per cent) and Basti (10.70 per cent). Nine districts belonged to the medium growth category of 5 to 10 per cent. However, these districts too were scattered and did not form any identifiable region. About twenty per cent districts recorded growth rate of less than 5 per cent. Four districts, namely, Fatehpur, Kanpur, Jalaun and Hamirpur formed a small region in the southwest, while the other districts were too scattered to constitute even a mini region.

In western Uttar Pradesh there was a distinct region of low decline (0 to -5 per cent) constituted by Bulandshahr (-1.47 per cent), Aligarh (-4.85 per cent), Budaun (-3.03 per cent) and Farrukhabad (-2.99 per cent). To the south and east of this region lay an interrupted zone of high loss, with growth rates of more than minus 5 per cent, stretching from Agra to Pilibhit. Within this zone Lucknow (-10.46 per cent), Barabanki (-7.81 per cent) and Sultanpur (-7.91 per cent) districts formed a small region of high decrease in central Uttar Pradesh.

The high incidence of deaths during the decade caused by famines (1877-78) and fever epidemics was the main determinant of the population growth pattern (Mahalanobis and Bhattacharya, 1977). About fifty per cent of the western and central plain districts were hit by these calamities.

1881-1891

During the decade 1881-91 the number of districts with population decline came down from 16 to 5. The overall range of population change remained very wide extending between -7.24 per cent in Etah and +20.72 per cent in Uttar Kashi and Tehri-Garhwal. The state average had a gain of about one per cent point to become 6.25 per cent. Districts with very high growth rate (+15 per cent and over) formed quite a large region in the extreme north with all the Himalayan districts falling in it. In about twenty per cent districts the growth rate ranged between 10 and 15 per cent. These districts combinedly formed a significant region in the eastern half of the state stretching from Hardoi in the west to Deoria in the northeast.

The eight districts with moderate growth rates of 5 to 10 per cent (almost equal to state average) constituted two distinct regions. One lying in the south included the districts of Allahabad (5.15 per cent), Pratapgrah (7.54 per cent), Rae Bareilly (8.99 per cent) and Unnao (6.07 per cent), while the other, which was in northeast, covered Nainital (5.34 per cent), Pilibhit (7.48 per cent), Shahjahanpur (6.93 per cent) and Kheri (8.62 per cent). A dominant region of low growth (below 5 per cent) lay to the west of

moderate region. It stretched from Banda in the south to Moradabad in the north. This region was interrupted by a small region of population decline comprising Farrukhabad (-5.33 per cent), Mainpuri (-4.87 per cent) and Etah (-7.24 per cent) districts.

During this decade the rate of population growth for the state was 6.25 per cent. According to Sri Baillie (1891) the population of 1881 had been understated to the extent of more than a third of a million; and if so the true rate of increase between 1881 and 1891 was only 5.5 per cent. The state did not suffer from famine or from any serious epidemic. Consequently the growth rate was quite high considering the fact the state was in the first stage of demographic transition (birth rate : 38.18 and death rate 31.66).

1891-1901

During this period the growth rate declined sharply to 1.60 per cent. The range of regional variations became much wider i.e. from -12.70 (Nainital) to 23.12 per cent (Etah). The number of districts with population decline rose from five in 1881-91 to twenty during the decade 1891-1901. West Uttar Pradesh emerged as a distinct region of high growth rate (10 per cent and over). Besides, two outliers of the region were found in western (Uttar Kashi and Tehri-Garhwal) and eastern (Almora and Pithoragarh) Himalayan districts. The intervening districts of Dehradun, Garhwal and Chamoli constituted a small strip of high growth (5 to 10 per cent). Another narrow belt of high growth rate ran almost through the middle of the state from Mathura to Bahraich. South of this belt the whole of the state recorded mostly low and very low growth rates.

The sharp decline in the state average growth rate during this decade resulted from natural calamities. Exceptionally heavy rains of 1894 and highly deficient monsoon of 1896 and 1897 caused havoc to crops and resulted in high damage and severe famine. The malarial fever in 1895 raised the death rate to an exceptional height (42.1) and sapped the vitality of the people to such an extent that the birth rate in 1895 was unusually low (34.7) in that context.

1901-1911

During the first decade of 20th century, the population of the state declined at the rate of 1.0 per cent. However, there were many districts where the population did actually increase at various rates with highest rate being about 16 per cent in Pithoragath and Almora. The number of losers districts was also quite substantial. The decline ranged between 0 and 15 per cent with highest rate of -14.3 per cent recorded in Ballia. The districts which escaped actual loss were relatively few and were confined to the extreme north, southwest and the northern - central part of the state. The hill districts were the main gainers. The rest of the state, comprising western, southern-central, southern and eastern sections, was the loser. The western and central districts were the worst sufferers.

The widespread population decline during 1901-11 was mainly due to increase in death rate caused by large scale famines and outbreak of epidemics. Though the first four years of the decade were free from famine and epidemic diseases, bad crops in 1905 and the following years resulted in severe famine, for about three years, which became all the more intense during 1907-08 (Blunt, 1911). The famine took a substantial toll of life. The conditions became still worse with the outbreak plague epidemic which took a very heavy toll of life in the state. The malaria epidemic of 1908 also added to the well of the state. The fertility was also badly affected so that in 1909, the birth rate of 33.4 was abnormally low. Official records show that the mortality from malaria was higher among females. Similarly the plague also was responsible for higher mortality among the females. Besides the decimation caused by the epidemics, the state also suffered substantial loss of its population due to out-migration to Bihar, Nepal, Bengal and Assam which mainly occurred as an effort to escape from famine and epidemics.

1911-1921

The trend of decline set in during the first decade continued well into the second. The average decline rate increased from 1.0 per cent to 3.0 per cent and about seventy per cent of the

districts were the losers in population. Like the previous decade the hill districts of the north were the chief gainers with high growth rates. The northeastern and western districts emerged as a second region of high population growth. A slight recovery was made by the eastern districts of the Doab. But in no case the growth rate exceeded 6 per cent. With the exception of these two areas of increase, almost the entire state was under the grip of decline which held its sway right upto the end of the decade. The decline range was much wider as it extended down to -16 per cent; the districts of Pilibhit, Shahjahanpur and Nainital were the worst sufferers.

During this decade also the major cause was the epidemics which continued to ravage the state. In 1911 the severe plague epidemic was responsible for 7 per mille mortality in the state while cholera and fever were also quite rampant. Then in 1917 malaria broke out as an epidemic and was much more devastating than any other disease. It was followed in 1918-19 by a devastating attack of influenza which took a toll of about 2 million population (Edye, 1924).

Second Span (1921-1951) : The Period of Early Demographic Recovery

1921-1931

The decline trend ended with the close of the second decade of the century, and the third decade marked the beginning of population recovery and a reversal in the trend of natural growth. Thus, the year 1921 is rightly considered as a great demographic divide. The population of the state during this decade increased by 6.80 per cent which meant a gain of about 10 per cent points over the previous decade. The increase was universal and ranged from 0.1 per cent in Nainital to 13.4 per cent in Agra.

More than eighty per cent of the districts of the state lay within the range of ± 2 per cent points from the state average. The hill districts of the north maintained their steady trend of increase and combinedly constituted a region of high growth. The central districts from Budaun in the west to Azamgarh in the east formed a long

narrow belt of low growth rates. This was fringed on both south and north by medium growth districts.

The most significant cause of this reversal of trend was the absence of famine and epidemics which took huge toll of lives in the past. Besides, with substantial improvement in public health and hygiene the death rates came down while the birth rates did not show a matching decline and hence the population managed to register quite sizeable increase (Natarajan, 1975; Domorös, 1984).

1931-1941

During the decade 1931-41, the growth rate became double (13.57 per cent) of what it was during the preceding one. The acceleration, which was almost universal, augmented the standard deviation and mean to become 4.93 and 13.64 respectively. The rates varied from 19.6 per cent in Ghazipur to 4.2 per cent in Sultanpur. There was no definite region of very high growth rates of more than 21 per cent as the only three districts, viz. Kanpur (28.38 per cent), Agra (23.0 per cent) and Allahabad (21.46 per cent) belonging to this grade were incontiguous. However, Ganga-Yamuna Doab emerged as a distinct region of high growth rates. On the contrary, the whole of the central and northeastern Uttar Pradesh was conspicuous for being a big region of low and very low rates. The plateau districts of south and the hill districts of north constituted two main separate wings of medium growth region, while third component of this type was formed by five districts of the eastern plain and the fourth was formed by three districts of the western plain.

While the third decade marked the beginning of recovery from earlier losses, the fourth heralded the acceleration of growth rates. This has been attributed to more stable agricultural situation and further improved health and hygienic environment as has been reported by the census superintendent (Sahay, 1942) that the decade was "free from serious epidemic and public health had been exceptionally good. The incidence of three major epidemic diseases — cholera, plague

and small pox — had fallen and anti-malaria schemes working in rural areas in collaboration with Indian Research Fund Association reduced deaths from malaria.”

1941-1951

This happened to be politically most disturbed decade: its first half faced the brunt of the Second World War while the second half witnessed the partition of the sub-continent and the ensuing aftermaths. Migrations, both in and out, became, for the first time, a significant determinant of demographic dynamics. The scenario that developed under the disturbances, migrations and the growth acceleration set in during the thirties was characterized by a wide range of variation in growth rates which ran from a growth rate of 2 per cent in Shahjahanpur to a high of 36 per cent in Dehradun (Singh, 1990). There was a reduction in the state average growth rate by 1.85 per cent points from 11.82 per cent in the previous decade. It may be pointed out that about fifty per cent of the districts lay within the range of ± 3 per cent from the state average. Though the Doab maintained its high and medium rating, the northern and southern extremes of the state witnessed substantial reduction to emerge as areas of generally low growth rates. On the other hand, abnormal spurt in growth in Sultanpur and Azamgarh resulted in the formation of a high growth region in the east comprising Sultanpur, Azamgarh, Ghazipur and Varanasi (Map 3). With the whole of low growth region of the previous decade in the central and northeastern part getting changed into a region of medium growth, the entire regional pattern underwent a virtual transformation.

Third Span (1951-1981): The Period of Accelerating Growth

1951-61

This decade marked the beginning of a steadily accelerating growth with sharply declining death rates. The increase of population, by about one-and-a-half times of that of the preceding decade, augmented the mean to 17.82 and standard deviation to 8.57. Excluding the

exceptional case of Nainital (73.1 per cent), the range of variation narrowed to 16 per cent points to run between a maximum of 26.27 per cent in Jhansi and a minimum of 10.04 per cent in Basti. The five districts of high growth rates within the range of 30.68 to 22.11 per cent alongwith Nainital did not show any regional pattern as they were scattered wide apart. But the north and east-central districts formed a distinct and compact region of low growth with rates ranging between 13.5 and 4.9 per cent. The extreme eastern districts of Deoria and Ballia and the western districts of Budaun and Shahjhanpur formed the eastern and western outliers of this region.

The rest of the state, comprising almost sixty-five per cent districts, had medium growth rates varying from 13.53 to 22.11 per cent. Obviously, these districts formed a wide region girdling the low growth region and intervening between the inconiguous high growth districts. The regional pattern of the growth during the decade reveals two important facts: one, widespread high disparities of growth of the earlier decades got substantially smoothed. Two, there was a general discernible rise in the level of growth rates of all the interquartile ranges. To be sure, these two facts were strong indicators of a steady and universal increase of population.

During the decade 1951-61, birth rate in Uttar Pradesh was slightly lower than all India birth rate (Gupta 1985). But on the contrary, the death rate was 2 per mille points higher being about 25 per mille per annum against the national ratio of about 23 per mille per annum. Though in-migration had a slight edge over out-migration during the previous decade and had a rather insignificant share in the total growth, the position of migration during the decade under review got altered both in nature and quantum. As such, Uttar Pradesh was designated as an out-migrating state for 1951-61 and there was a net loss of about 1.4 million persons due to migration during this decade (Mitra, 1962).

1961-71

The general population of Uttar Pradesh increased at an average rate of 19.78 per cent during 1961-71. Nevertheless the value of standard deviation (4.9) declined sharply to lose 3.6 counts over the previous decade's value of 8.5. This, in fact, represented a sharp decline in the deviation of the individual values from the mean and thus reflected a greater concentration of the district rates close to the state average. However, a somewhat uniform growth pattern of the previous decade was undone and the inter-district growth range widened by 11 per cent points and ran from 11.0 in Gonda to 37.57 in Nainital. The distribution pattern obtained reveals no basic change over that of the previous decade. The western districts maintained their high to medium growth rates while the north and east-central districts, with minor modifications continued to form a region of relatively low growth rates. The girdle of relatively medium growth districts of the previous decade became broken and narrow. As in the previous decade, the hill districts retained their medium to low growth character. The trend of steady increase in population of the previous decade was further intensified during this decade. In the process the growth pattern of population became still more uneven during the decade as certain districts registered greater gains while others generally retained the earlier rates or made only marginal gains. Among the substantial gainers were Saharanpur, Muzaffarnagar, Bijnor and Moradabad in the northwest, Agra, Kanpur, Jalaun, Hamirpur and Banda in the southwest and southcentral part and Deoria and Ballia in the northeast. These gains added considerable diversity to the regional distribution of growth rates. The pattern of operation of vital processes and migration also continued without any notable change.

It may be observed that according to the recorded data the state maintained its out-migrating area character as considerably more people went out than came into this state (Sinha, 1973; Siddiqui, 1984). Besides, the intrastate

migration has also been operating in effecting regional changes. The western and southern districts were the chief recipient areas of both interstate and intrastate migrants. Consequently, the population of these districts accelerated to a higher pace. The eastern districts, on the other hand, were the main despatchers of migrants and as such have had a relatively low net growth rate (Siddiqui, 1984).

1971-81

The accelerating growth trend continued unabated into the eighties and the decade 1971-81 witnessed growth at the rate of 25.49 per cent. Only in this decade the population of Uttar Pradesh had higher rate than that of the country as a whole (Gupta, 1985). The pattern of growth for this decade as worked out on the basis of interquartile ranges compared well with that for the 1961-71 decade, though the numerical values of all the ranges were relatively raised. For instance, the range designated as medium for this decade (28 to 22 per cent) almost equalled the high range (27 to 22 per cent) of the preceding decade. Such augmentation, however, did not cause much change in the basic relative pattern of growth rate in the state. Almost the entire central and eastern Uttar Pradesh retained its medium growth character and the hill districts of the north retained generally their low to medium range of the previous decade. Nevertheless, certain notable changes did occur in the southern and western parts. With the graduation of the districts of Allahabad, Varanasi, Jhansi and Lalitpur from medium and low to high growth category, there emerged a belt of high growth rate in the south with an interruption at Hamirpur -- the district which moved down from high to low category. The western districts on the whole showed a slight decline in the rate category. The pattern that emerged by 1981 clearly indicated that almost the entire southern, central and eastern Uttar Pradesh gradually became a repository of higher growth rates whereas the western and hill districts having relatively high growth rates at the close of the 19th century and the mid twentieth century suffered a substantial fall in their growth rates.

Fourth Span (since 1981) : The Recent Period

The population of Uttar Pradesh increased at an average rate of 25.11 per cent during 1981-91, i.e. the rate was 0.08 per cent point lower than that in the previous decade. The value of standard deviation (6.31) increased to gain 0.85 count over the previous decade value of 5.46. The pattern of growth for this decade as worked out on the basis of interquartile ranges compared well with that for the 1971-81 decade, though of course the numerical values of all the ranges had relatively declined. For instance, the range designated as medium for this decade (18.45 to 24.76) almost equalled the low range (17.53 to 22.97) of the preceding decade. It, however, did not cause much change in the basic relative pattern of growth rate distribution in the state. Almost, the entire central Uttar Pradesh retained its medium growth character and the hill districts of the north retained generally their low to medium range of the previous decade. Nevertheless certain notable changes did occur in the southern and western parts (Map 4).

Population Growth Regions

The decadal growth rates of population since 1901 have been added districtwise to obtain a gross index of growth of population for the ninety-year period (Fig. 2). The indices thus obtained have been used to identify and demarcate population growth regions of the state. The general principle is that the larger the index greater is the growth rate during ninety-year period, and vice versa. Groups of interquartile values of growth rates have been used to define and plot broad population growth regions. The state has been divided into four broad regions of population growth. The median growth rate for the nine decades covers, under this process, to 112.55 per cent while the quartiles values are 132.64 and 99.74 per cent. Thus the range of variations from the median to the upper quartile (112.55 - 132.64 per cent) has come out to be higher than that from the median to the lower quartile (112.55 - 99.74 per cent). The range of

variations from the upper quartile to the upper limit is obtained to be 132.64 - 199.77 per cent whereas from the lower quartile to the lower limit it has come out between 99.74 and 79.69 per cent.

The districts with growth rates of below 99.74 per cent constitute a distinct region comprising mainly the central plain areas. It stretches from Budaun district of west plain to Baeti, Faizabad, Sultanpur and Pratapgrah districts of the east plain. The middle and lower Doab combinedly constitute a distinct region of low to median growth (99.74 - 112.55 per cent) in the western section of the state. The region includes two-thirds of the total number of districts under this grade. Other districts of this grade are widely scattered over the state.

About seventy-three per cent districts which lie between median and upper quartile (112.55 - 132.64 per cent), delimit three separate but individually compact regions in the eastern and northwestern plains and in the northern hilly zone of the state. The eastern plain region is composed of Ghazipur, Azamgarh, Deoria and Gorakhpur districts, while the northwestern component is comprised of Meerut, Bijnor and Saharanpur. The Himalayan region is formed by the districts of Tehri-Garhwal, Chamoli, Pithoragarh and Almora.

Three narrow belts of very high growth (more than 132.64 per cent) can be easily identified. One of them is in the extreme northeast and comprises the hill districts of Dehradun and Uttar Kashi, the second lies a little south and is formed by the districts of Ghaziabad, Moradabad and Nainital while the third is found in the extreme southeast. The last one is, in fact, the biggest of the three and is composed of Allahabad, Varanasi, Mirzapur and Sonbhadra districts.

Broadly speaking, the northern and the southern districts constituted the two distinct regions of high to very high growth rates, while the western and central plains alongwith western section of eastern plain formed an almost continuous region of moderate to low growth rates.

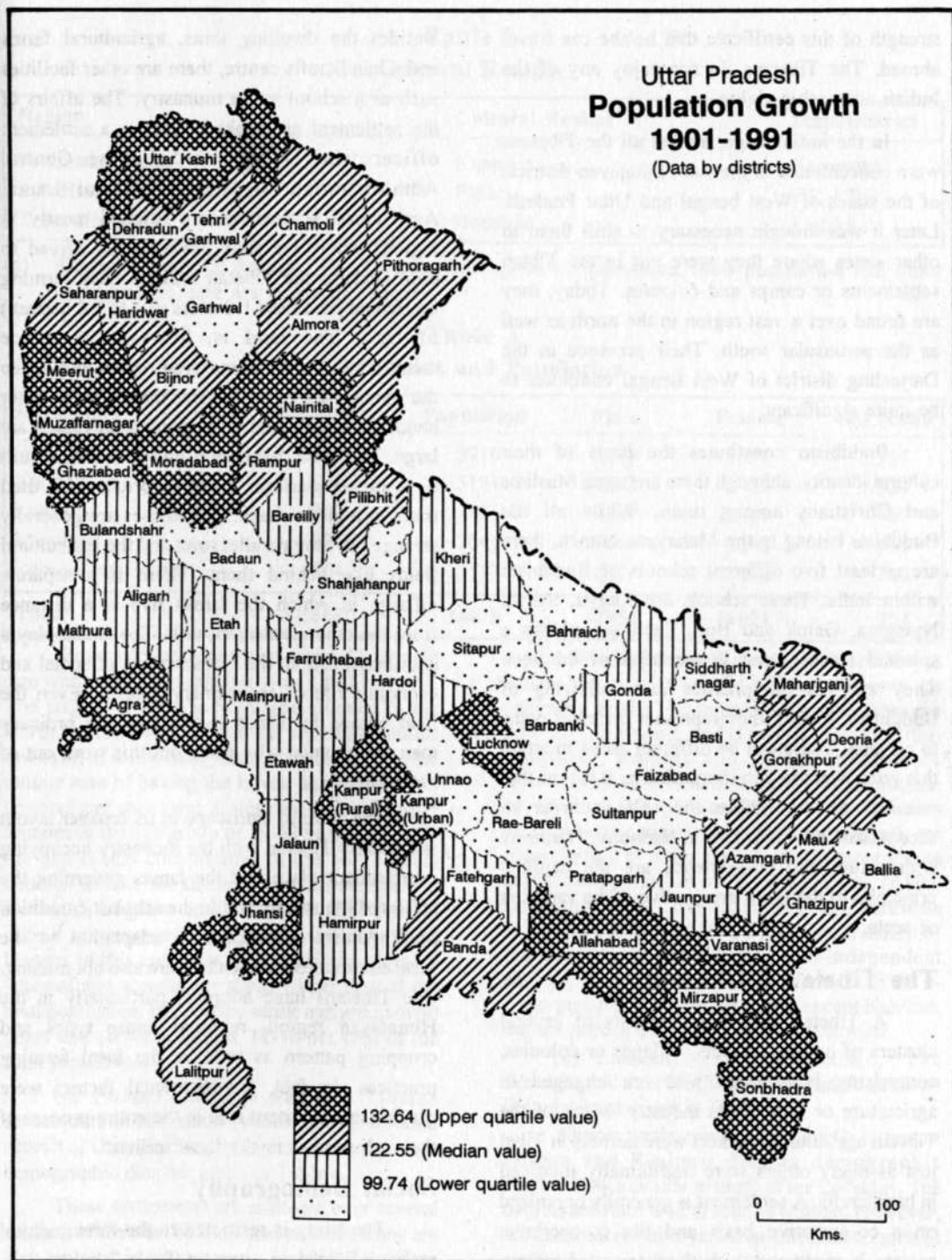


Fig. 2

Conclusion

The first fifty years since the first census in 1872 were marked with fluctuating trend of population growth rate. Roughly the first half of this period recorded low growth rate, whereas the second half was the period of progressive decline. The pace of uninterrupted acceleration in the growth rate, set during the forties, and continued unabated till the end of the seventh decade, was brought to a halt during the eighties. In fact the trend got reversed. But the reversal was nominal and merely of an academic nature as the fall in growth rate vis-a-vis the rate of the previous decade was a paltry 0.08 per cent point.

Thus, the average growth index for 1981-91 was 25.11 per cent which despite this relative decline was, by itself, quite substantial and significant. According to the international standard, the population was still at the first step of explosion as the index exceeded 2.5 per annum -- the threshold to explosion. However, in respect of determinants of growth this decade was not in the least different from the preceding one. The role of mortality and fertility in the growth of population maintained its outstanding dominance throughout the twentieth century uninterruptedly save a temporary break around the mid-twentieth century when, temporarily, migration emerged as a notable determinant of growth in the state.

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Annex. I

UTTAR PRADESH : DISTRICTWISE DECADAL GROWTH RATE OF POPULATION, 1872-1991

S. No.	Districts	Per cent growth rate													
		1872-81	1881-91	1891-1901	1901-1911	1911-1921	1921-1931	1931-1941	1941-1951	1951-1961	1961-1971	1971-1981	1981-1991	1901-1991	
1.	Uttar Kashi	51.71	20.72	10.80	11.88	5.85	9.79	13.67	03.69	15.82	20.33	29.19	24.52	144.74	
2.	Chamoli	51.71	17.99	5.39	11.69	1.16	10.04	12.78	6.23	16.67	15.58	24.53	18.21	116.89	
3.	Tehri Garhwal	22.95	16.92	5.80	11.88	5.85	9.78	13.67	3.72	13.53	14.28	25.25	15.60	113.56	
4.	Dehradun	11.39	17.99	5.41	11.69	1.16	10.04	12.78	36.08	18.61	34.57	31.93	33.22	197.36	
5.	Garhwal	1.81	15.52	11.70	15.88	0.90	9.99	17.83	6.23	14.12	14.66	15.34	5.79	91.81	
6.	Pithoragarh	1.81	15.52	11.70	15.88	0.90	9.99	17.83	12.46	13.80	20.60	17.85	14.55	129.96	
7.	Almora	27.72	5.34	-12.70	-0.15	-14.42	0.15	5.26	14.92	73.10	37.57	43.85	39.49	199.77	
8.	Nainital	10.83	2.20	4.45	-5.62	-4.97	11.37	12.99	14.67	19.34	27.20	30.11	26.16	131.25	
9.	Saharanpur	9.86	1.90	13.50	-7.82	-1.64	12.68	18.12	15.61	18.26	24.73	26.20	30.26	136.40	
10.	Muzaffarnagar	-2.10	10.06	-1.77	3.33	-8.15	12.85	8.95	8.13	21.01	25.12	30.14	26.83	128.21	
11.	Bijnor	2.84	5.96	10.69	-1.35	-0.31	6.89	18.39	20.28	18.10	21.35	25.33	23.96	132.64	
12.	Meerut	2.84	5.96	10.69	-1.30	-1.00	6.80	18.00	19.40	21.10	29.30	37.45	49.48	179.23	
13.	Ghaziabad	-1.47	2.71	19.81	+0.70	-5.04	6.63	15.86	13.87	15.10	18.66	24.68	19.84	110.30	
14.	Bulandshahr	2.95	2.10	1.10	5.95	-5.11	7.12	14.72	12.75	19.74	23.07	29.66	30.32	138.22	
15.	Moradabad	-3.03	2.15	10.81	2.74	-7.46	3.56	15.03	7.64	12.83	16.60	19.80	23.74	94.48	
16.	Budaun	6.88	1.72	-3.30	-0.27	-14.44	2.64	2.81	13.87	25.27	28.46	30.78	27.13	116.25	
17.	Rampur	1.56	0.97	4.70	0.42	-7.38	5.77	9.68	7.91	16.51	20.38	27.71	24.12	105.12	
18.	Bareilly	-8.23	7.48	-3.06	3.67	-11.49	3.09	9.33	2.79	22.18	22.05	34.06	26.93	113.51	
19.	Pilibhit	-8.01	6.93	0.43	2.53	-11.16	5.75	8.68	2.79	12.53	13.79	28.11	20.29	82.66	
20.	Sahjahanpur	-4.85	2.15	15.11	-2.93	-8.92	10.36	17.15	12.45	14.37	19.63	21.93	27.64	111.68	
21.	Aligarh	-14.16	6.21	7.07	-13.97	-5.70	7.86	20.80	12.45	17.43	20.45	20.94	23.15	103.41	
22.	Mathura	-9.42	2.99	5.96	-3.66	-9.56	13.44	23.00	16.52	24.03	23.98	23.98	21.78	133.51	
23.	Agra	-8.74	-7.24	23.12	0.87	-4.78	3.71	14.44	18.14	15.59	20.87	18.32	20.53	103.73	
24.	Etah	4.62	-4.87	8.82	-3.83	-6.22	0.21	16.40	13.90	18.82	22.41	19.42	22.94	104.05	
25.	Mainpuri	-2.99	-5.39	7.89	-4.82	-7.77	4.50	8.80	14.34	18.54	20.22	25.19	23.87	107.87	
26.	Farrukhabad	8.03	0.73	10.88	-5.79	-3.50	1.70	18.40	9.90	21.79	22.46	20.37	21.26	106.59	
27.	Etawah	2.19	2.39	4.06	0.56	5.54	28.38	24.65	22.76	25.81	24.90	23.01	23.53	146.87	
28.	Kanpur	2.99	2.25	-1.82	-1.38	-3.63	5.58	17.15	12.65	18.06	19.94	23.01	20.41	111.79	
29.	Fatehpur	5.78	5.15	-3.99	-1.56	-4.27	6.20	21.46	13.01	19.29	20.46	29.27	29.76	133.62	
30.	Allahabad														

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Annex. I

UTTAR PRADESH : DISTRICTWISE DECADAL GROWTH RATE OF POPULATION, 1872-1991

Per cent growth rate

S. No.	Districts	1872-81	1881-91	1891-1901	1901-1911	1911-1921	1921-1931	1931-1941	1941-1951	1951-1961	1961-1971	1971-1981	1981-1991	1991-1991
31.	Jalaun	3.39	-5.21	0.80	1.68	-9.90	4.85	12.20	5.60	19.80	22.67	21.24	23.40	101.54
32.	Jhansi	7.81	9.39	-9.87	9.71	-9.93	13.21	12.22	5.61	26.20	21.19	30.67	25.50	134.38
33.	Lalitpur	17.81	9.39	-9.87	9.71	-9.93	13.21	12.22	5.61	18.70	17.14	32.21	29.08	127.95
34.	Hamirpur	1.28	1.25	-10.90	2.00	-4.21	6.79	13.79	2.67	19.57	24.39	20.84	22.74	108.58
35.	Banda	-3.96	1.03	-10.60	4.20	-6.57	6.31	15.51	6.76	20.69	21.96	29.80	22.20	122.86
36.	Kheri	12.71	8.62	0.17	5.97	-4.77	3.39	8.42	3.35	18.90	18.13	31.40	23.62	108.41
37.	Sitapur	2.71	12.23	9.30	-3.09	-4.32	7.13	10.82	6.73	15.94	17.18	24.08	21.94	96.41
38.	Hurdoi	6.04	12.71	-1.89	2.59	-3.29	3.97	9.97	9.88	15.54	17.37	23.00	0.51	99.74
39.	Unnao	-4.96	6.07	2.41	-6.73	-10.08	4.46	12.14	11.20	14.97	21.00	22.80	20.61	90.37
40.	Lucknow	-10.46	11.10	2.46	-3.63	-5.24	8.72	20.60	18.78	18.68	20.84	24.50	35.69	138.94
41.	Rae Bareli	-3.75	8.89	-0.27	-1.10	-7.89	4.04	9.35	8.65	13.68	14.27	24.98	22.99	88.97
42.	Bahraich	13.15	13.99	5.14	-0.37	-11.70	6.66	9.17	8.53	11.63	15.14	28.30	24.44	91.80
43.	Gonda	8.79	14.81	-3.84	0.64	4.31	6.96	9.11	9.18	10.43	11.00	23.10	26.09	100.82
44.	Barabanki	-7.81	10.14	4.27	-8.09	-4.97	3.31	9.28	8.75	12.23	15.63	21.80	21.75	79.69
45.	Faizabad	5.54	12.53	0.70	-5.81	1.55	2.81	9.51	12.30	10.52	17.90	23.60	25.24	97.62
46.	Sultanpur	-7.91	12.31	1.73	-3.27	-4.21	4.74	4.75	16.44	9.28	16.27	24.30	25.26	93.56
47.	Pratapgarh	8.22	7.54	0.31	-1.41	-4.97	5.98	14.96	6.78	1.14	13.62	26.60	22.78	97.48
48.	Basti	10.70	9.52	3.38	-0.85	5.18	7.94	5.20	9.24	10.04	13.65	19.86	24.60	94.86
49.	Gorakhpur	29.65	14.45	-1.20	8.97	2.02	11.69	10.67	12.29	14.59	18.44	24.93	24.69	128.29
50.	Deoria	29.65	13.45	-2.10	8.90	2.08	6.78	11.53	6.74	12.96	18.41	24.30	26.84	118.54
51.	Azamgarh	21.79	7.71	-11.50	-3.58	2.40	2.81	15.98	15.33	14.31	18.66	24.00	26.64	115.55
52.	Jaunpur	17.90	4.57	-5.00	-3.86	-0.14	7.00	12.24	9.35	14.01	16.10	26.30	26.62	107.62
53.	Ballia	34.17	2.03	-0.77	-14.26	-1.75	9.88	15.46	13.37	12.10	18.22	22.40	21.60	97.02
54.	Ghazipur	8.63	6.39	-10.85	-8.11	0.88	5.55	19.46	15.82	15.83	15.90	26.76	26.65	118.74
55.	Varanasi	17.48	4.81	-4.36	0.52	1.58	7.06	18.64	18.47	19.43	20.62	29.60	30.77	146.69
56.	Mirzapur	11.79	-0.59	-6.77	-1.05	-0.08	8.87	14.15	13.04	22.82	23.59	31.97	34.56	147.87
57.	Uttar Pradesh	5.30	6.25	1.60	-0.97	-3.08	6.66	13.57	11.82	16.66	19.78	25.49	25.41	115.34

Source : Census of India columns for Uttar Pradesh, 1872-1991

Note : All data have been adjusted to the district boundaries as in 1991.

URBANISATION IN HIMACHAL PRADESH DURING THE PRESENT CENTURY

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Abstract

The paper examines urbanisation in Himachal Pradesh in terms of size, growth, evolution, site and functional characteristics of urban centres for 1901-91 period. In addition, the role played by the changing political and administrative geography has also been considered. The process of urbanisation remained sluggish during the pre-Independence period but got a momentum in the post-Independence era with the influx of refugees who arrived in the wake of the partition of the country in 1947 from across the border and increase in administrative and developmental activities. Grant of full statehood in 1971 further accelerated the process. A large part of increase in urban population is attributed to emergence of new towns. The contribution of net in-migration has been less important. Small towns predominate in the hierarchy of towns. Overwhelming majority of towns are located in the southwestern part of the state. A large majority of towns is sited along the river valleys. Most of such towns originated during either the pre-British or post-Independence period. Against this most of the British towns are sited on hill tops. Many of the pre-British towns were the capitals of formerly native states, while most of the post-Independence towns are market towns. Most of the cantonment towns, having their origin during the British period, are registering decline in their population base.

Himachal Pradesh, which till recently was a part of the Punjab, makes a distinct physio-cultural unit, different from the Punjab plains. Among others, urbanisation here has a number of features which distinguish it from that of the plains. Urbanisation in the hill regions like Himachal Pradesh can easily be identified with a low level, moderate growth, highly uneven distribution, small size and wide spacing of urban centres. As a cultural artefact, hill towns make a bold appearance on the dominant physical landscape of the hilly and mountainous regions (Verma and Krishan, 1980). Chief determinants

of their location include altitude, terrain, micro-climate, scenic beauty, accessibility, personal interest of the founders, political constraints, strategic importance, plural societies and reputation of a locality (Mitchell, 1973). Religion and technology can be listed as additional factors.

The recent political and administrative history of Himachal Pradesh has a significant bearing on the urbanisation process in the state. The British rulers established a number of hill stations, health sanatoria and cantonments to impart administrative, recreation and military functions following the Anglo-Sikh War in the

middle of 19th century. The exogenous urbanisation induced during the British period differed widely in terms of site, situation, cultural setting and several other respects from the indigenous urbanisation. In the post-Independence era, emergence of Himachal territory into a centrally administered state in 1948, in-migration of refugees from across the border due to partition in 1947, merger of Bilaspur with it in 1954, shifting of state headquarters of Punjab state from Shimla to its new capital at Chandigarh in 1956, transfer of Hindi speaking northern areas from Punjab to Himachal Pradesh under the Punjab Reorganisation Act, 1966 and grant of full statehood to Himachal Pradesh in 1971 made profound impact on the process of urbanisation in Himachal Pradesh.

In the present paper an effort has been to make a comprehensive examination of the process of urbanisation in Himachal Pradesh in the light of all these statements. The main aspects examined here include :

- i) comparison of the urbanisation process in the pre- and post-Independence history of the state;
- ii) geographical and size distribution of the urban centres;
- iii) site characteristics of urban centres;
- iv) growth behaviour of urban centres and its consequences; and
- v) functional characteristics of towns.

A reliable and continuous data on various demographic attributes in India are available only from 1901 onwards. The present study will cover a period of 90 years (1901-1991) during which period ten population censuses have been conducted. For a comparative study of the urbanisation process in the state, this period will be divided into sub-periods: 1901 to 1951 and 1951 to 1991. For studying other aspects of urbanisation in Himachal Pradesh focus will remain on 1951 to 1991 period.

Urbanisation Process

Himachal Pradesh is the least urbanised

state in India. The proportion of its urban population, which was 8.70 per cent at the 1991 census, is the lowest of all the states in India and was nearly one-third of the national average (25.72 per cent). Nevertheless, the urbanisation has been increasing fast particularly in the post-Independence period. The growth rate of urban population was more than 3.0 per cent per annum against only about 1.0 per cent of the total population in the state during 1901-1991. Remaining quite sluggish till 1931-41, urban growth picked up fast since 1941-51 decade. Of the total urban population of 372 thousand which was added in the state during the entire period of nine decades from 1901 to 1991, 363 thousand or 98.0 per cent occurred during 1941-1991. The number of towns has grown to 58 in 1991 from just 11 in 1911. During the same time, the proportion of urban population increased to 8.68 per cent from only 3.12 per cent. The decennial increase in urban population during the latest census decade of 1981-91 was 37.80 per cent against a negative change of 23.45 per cent during 1901-11 (Table I).

Notwithstanding that the urbanisation is getting more and more spatially pervasive, there are wide regional variations in size and number of urban centres in the state. Kinnaur and Lahul & Spiti are two such districts which do not have even a single urban centre. Shimla, located in the district of the same name, has now attained the status of Class I urban centre (population 100,000+). However, a large majority of towns in the state are small sized.

Low degree of urbanisation in the state is explained by the factors, such as: (i) the difficult terrain, dictating the large sized central villages to act as service centres for the surrounding villages; (ii) presence of a large number of small to very small sized rural settlements which fail to provide the threshold required for further growth of the towns/cities; and (iii) the low level of industrial development acting negatively on the process of urbanisation in the state.

In the following, a detailed analysis of the urbanisation process in the state is made by

Table 1
Himachal Pradesh : Trends and disparity in Urbanisation, 1901-1991

State/District	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991
Himachal Pradesh	4.03	3.12	3.45	3.63	3.80	6.45	6.34	6.99	7.61	8.70
Chamba	7.95	7.68	7.90	7.53	7.64	4.55	7.96	7.50	6.84	7.60
Kangra	3.38	1.47	1.04	1.28	1.71	6.79	5.84	4.32	4.93	4.81
Solan	7.49	7.08	5.93	5.70	9.76	11.42	10.89	10.08	10.75	12.74
Sirmaur	4.61	4.57	4.09	5.25	5.08	6.24	7.22	8.45	8.74	10.05
Hamirpur (1)	-	-	-	-	-	-	-	1.38	4.98	6.31
Una (2)	2.87	-	-	2.57	2.77	2.74	2.27	3.95	7.72	8.61
Bilaspur (2)	3.51	-	-	2.36	2.60	2.96	4.88	5.30	4.68	5.73
Mandi	4.51	3.34	3.93	5.98	4.44	5.20	5.60	9.35	7.33	7.30
Kullu (3)	-	-	-	-	-	2.53	3.19	5.59	7.09	7.02
Shimla	6.80	8.67	12.05	7.85	8.05	8.05	14.07	14.59	15.69	20.43
Lahul & Spirit (4)	-	-	-	-	-	-	-	-	-	-
Kinnaur (4)	-	-	-	-	-	-	-	-	-	-
Spatial Disparity Index*	1.61	1.91	2.47	1.71	1.62	2.98	2.06	1.87	1.36	1.73

Notes : (1) Urban centre emerged at 1971 census.

(2) Urban centres remained declassified during 1911 and 1921 census years.

(3) Urban centre emerged at 1951 census.

(4) Wholly rural district.

* Disparity Index has been calculated by taking the range difference (i.e. maximum value - minimum value) divided by the median value in the series.

dividing the study period into two sub-periods: Pre-Independence (1901-1951); and Post-Independence (1951-91).

Pre-Independence period

During this period the pace of urbanisation remained quite slow. In 1901, the urban population of Himachal Pradesh was only 77,332 persons, accounting for 4.2 per cent of the total population in the state. Thus, only one out of each 25 persons in Himachal Pradesh was an urbanite in 1901 as against one in ten persons in the country as a whole. This reveals an extremely low level of urbanisation in the state. In all, there were 20 towns in the state in 1901. As many as 15 of them were class VI towns (having population less than 5,000 persons). Shimla, the

largest town in the state, had a population of 13,960. Shimla, Kasauli, Sabathu, Dagshai, Jutogh, Dalhousie and Bakloh were sited at hill top and originated during the British period. Shimla established in 1819 was among the first modern hill stations in India. Located on a saddle ridge, it was well connected to Ambala through Kalka. The cantonments of Sabathu, Dagshai and Kasauli also functioning as convalescent depots and hill stations along the Kalka-Shimla highway. On the other hand, Chamba, Kangra, Rampur, Mandi, Nalagarh, Nurpur and Una were pre-British in origin and were sited in river valleys. Kangra had the distinction of being the capital of the oldest native state and enjoyed considerable importance as a political, cultural and religious centre of the region. Rampur, the capital of

Bashahr state and located on the old Hindustan-Tibet road was an important centre of collection and distribution of products. It attracted trade from long distances. Besides, it was an important Hindu and Buddhist religious centre. Nurpur and Nalagarh located in the hill-foot contact zone enjoyed better accessibility and functioned as important supply and market centres. The process of indigenous urbanisation was, thus, progressing through administrative, trade and religious activities (Sharma, 1992, p. 7). Nahan, though a pre-British town, had a hill top location. In contrast, Dharmsala having origin in the British period was a spur town (Appendix 1). There was no definite association between the pattern of growth and size, location and function of the urban centres.

During 1901-11 decade urban population in the state registered an absolute decrease of 18,139 persons. This amounts to nearly one-fourth of the total urban population (77,332 persons) in the state in 1901. The share of the urban population in total also declined: 4.2 per cent in 1901 to 3.12 per cent in 1911. As many as eight towns were declassified and Jutogh, a separate town in 1901, was merged with Shimla town. This reduced the number of towns in the state to 11. These towns were distributed in Shimla, Chamba, Mandi, Kangra, Sirmaur and Solan districts. Consequently, Una and Bilaspur districts remained without any urban centre. Urban centres remained confined to six districts of Shimla, Solan, Chamba, Kangra, Sirmaur and Mandi. Interestingly, all declassified towns were native in origin and functioned as the capital headquarters of native states. Mandi and Chamba, two capital towns of native states, also registered decline but were not declassified. Almost all the declassified towns were class VI category towns. The number of such towns was reduced to 6 in 1911 from 15 in 1901.

Moreover, 1901-11 decade witnessed natural calamities. In Kangra district alone, the earthquake of 1905 killed thousands of people. Urban areas being congested registered higher deaths in comparison to rural areas. In fact this was a

decade of overall decline in population of Himachal Pradesh. Rural population also registered a marginal decline of 0.20 per cent during the decade. The average growth of urban population was 12.14 per cent during 1901-11. Shimla registered the highest decadal growth rate of 39.0 per cent. In fact, 85.0 per cent of the total urban population increase during the decade was in Shimla town.

During 1911-21, urban population increased by 7,325 persons. The proportion of urban population also increased marginally from 3.12 per cent in 1911 to 3.46 per cent in 1921, against the national average of 11.20 per cent. The spatial pattern of urbanisation remained the same as in 1911. Dalhousie recorded the highest increase of 52.02 per cent followed by Shimla with 41.68 per cent. Against this, Dharmsala, a cantonment town, registered highest decline of 29.16 per cent attributable to out-movement of troops and their families. The same could be said about the decline in population in the cantonment towns of Sabathu, Dagshai and Bakloh. Nahan and Mandi, capital headquarters of native states of Sirmaur and Mandi, also registered a decline in their population.

During the next decade (1921-31), urban population registered an absolute increase of only 7,134 persons against 78,325 persons in the previous decade leading to a marginal decline in the decennial growth rate to 10.72 per cent from 12.37 per cent during 1911-21 decade. Urban proportion registered only a marginal increase: from 3.46 per cent in 1921 to 3.69 per cent in 1931. On face, seven new/reclassified towns which came up in 1931 included Kasumpti, Jogindernagar, Shamsherpur, Jutogh, Una, Bilaspur and Dalhousie cantonment. However, the population of the cantonment towns of Shamsherpur and Dalhousie was shown with municipal towns of Nahan and Dalhousie, respectively. This reduced the number of new/reclassified towns to five only. Besides, Una, Bilaspur and Kasumpti were actually reclassified towns. And Jutogh, like Shamesherpur and Dalhousie, was separately identified in 1931. In

real sense, Jogindernagar, which grew with implementation of Barot hydel power project, was the only new town added during this decade. Shimla town registered decline in its population for the first time. Exclusion of the population of Kasumpti and Jutogh towns from that of Shimla in 1931 was mainly responsible for the highest decline in Shimla town during this decade. Against this, impressive increase in the population of the municipal towns of Nahan and Dalhousie was due to addition of Shamsheerpur and Dalhousie cantonments in population of the respective towns. The spatial pattern of urbanisation remained almost unaltered during this decade also.

The urbanisation registered further increase during 1931-41 as the decade recorded a growth of 16.90 per cent (rural population growth being 11.33 per cent) against only 10.72 per cent during the previous decade. Three new towns added in 1941 were reclassified towns of Solan, Nalagarh and Rampur. Of them, latter two were capital towns of native states. With this, number of towns in the state again touched 1901 level.

The growth of urban population varied widely. It varied from an increase of 64.35 per cent in Sabathu cantonment town to a decline of 53.89 per cent in Jogindernagar. An increase in former case was related to the induction of troops here and a decrease in latter case with reduction in construction activities at hydel project site. Mandi, Dharmsala, Una, Bilaspur, Dalhousie, Bakloh and Jutogh registered increase that was higher than the state average. Some development of tertiary services resulted in growth of urban population in Chamba, Mandi, Nahan and Bilaspur towns. All were capital towns of the native states (Annex. 1). On the other hand, those registering decline other than Jogindernagar included Dagshai, Kasauli and Sundernagar.

The distributional pattern of towns in 1941 was a continuation of pattern existing before 1931. The addition of reclassified towns did not bring any significant change in it.

The decade 1941-51 was marked by important events on the Indian scene. First half

of this decade was spanned by continuation of the World War II and later half was occupied by events like post-war industrial unrest followed by partition of the sub-continent in 1947. The latter event had a direct bearing on urbanisation in Himachal Pradesh since one-half of the present state of Himachal Pradesh was then a part of the Punjab- partitioned between India and Pakistan. Displaced population from newly born country, Pakistan, was settled in different districts of present Himachal Pradesh. The displaced persons showed a distinct tendency of settling down in urban places. New towns came up and old registered a sharp increase in their population. The net impact of all these developments was a boost to the process of urbanisation in the state.

Urban population registering a sharp increase, nearly doubled during this decade. The share of urban population increased to 6.38 per cent in 1951 from 3.80 per cent in 1941. In absolute terms, it increased to 154 thousand making a decadal increase of 78.7 per cent. This increase is attributed to : (i) reclassification of towns such as Kangra and Nurpur which stood declassified since 1911; (ii) emergence of 10 new towns namely Kullu, Yol, Nagrota, Paonta Sahib, Palampur, Dharampur, Kandaghat, Garkhal, Arki and Theog; and (iii) sharp increase in the population of existing urban centres due to settling of displaced persons. The number of towns went up to 29 from 20 in 1941. In fact, with addition of 12 towns in 1951, the number should have been 32 but for declassification of Bakloh (Chamba district) and Kasumpti (Shimla district) towns and inclusion of Jutogh with Shimla town. With the exception of Yol, a spur town, all new/reclassified towns in 1951 were valley towns.

The reclassification of Kangra town and the emergence of four new towns of Yol, Nagrota, Palampur and Nurpur in Kangra district contributed three-fold increase in urban population in the district. A big army camp, with 13,520 personnel, was set up at Yol. On the other hand, declassification of cantonment towns of Bakloh and Dalhousie along with repatriation of Muslim

population from other towns of the district to Pakistan were responsible for a negative change of 40.3 per cent in urban population of Chamba district.

At town level, urban population in Sundernagar increased by more than 200.0 per cent. Other towns experiencing very high increase include Shimla (151.5 per cent) and Solan (114.9 per cent). Merger of Jutogh with Shimla coupled with the shift of the East Punjab Capital to Shimla from Lahore caused this spurt in the case of Shimla. On the other hand, rapid growth in population of Solan town was attributed to settling of displaced persons along with shift of Panjab University offices to this place. Jogindernagar continued to decline in this decade also. Three former native state capital towns of Mandi, Nalagarh and Rampur also declined under changed situation.

The decade of 1941-51 can rightly be called a landmark in the history of urbanisation in the state. For the first time, decadal increase in urban population in Himachal Pradesh was higher (78.7 per cent) than the national average (41.3 per cent). Moreover, as many as 12 new/reclassified towns emerged and urbanisation entered into the new locations.

Post-Independence Period

This period witnessed a reversal in urbanisation trend in the state: from earlier sluggish growth to fast growth of urban centres. Of the total increase of 372 thousand persons in urban Himachal Pradesh during the present century, 295 thousand or four-fifths took place during 1951-91. Nearly two-fifths of this was added during the latest census decade of 1981-91. As many as 22 out of a total of 58 urban centres in the state emerged during last two decades of 1971-81 and 1981-91. The spatial pattern of urb urbanisation also changed considerably in favour of new locations. Now urban centres are found in ten districts of the state, as against in six districts only during the pre-Independence period.

In the decade of 1951-61, though the proportion of urban population declined marginally to 6.34 per cent in 1961 from 6.38 per cent in 1951 yet the urban population registered an impressive absolute increase of 24,448 persons. This number was nearly three times of total increase (8,767 persons) in urban population during the entire period of four decades (1901-41) of pre-Independence era. Four towns of Dharmapur, Garkhal, Kandaghat and Sanawar were declassified for not satisfying the new definition laid down in 1961 census. However, emergence of 5 new/reclassified towns of Bakloh, Dalhousie, Jutogh, Nainadevi and Narkanda checked the number of towns from falling down.

Locationally, all the five new/reclassified towns of Dalhousie, Bakloh, Jutogh, Nainadevi and Narkanda, emerging in 1961, were hill towns (Annex 1). This raised the number of hill towns to 11 from 6 in 1951. The spatial pattern of urbanisation remained almost the same as in 1951. The impact of post-Independence development programmes on population growth of several towns was quite evident by now. Paonta Sahib, a religious centre, attracted a lot of trade and industrial activities during the decade resulting in rapid growth in its population. Impressive growth of Bilaspur, Mandi and Kullu towns was associated with expansion in administrative activities. On the other hand, decline in Shimla was due to the shift of Punjab's capital headquarters to Chandigarh, the newly constructed capital city.

The momentum of urbanisation further increased in the state during 1961-71 as the decadal increase jumped to 35.7 per cent during this period. As many as seven new towns namely Hamirpur, Santokhgarh, Pandoh, Manali, Ghumarwin, Dhalli and Saharan emerged, taking number of towns in the state to 36. These contributed 19,166 persons or 7.9 per cent of the total urban population in Himachal Pradesh in 1971. The new towns, thus, played a significant role in urban growth during this decade. Of these, Hamirpur and Ghumarwin were tahsil headquarters. Manali, an important tourist centre

located on the left bank of the river Beas, enjoyed direct access to Shimla, Chandigarh and Delhi. Pandoh emerged as a hydel power project township, entering directly in class V category of towns.

Urban growth varied widely at town level. Sundernagar, a project township in Mandi district, registered the highest increase of 268.5 per cent distantly followed by Paonta Sahib with 101.4 per cent and Kullu with 83.3 per cent. Against this, most of the cantonment towns registered decline in population due to outward movement of troops from there.

The spatial disparity in the distribution of urban centres strengthened further during this period. The main concentration of towns was in Kangra valley and southern parts of the state. Three districts of Kangra, Shimla and Solan, in combine, had about one half of all the urban centres in the state. In contrast, Hamirpur, Una, Bilaspur and Kullu districts had few towns and that too small-sized.

One-half of the urban centres in the state were sited in the valleys of the Beas and the Satluj rivers. Earlier in 1941, the number of such towns was more than three-fourths of the total towns in the state. This reveals that over the time more urban centres emerged away from the valleys. Nearly, sixty per cent of urban centres were imparting administrative functions, as administrative headquarters at different levels. A large majority of towns (75.0 per cent) were small towns (having population of less than 20,000 persons) which accommodated 68.3 per cent of total urban population in the state.

The decade of 1971-81 was full of activities in Himachal Pradesh. The state got full statehood in 1971. This induced new zeal and enthusiasm among the masses, bureaucracy and the leadership in the state. They showed their renewed faith in development of the state. Administrative and developmental activities expanded on large scale. New administrative centres emerged with expansion in administrative activities. In absolute terms the increase of 84,000 persons in urban proportion during this decade was practically the

same as total urban population (86 thousand) in the state in 1941. As many as 11 new towns emerged, to take the number of towns in the state to 46. Shimla, the largest town in the state, was still in class II category of towns. Of the remaining 45 towns, 44 were small sized towns, revealing predominance of, small to very small towns in the hierarchy of towns in the state.

Among the new towns, were religious centres such as Jwalamukhi (Kangra district) and newly emerging industrial centres such as Parwanoo (Solan district) and Mehatpur Badsehra (Una district). The location of the airport at Bhuntar, providing air link to Kullu from Delhi, and its adjacent location to Kullu were mainly responsible for its emergence as a town. Some of the new towns were tahsil headquarters such as Rohru, Tira-Sujanpur and Nadaun. Other new towns included Dera Gopipur, Daultpur, Chauri Khas and Gagret. New towns, in combine, added a population of 33,114 persons in urban Himachal Pradesh, representing one-tenth of total urban population in the state in 1981.

The latest decade (1981-91) took urban population in the state to 449 thousand, registering an increase of 37.8 per cent. The proportion of urban population also increased to 8.7 per cent from 7.6 per cent in 1981. Eleven new towns were added, taking number of towns to 58 from 47 in 1981. With exception of Chaupal and Narkanda all the new towns emerged in the valleys. Maximum number (five) of new towns emerged in Shimla district, followed by Mandi district with another two. This further added to spatial concentration of the urbanisation in the state. Nearly three-fifths of urban centres and more than one-half of the urban population in the state was in four districts of Shimla, Solan, Mandi and Sirmaur.

As a significant development, class I town emerged in the state in 1991. Shimla, the state capital town, has achieved this distinction. This shares more than one-fifth of the total urban population in the state. Next in the hierarchy were Mandi and Solan both of them district headquarters of respective districts were

HIMACHAL PRADESH Classification of Towns By Site Attribute

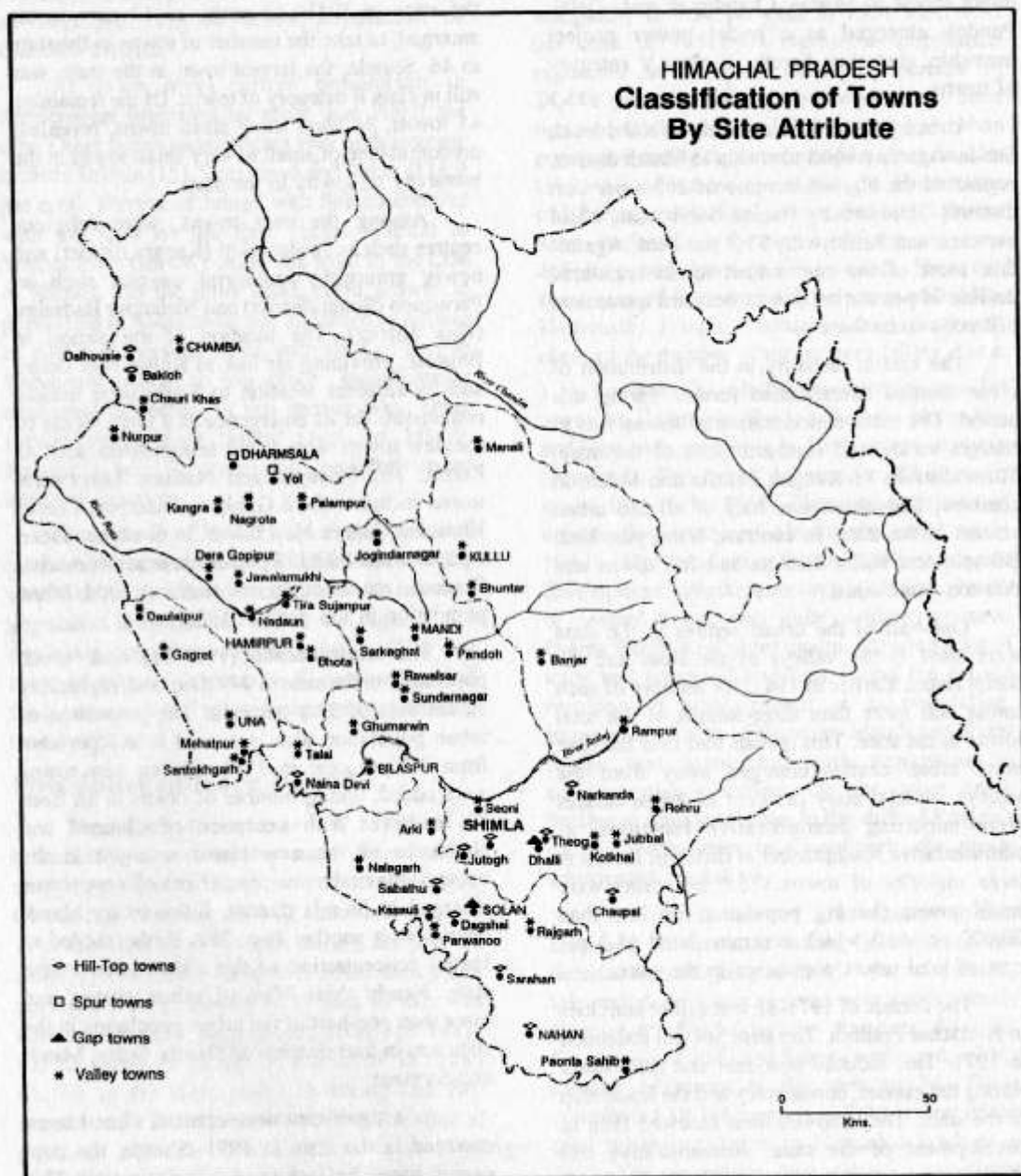


Fig. 1

categorised in class III of towns (having population between 20 to 49.9 thousand). All the new towns were in class VI (having population of less than 5 thousand persons). Only fifteen towns namely, Shimla, Mandi, Nahan, Solan, Sundernagar, Dharmasala, Chamba, Kullu, Paonta Sahib, Hamirpur, Una, Bilaspur, Kangra, Nurpur and Yol had population higher than the average size of population (7,745 persons) for a town in the state. Overwhelming majority of towns were, thus, small in size.

The urban growth in the state has been quite uneven. Degree of urbanisation rose from 3.80 per cent in 1941 to 8.70 per cent in 1991. Interestingly, the upsurge in urban growth in the state was marked with inter-regional disparity in urbanisation. Evidently, table 1 reveals that the spatial disparity index (calculated to know inter-district disparity in urbanisation) rose to 2.98 in 1951 from 1.62 in 1941. The index value declined again to 2.06 in 1961 with a decline in degree of urbanisation in the state. Again, the index value went up to 1.73 per cent in 1981 to 8.70 per cent in 1991. In this way, spurts in urban growth in the state find marked association with intra-state disparities in urbanisation.

At district level, it varied from the highest growth of 56.7 per cent in Shimla to the lowest of only 12.9 per cent in Kangra. Besides Shimla, other districts experiencing urban growth higher than the state average were Chamba, Hamirpur, Bilaspur, Solan and Sirmaur. While Kangra, Una, Mandi and Kullu recorded lower than state average. The districts of Lahul & Spiti and Kinnaur were yet to experience an urban settlement. At town level, Jutogh registered the highest growth of 317.4 per cent. In contrast, Banjar (Kullu district) recorded the highest negative change of 41.9 per cent. Jutogh, making a part of Shimla urban agglomeration (UA), experienced the dispersal of population from Shimla city where the cost of living and shortage of housing was quite high. The state government also, as a policy, encouraged the dispersal of its offices to peripheral areas away from the Shimla (main) city.

In the following, a brief analysis of urban centres in the state as done on the bases of site, evolution and functional character of towns is done.

Site of Towns

Locationally, there exist four types of towns in the state: valley towns; hill/ridge towns; spur towns; and gap towns (Fig. 1). Hill/ridge towns, numbering 13 in the total of 58 towns in the state, came mainly during the British period, as hill resort towns. Valley towns, having indigenous origin and accounting for nearly 70.0 per cent of all towns in the state, are quite old in their origin. Of the remaining 6 towns in the state, two are spur towns and remaining gap towns (Annex 1). In this way, valley followed by the hill top is the most favoured site for locating the towns in the state. Valley towns are nearly ubiquitous in their distribution while hill towns are mainly confined to three districts of Shimla, Solan and Sirmaur. Majority of hill top towns are sited along the Chandigarh-Shimla national highway. In terms of growth, hill towns were growing the fastest (40.52 per cent) against the slowest (12.92 per cent) growth of spur towns. However, there were wide variations in growth behaviour of hill towns at individual level. While Shimla, the state capital and most important among hill top towns, was growing at a very fast rate, Sabathu and Sarahan are the declining towns. In the light of wide variations in the demographic behaviour of towns based on site attributes, consideration of locational aspects of towns becomes quite significant for a meaningful urban development planning in the state.

Origin of Towns

Notwithstanding the long history of urbanisation in the state, a large majority of towns emerged during the post-Independence era. Of the 58 towns in the state 33 came during this period only. Of the remaining, 11 towns came during the British period and another 14 towns during the pre-British period (Fig. 2).

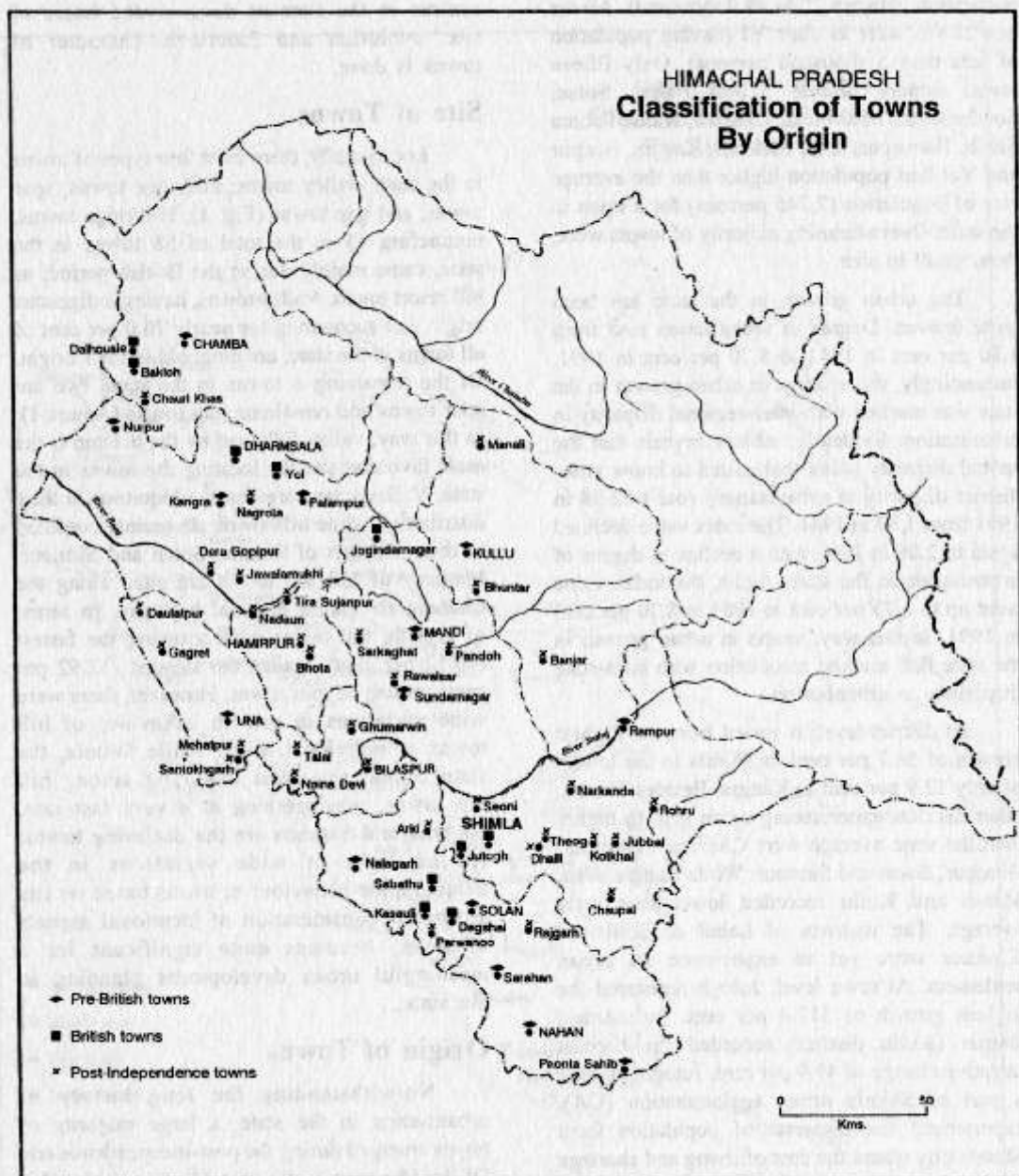


Fig. 2

With few exceptions post-Independence towns emerged in river valleys of Beas, Satluj and Giri. Important exception to this are the towns of Chaupal and Narkanda which are sited on the hill top. Further, in their distribution nearly three-fourth of these towns fall in four districts of Una, Hamirpur, Kullu and Mandi. Their combined growth rate during 1981-91 was over 30.0 per cent. A large majority of these towns were small in size and imparting administrative and trading services to their surrounding areas. With a population of 12,544 persons Hamirpur was the largest town in the group and Narkanda with only 687 persons was the smallest. This gives a ratio of about 1:20 between the population of these towns.

Towns having their origin during the British period are sited mostly on the hill tops. Scenic beauty, cold climate and defence were major considerations for selection of such locations by their founders. Dharmsala, sited on the spur, is a major exception in this group. Further in their spatial distribution these towns were falling in the districts of Shimla, Solan, Kangra and Chamba. No such town was in the districts of Hamirpur and Kullu. Shimla, the state headquarters, is not only the largest urban centre in this group but also the biggest in the Himachal state. The ratio between the population of the largest and the smallest town of the group is of 1:60. In combine, they registered a growth rate of nearly 40.0 per cent during 1981-91.

Fourteen towns of pre-British origin evolved as the capital headquarters of princely states. Though they make one-fourth of the total urban centres in the state, these accommodate more than two-fifths of the total urban population. Further with the exception of Nahan and Solan all other towns in the group are sited on river banks. The former is a hill top town and latter one is a spur town. In the group Mandi is the largest town and Palampur, the smallest. The population of these two towns make a ratio only of about 1:6. They are growing at a slow pace. Their combined growth rate during 1981-91 was about 30.0 per cent against the state average of

about 38.0 per cent. Administration is the dominant function of all the towns of pre-British origin.

In brief, site differential was a marked feature of evolutionary process of the towns in the state. A large majority of pre-British and Post-independence towns are sited in the river valleys while the British towns find their location on hill tops. Considerations of effective administration and water supply formed the major factors in the former case whereas natural scenic beauty and defence guided the location in the latter case. Post-Independence towns, majority of which emerged in response to expansion in administrative services and market needs of the surrounding countryside, are small sized but largest in number in the state.

Functional Character of Towns

More than two-fifths of the towns in the state have administration as the dominant function while in another one-third trade is the dominant function. Thus, overwhelming majority of towns in the state are either administrative or trade centres (Fig. 3). Most of such towns emerged either during the pre-British or in the post-Independence period.

Of the remaining one-fourth towns, one-half have defence as the dominant function. All of them find their origin during the British period. In rest of the seven towns, three each are tourists and religious places and one industrial centre. The lone town having industrial activities as the dominant activity is the town of Parwanoo which is located on Haryana-Himachal border. Originated in post-Independence period as a planned town, it has attracted lot of industries due to easy accessibility and attractive concessions offered by the Himachal government to industrialists.

Mono-functionality is, in fact, the most dominant functional character of towns in the state. In 1991, as many as 30 towns were mono-functional. Another 20 were bi-functional and remaining 8 multi-functional.



Fig. 3

Briefly, the hilly terrain greatly restrict the expansion in industrial base of towns in the state. Under the circumstances, a large majority of urban centres in the state act as administrative or trade centres for the surrounding countryside.

Conclusions:

Hill areas in a developing country like India are characterised by a low degree of urbanisation. It is attributed mainly to their subsistence agricultural economy, meagre industrial base and modest-scale of transport development. In such a situation, rural service centres have to share the obligations of towns. Their identification, planning and development has to be an integral part of any urbanisation policy.

Hill areas have their own context of size hierarchy of towns. Numerically, small towns predominate. There is little fear of emergence of any big urban concentration. Of course, small towns have their own virtue of being manageable units for intensive planning and development.

As regards the distribution of towns in the state, practically all the towns are located in the south-western part of the state. The northern and north-eastern parts are devoid of any urban centre. Within the southern part also, the Shimla hills, the Kangra valley and Jaswan *dun* contain majority of towns. These find their location mainly on Kalka-Shimla, Nangal-Manali and Pathankot-Jogindernagar road/rail routes. A string of towns on the Himachal side of its border with Punjab and Haryana is also taking place.

Three districts of Shimla, Kangra and Mandi, in combine, take away more than a half of the urban population in the state. In contrast, Kinnaur and Lahul & Spiti districts are without any urban centre. Spurt in urban growth and regional disparities in urbanisation find positive association with each other. A conscious policy of urban dispersal has to be followed. Rural-urban linkages are needed to be intensified. Simultaneously the rural service centres are to be provided with the requisite stimulus.

There is only one city of Shimla in the state. It enjoys primacy, having more than four times the population of the next town (Mandi) in the state. Forty-eight out of a total of 58 towns in the state have a population size of less than 10,000 persons each; 34 among these have a population even less than five thousand each. 14 towns are distinctly small, each having a population of less than 2,000 persons. Narkanda, the smallest town in the state, has only 687 persons. The ratio between the smallest and the largest urban centre in the state has increased over the time: 10:1 in 1901 to 149:1 in 1991. Site which stands for the ground on which a settlement is spread over has been of great significance in determining the role and importance of towns in Himachal Pradesh. As many as 39 of total 58 towns in the state are sited along the river valleys, 13 on hill tops, 4 in gaps and remaining 2 on spurs. Virtually all the valley towns are positioned on river terraces. Hill top towns range in elevation from 2000 to 2500 metres. Gap and spur towns are in the altitude range of 600 to 2000 metres.

Most of the towns, originating during the pre-British and post-Independence period, occupy valley sites. Many of the pre-British towns such as Mandi, Chamba, Kullu, Bilaspur and Rampur were the capitals of formerly native states. On the other hand, majority of post-Independence towns such as Gagret, Daulatpur, Talai and Nagrota are market towns.

Urban population of Himachal Pradesh recorded nearly six-fold increase; from 77,332 in 1901 to 449,196 in 1991. This was concomitant with a rise in the number of towns from 20 to 58. The share of urban population in total moved up to 8.70 per cent from 4.03 per cent during this period. By comparison, India's urban population has grown by 8 times: from 26 million in 1901 to 219 million in 1991. Urban proportion has also moved to 25.7 per cent from 10.84 per cent during this period. The pace of urbanisation has, thus, been slow in the state as compared to India as a whole. Indeed, hill towns are not subject to strong rural-urban interactions. Their potential to offer employment is limited.

A large part of increase in the state's urban population is attributed to emergence of new towns. Contribution of net in-migration seems to be less important in urban growth in Himachal Pradesh.

Higher order administrative centres such as district headquarters are growing fast due to considerable in-migration. By contrast, growth of cantonment towns has been slow because of their exceptionally low rate of natural increase.

Population size of towns find some positive association with their size. Valley towns are relatively large, spur towns of medium size and hill top and gap towns small. Shimla is an exception to this. This hill top urban centre has

the privilege of being the state capital and a tourist centre of international repute.

In contrast, size of a town and its growth did not find association with each other. This goes with peculiar physical and socio-economic conditions prevailing in the hill areas.

Acknowledgements:

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Annex 1

Himachal Pradesh : Some Select Characteristics of Towns

Name of town	Site attribute	Period of evolution	Dominant function	Population in 1991	Percentage of households having three facilities of electricity, safe drinking water & toilet
Shimla	Hill Top	British	Administration	102,186	65.82
Mandi	Valley	Pre-British	Administration	23,202	69.00
Nahan	Hill Top	Pre-British	Administration	21,878	81.10
Solan	Gap	Pre-British	Administration	21,771	72.69
Sundarnagar	Valley	Pre-British	Administration	20,397	63.41
Dharmasala	Spur	British	Administration	17,495	52.99
Chamba	Valley	Pre-British	Administration	17,194	72.77
Kullu	Valley	Pre-British	Administration	14,569	44.19
Paonta Sahib	Valley	Pre-British	Administration	13,207	66.01
Hamirpur	Valley	Post-Independence	Administration	12,544	54.44
Una	Valley	Pre-British	Administration	12,001	50.57
Bilaspur	Valley	Pre-British	Administration	10,609	83.40
Yol	Spur	British	Defence	9,310	45.76
Kangra	Valley	Pre-British	Administration	9,010	42.48
Nurpur	Valley	Pre-British	Administration	7,961	45.05
Nalagarh	Valley	Pre-British	Administration	7,448	61.02
Dalhousie M.C.	Hill Top	British	Tourism	6,855	53.40
Santokhgarh	Valley	Post-Independence	Trade	6,848	19.73
Mehatpur	Valley	Post-Independence	Trade	6,417	30.67
Parwanoo	Valley	Post-Independence	Manufacturing	5,856	72.47
Jutogh	Hill Top	British	Defence	5,827	37.61
Tira Sujanpur	Valley	Post-Independence	Trade	5,477	30.05
Jogindernagar	Valley	British	Trade	4,513	50.92
Nagrota	Valley	Post-Independence	Trade	4,503	40.26
Kasauli	Hill Top	British	Defence	4,385	65.37
Rampur	Valley	Pre-British	Administration	4,342	51.40
Garget	Valley	Post-Independence	Trade	4,258	21.28
Jawalamukhi	Valley	Post-Independence	Religion	4,047	45.80
Ghumarwin	Valley	Post-Independence	Trade	3,718	34.86

Contd. on Next Page

Name of town	Site attribute	Period of evolution	Dominant function	Population in 1991	Percentage of households having three facilities of electricity, safe drinking water & toilet
Sabathu	Hill Top	British	Defence	3,700	33.79
Palampur	Valley	Pre-British	Administration	3,638	65.31
Pandoh	Valley	Post-Independence	Trade	3,519	83.86
Nadaun	Valley	Post-Independence	Trade	3,379	34.23
Dera Gopipur	Valley	Post-Independence	Trade	3,378	36.63
Rohru	Valley	Post-Independence	Administration	3,366	22.16
Sarkaghat	Valley	Post-Independence	Administration	3,093	34.51
Bhunter	Valley	Post-Independence	Trade	2,972	43.46
Theog	Hill Top	Post-Independence	Administration	2,757	32.49
Daulatpur	Valley	Post-Independence	Trade	2,748	16.50
Manali	Valley	Post-Independence	Tourism	2,433	38.30
Dhalli	Gap	Post-Independence	Trade	2,347	36.99
Dagshai	Hill Top	British	Defence	2,163	39.36
Chauri Khas	Valley	Post-Independence	Trade	2,107	28.73
Bakloh	Hill Top	British	Defence	1,983	29.25
Arki	Valley	Post-Independence	Administration	1,976	16.58
Rajgarh	Valley	Post-Independence	Administration	1,780	38.57
Dalhousie C.B.	Hill Top	British	Defence	1,741	40.79
Talai	Valley	Post-Independence	Trade	1,550	03.91
Jubbal	Valley	Post-Independence	Trade	1,379	28.86
Bhota	Valley	Post-Independence	Trade	1,286	16.47
Seoni	Valley	Post-Independence	Trade	1,272	31.64
Sarahan	Hill Top	Post-Independence	Administration	1,209	38.44
Chaupal	Hill Top	Post-Independence	Administration	1,074	19.44
Rawalsar	Valley	Post-Independence	Religion	1,045	38.82
Banjar	Valley	Post-Independence	Administration	1,037	31.00
Kotkhai	Valley	Post-Independence	Trade	896	29.35
Naina Devi	Hill Top	Post-Independence	Religion	868	30.61
Narkanda	Hill Top	Post-Independence	Tourism	687	13.81

MAP SERIES : 2

RURAL TRANSFORMATION IN INDIA

GOPAL KRISHAN

Chandigarh, India

Contemporary geography places a high premium on research which covers conceptual themes, such as the world pattern of status of women, regional dimension of socio-economic backwardness in India, and areal differentiation in physical quality of life in Punjab. Studies of this nature invariably involve selection of representative indicators. Indicators are quantitative expression of qualitative concepts. These combine fact with theory.

The present map series tries to capture the spatial picture of rural transformation in India. Three indicators, among several other possible ones, have been used for the purpose. These include : (i) rural households living in *pucca* houses, (ii) rural households having electricity facility, and (iii) rural households using cooking gas as the fuel.

Pucca house, replacing the previous *kutchra* or *semi-pucca* one, is the most conspicuous indicator of rural transformation. Access to electricity facility has several implications for a rural household: it raises its productivity by way of prolonging working hours; it facilitates the use of electricals, such as fans, radio and television; and it extends the home study span for the children. Cooking gas represents mechanisation of the kitchen. Along with the pressure cooker and refrigerator, it is one of three items which have immensely reduced drudgery in the daily life of a housewife.

Three maps, based on districtwise data made available by the Census of India 1991, are being presented. The assumption is that, till recent past, various parts of India had very low or even zero scores in respect of the three indicators listed above. The evolved scenario is visualised as representing the transformation that has taken place over time, especially since Independence. A dynamic picture has been obtained from static data.

As per the 1991 Census of India, only 30.59 per cent of the rural households in the country live in *pucca* houses. This percentage sinks below 10 in the northeastern India and ranges between 10 and 25 in most parts of the eastern and central India. On the other hand, the proportion of such households is relatively large in two types of contrasting areas: (i) which have attained a high level of agricultural development, facilitated by a genial physical base and supported by advanced technology; and (ii) which are subject to harsh climatic conditions but have the benefit of locally available building materials. In the first category are included regions, such as Punjab, Eastern Haryana, Western Uttar Pradesh, Gujarat, Bombay-Kohlapur belt, Goa, Kerala and Coastal districts of Andhra Pradesh. Emigration, alongwith remittances from abroad is also typical of several of these areas. In the second category fall a large part of Rajasthan desert, hilly regions of Himachal Pradesh and Uttarakhand, and interior of the peninsular India.

The percentage of rural households having the facility of electricity is virtually the same as that of those living in *pucca* houses : 30.54. Despite a fair spatial correspondence between the two, there are notable departures too. Most of the northeastern States score low on *pucca* houses but are relatively high on electricity facility; Rajasthan and Uttar Pradesh are comparatively high on *pucca* houses but low on electricity facility. High percentage scores, on this count, are typical not only of those States which are relatively more developed but also of some less developed ones which gave a special priority to hydel power generation, as facilitated by a favourable topography and abundant water supply. Himachal Pradesh is a case in point. State boundaries loom large on the electricity facility map based on districtwise data. This represents the differential attention that State governments

have accorded to the power sector.

Hardly 1.22 per cent of the rural households in India use cooking gas. Over large parts of the central, eastern and northeastern States, this percentage drops below one per cent. Relatively higher scores are observed for the coastal areas, northwestern States, Assam valley, metropolitan regions and the Union Territories. The convenience with which the cooking gas could be carried to different areas and the sequence in which the various places were covered by the Government of India in provision of this facility define the contours of the cooking gas map of rural India.

In nutshell, agricultural development, metropolitan influence and public policy have been the major determinants of rural transformation in India.

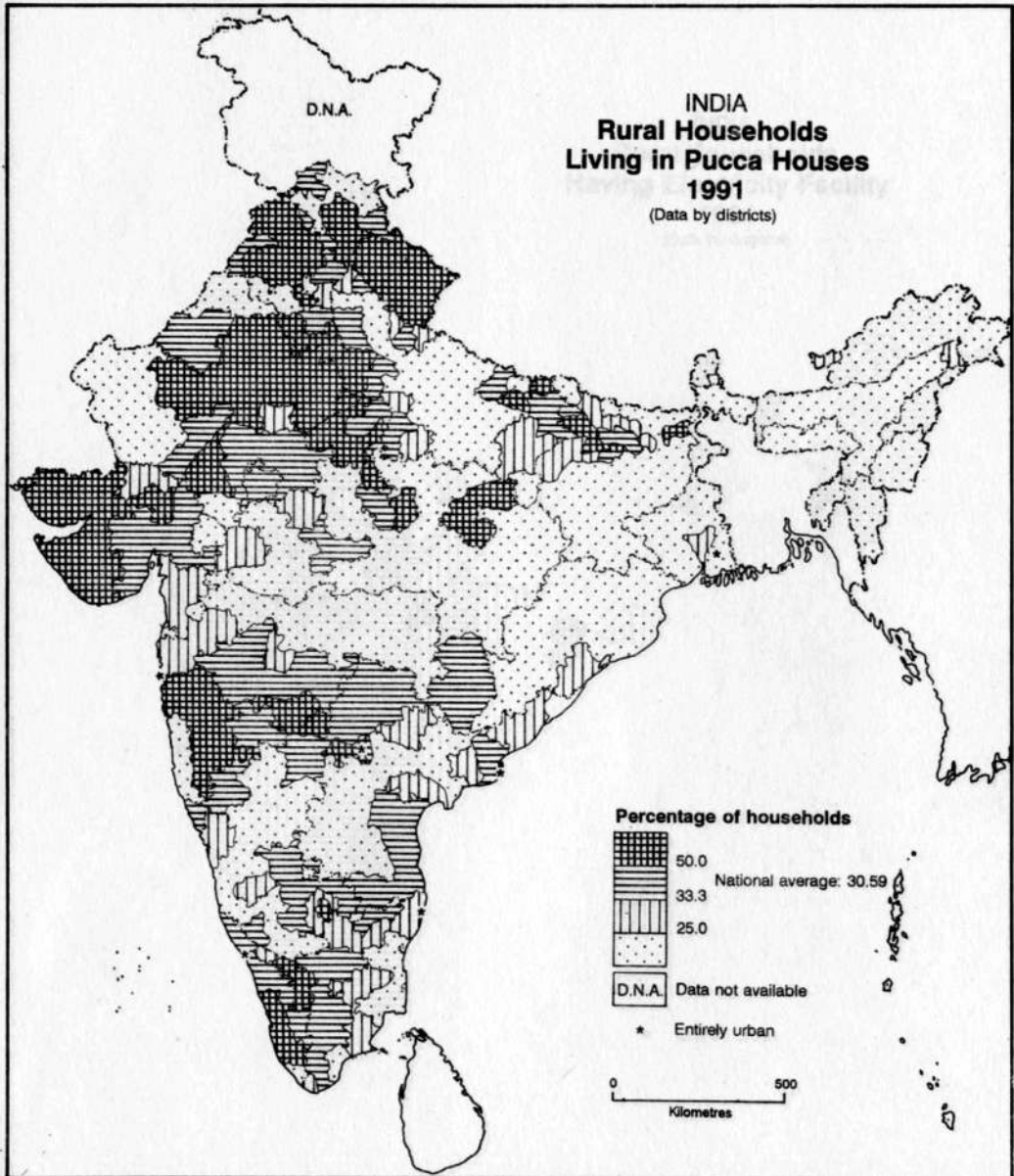


Fig. 1

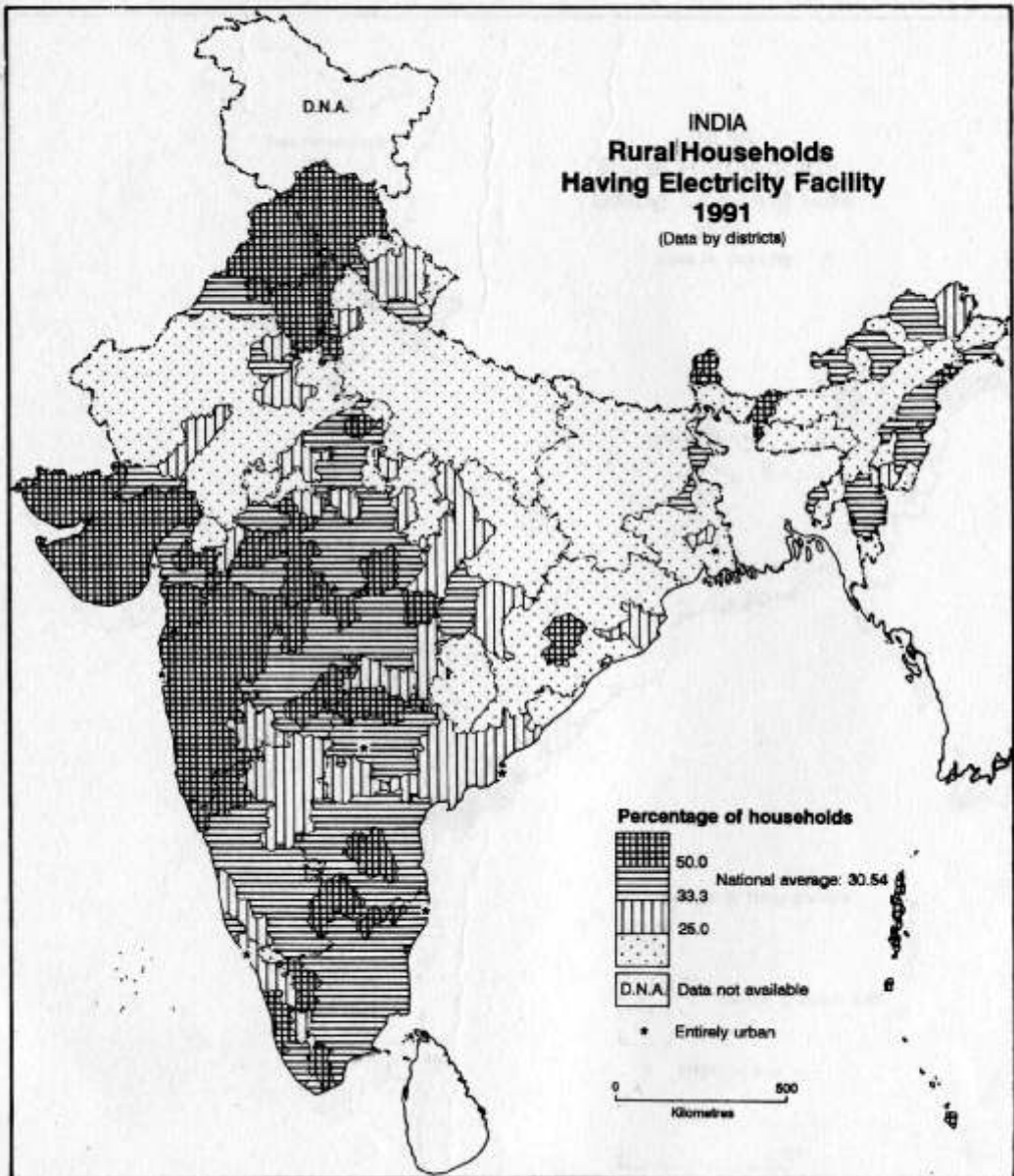


Fig. 2

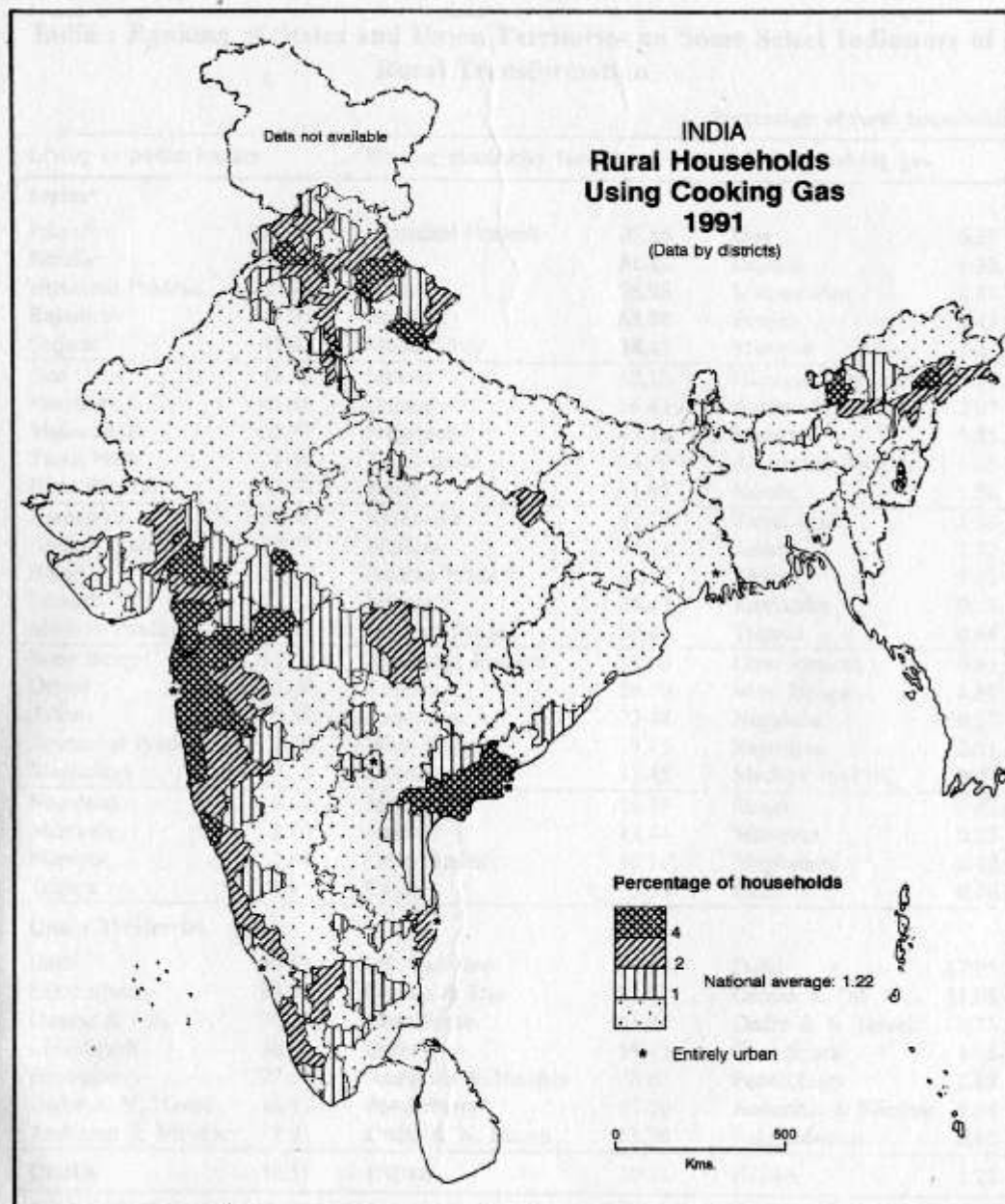


Fig. 3

Table 1

India : Ranking of States and Union Territories on Some Select Indicators of Rural Transformation

Percentage of rural households

Living in pucca houses		Having electricity facility		Using cooking gas	
States*					
Punjab	72.14	Himachal Pradesh	85.86	Goa	16.58
Kerala	51.56	Goa	81.82	Gujarat	3.38
Himachal Pradesh	49.75	Punjab	76.98	Maharashtra	2.87
Rajasthan	47.04	Haryana	63.20	Punjab	2.43
Gujarat	43.42	Maharashtra	58.45	Manipur	2.21
Goa	41.58	Sikkim	57.12	Himachal Pradesh	2.11
Haryana	41.46	Gujarat	56.43	Andhra Pradesh	2.07
Maharashtra	35.37	Nagaland	47.16	Haryana	1.85
Tamil Nadu	34.60	Tamil Nadu	44.49	Arunachal Pradesh	1.65
Uttar Pradesh	32.70	Kerala	41.95	Kerala	1.56
Karnataka	30.45	Karnataka	41.75	Tamil Nadu	1.36
Andhra Pradesh	29.77	Manipur	41.73	Assam	1.32
Bihar	24.07	Andhra Pradesh	37.50	Sikkim	1.16
Sikkim	22.13	Mizoram	35.47	Karnataka	0.73
Madhya Pradesh	20.93	Madhya Pradesh	34.49	Tripura	0.64
West Bengal	15.74	Arunachal Pradesh	33.88	Uttar Pradesh	0.63
Orissa	13.00	Tripura	28.50	West Bengal	0.57
Assam	10.53	Rajasthan	22.44	Nagaland	0.57
Arunachal Pradesh	9.76	West Bengal	17.75	Rajasthan	0.51
Meghalaya	9.33	Orissa	17.45	Madhya Pradesh	0.47
Nagaland	6.62	Meghalaya	16.34	Orissa	0.42
Mizoram	2.86	Assam	12.44	Mizoram	0.27
Manipur	2.64	Uttar Pradesh	10.96	Meghalaya	0.19
Tripura	1.91	Bihar	5.57	Bihar	0.18
Union Territories					
Delhi	86.63	Lakshadweep	97.65	Delhi	17.95
Lakshadweep	83.91	Daman & Diu	92.87	Daman & Diu	11.98
Daman & Diu	70.22	Chandigarh	65.25	Dadra & N. Haveli	5.73
Chandigarh	58.66	Delhi	59.85	Chandigarh	4.68
Pondicherry	27.17	Andaman & Nicobar	53.62	Pondicherry	2.28
Dadra & N. Haveli	16.11	Pondicherry	51.20	Andaman & Nicobar	0.66
Andaman & Nicobar	7.91	Dadra & N. Haveli	51.20	Lakshadweep	0.05
INDIA	30.59	INDIA	30.54	INDIA	1.22

Source : Census of India, 1991 : *Housing and Amenities*, Occasional Paper No. 5 of 1994, pp. 13-15, 67-69, and 227-229.

* Data for Jammu & Kashmir are not available.