Chapter I

Introduction

1.1 Introduction to the topic

Migration is a movement of people from one place to another for different reasons. Migration, like fertility and mortality, holds a place of prominence in geographical analysis of population change in any area (Trewartha 1969: 137). Migration is one of the most dynamic aspects of population studies. It reflects the distribution and movement of population, and the development of natural resources. Thus, migration is an essential component of economic development, social change, and political organization. (Jackson 1969: 282-297). Migration keeps a balance between the distribution of population and the development of natural resources. Transport is helpful for the migration of people from one place to another. Prof. Hawley (1977: 223) has remarked that civilized people are those people who have obtained a high degree of mobility. Migration increases mobility. Migration means change of place for living for a long period. Migration of individual as well as of families plays an important role in changing the pattern of distribution of population with reference to areas and locations.

It has been noted that the population of the world is increasing rapidly. The population of world was 1 million in 1 A. D., it increased to 1.8 billion in 1900 (United Nations 1973: 241) and now it is 6 billion (Statistical Outline of India 2001: 244). In the case of developed countries, the rate of growth of population is very low. Since the death -
rate has stabilized and birth - rate has also come down to such a level that the total population has stabilized in the developed world. Another characteristic of the developed countries is the high level of urbanization. Majority of the people in these countries live in urban places and only a very low proportion of people reside in semi-urban or rural areas. With high level of urbanization and relatively very low percentage of rural population, the urbanization in developed world appears to have nearly reach saturation level. There is a very limited possibility of urban areas further growing rapidly in near future in the developed world. Populations of many urban areas in these countries have nearly stabilized or have even shown declining trends, with little contribution by natural increase and no contribution or even negative contribution by net migration. This has resulted in populations of the cities either remaining constant or showing declining trends, indicating that they are in the terminal stage of the urbanization curve.

In the developing countries, on the other hand, death - rates have largely stabilized, but birth-rates are still relatively high. Therefore, the contribution made by natural increase is still substantial. The populations of cities in the Third World countries are growing rapidly, not so much due to contribution made by natural increase, but more due to contribution made by migration. In these countries, the level of urbanization is still quite low. The proportion is some where between 25 and 40 percent (General Population Tables 1991). Majority of the people in these countries still live in rural areas; and for improvement in the standard of living and for better employment opportunities, they are eager to come to urban areas. Unemployment, underemployment and partial employment are working as 'push' forces from the rural economy, while better wages and varied job
opportunities in the cities are working as 'pull' factors. In near future, therefore, a large number of people in developing countries are likely to move to urban areas and a very small number of people are likely to go back to their villages after retirement. This trend is already set in since World War II. The contribution of migration towards growth of population of cities is going to further increase phenomenally. This means these regions are entering or have entered the acceleration stage of the urbanization curve. Why these people move? How do they get a job? How do they manage to get accommodation? Do they live in-groups? What impact their migration to cities is felt on the villages and their families' back home? These are some of the issues raised and an attempt has been made in this study to provide suitable explanations with reference to Pune, an urban centre in Western India, which has grown very rapidly during the last four decades.

1.2 Population Growth of Indian Cities

In India, according to 1991 Census, only 27 per cent people lived in urban places and 73 per cent people lived in rural areas. The death-rate for India has stabilized around 10 per thousand and the birth-rate has come down to around 32 per thousand (Sawant 1994: 56-81). The contribution made by natural increase is, therefore, still substantial. Major contribution towards growth of population in the large cities, however, is that of migration, which is many times more than that of natural increase. Increasing number of people are moving from the villages to cities in search of employment. In comparison, very few people are going back to their villages after their retirement. The
contribution made by migration, therefore, attains greater significance in the phenomenal growth rate in case of the large cities. For example, if one considers and compares rates of growth during 1981-1991 in the first ten largest cities in India (Table 1.1) it becomes at once evident that with the exception of Kolkata and Bangalore, the remaining eight largest cities had growth rates exceeding 120 per cent. Pune recorded the highest growth rate (148.21 percent) in the decade, 1981-1991.

Table 1.1: Growth Rate and Ranks of the Indian Cities

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of City</th>
<th>Rank</th>
<th>Percent Growth Rate (1981-91)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kolkata</td>
<td>1</td>
<td>88.13</td>
</tr>
<tr>
<td>2</td>
<td>Greater Mumbai</td>
<td>2</td>
<td>120.50</td>
</tr>
<tr>
<td>3</td>
<td>Delhi</td>
<td>3</td>
<td>132.86</td>
</tr>
<tr>
<td>4</td>
<td>Chennai</td>
<td>4</td>
<td>115.54</td>
</tr>
<tr>
<td>5</td>
<td>Bangalore</td>
<td>5</td>
<td>62.67</td>
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<tr>
<td>6</td>
<td>Ahmedabad</td>
<td>6</td>
<td>124.47</td>
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<tr>
<td>7</td>
<td>Hyderabad</td>
<td>7</td>
<td>121.65</td>
</tr>
<tr>
<td>8</td>
<td>Pune</td>
<td>8</td>
<td>148.21</td>
</tr>
<tr>
<td>9</td>
<td>Kanpur</td>
<td>9</td>
<td>147.23</td>
</tr>
<tr>
<td>10</td>
<td>Nagpur</td>
<td>10</td>
<td>127.69</td>
</tr>
</tbody>
</table>


1.3 Introduction to the Study Area

1.3.1 Site and situation of Pune

Pune (18° 31' North latitude and 73° 51' East latitude) is situated on the Deccan plateau almost on its western margin and lies on the leeward side of the Western Ghats. The town is located 30 miles east of the crest line of the Sahyadri (Western Ghats) and 63 miles from the sea. Located on the Mumbai-Chennai main line of the Central Railway, it
Location of Pune on the upland Western Maharashtra.

Fig. No. 1.2
is 119 miles from the city of Mumbai by rail. It has a strategic position in the valleys of Mula and Mutha, which join each other in the city of Pune and flow east and southeast a few kms. east of Pune and form a part of the Bhima basin, which is a part of the larger Krishna basin.

The site of the town occupies the place just where the rivers Mutha and Mula deauch from the hills and occupy the terraces backed by steep escarpments. The urban centre in fact is developed around the confluence of the two rivers (Mutha and Mula). The old town, around which the principal new extensions have come up, is at an altitude of 559 meters above Mean Sea Level, though recently the urban landscape is encroaching upon even the higher areas, on the slopes of the hills. Situated on the right bank of the river Mutha which occupies an asymmetrical valley, the town is backed by steep escarpment in the south and west, while in the north there is a gradual rise of land till it merges with 609.6 Meters surface, the divide between the Indrayani and Mula. The general slope of the area is towards the east. Down the valley to the east, the terraces become wider and more extensive and offer scope for further development. On this site represented by a gently sloping plain and backed by escarpments on the south and west and gentle rising land on the north, the town has adjusted its spatial growth.

The original nucleus on a flat surface, which is an alluvial terrace, in which are found gravels even today, was on the Right Bank of the river. The city has been growing mainly to the other side of the river mostly to seek level surfaces and more because of limitations imposed by the cantonment on the east and the hill escarpment on the South
and West. In the days when there was no regular water supply, location on these terraces was important in view of the availability of ground water, easy transport, low cost of construction and above all, proximity to the river which had many uses. These considerations, in due course, became less important and the town grew right up to the foot of the hills. The residential areas grew in the peripheral zone and the industrial areas occupied the gently sloping plain to the north and the alluvial terraces to the east. The railroads also followed the valleys linking Pune with Mumbai and later with Chennai. In fact, as a rule, the settlements on the plateau, both large and small, with a few exceptions are usually located in the river-valleys, on the terraces above the flood level.

The particular site in case of Pune besides the local advantages had also a strategic significance. Besides being situated on ancient routes passing through Bor Ghat, following the Bhima valley of which Mula-Mutha are the tributaries and the other north - south route crossing the river at a ford which later provided a location well suited for defence requirements. Located at the foot of the mountains, it offered ideal site for guerilla warfare in which advance and retreat were the inseparable features.

1.3.2 The climate of the city

Climate is an important element in the environmental setting of this town located in the tropics at more than 559 meters above Mean Sea Level. The city is located in Western India therefore, experiences monsoon climate. Pune experiences a monsoon climate, with rainy summer and dry winter. The average annual rainfall, recorded in the
city about 720 mm. The rain-shadow of the Sahyadri (Western Ghats) forces a precipitous fall in rainfall to the East, thus developing a longitudinal strip of scanty rainfall in which Pune is located. The rainfall is distributed over 5 months from June to October with a maximum in the second week of July.

The climate of Pune, though tropical in its broad features, is often marked by departures from the normal. Laying within the tropics the city experiences the extreme temperature conditions of the continental interior because of its location on the Deccan plateau. It has two maxima and minima of temperature annually. The relationship between temperature and humidity conditions of the atmosphere shows that the conditions are always suited to human comforts except for two-summer month's i.e. April and May when heat is quite oppressive.

The year at Pune, as anywhere in monsoon India, is customarily divided into three seasons, the cold season from November to February, the hot season from March to May and the rainy season from June to October. In the cold season, dry easterly land winds prevail during most part of the day and cool westerly valley winds in the night. From February onwards, there is a sea breeze in the evening. By about the middle of March, the temperature rises somewhat rapidly and hot breeze with no strong tendency for any direction prevails during daytime. In April and May, the maximum temperature at Pune often rises to about $38^\circ$C and temperature as high as $43^\circ$C - $44^\circ$C have been recorded. During the monsoon season i.e. June to October, although clouded, there is always
strong westerly breeze and it is pleasantly cool, the rain occurs generally in the form of light drizzles. (Sawant 1972: 4 and Deshpande 1992: 5-20).

1.3.3 Historical Background of Pune city

During Rashtrakuta rule Pune was headquarter of 'Vishaya' (that is district for administration) of Pune. The Rashtrakuta were overthrown in 973 A.D. by the Yadava kings of Devgiri, who in turn suffered defeat at the hands of Al-Ud-din Khilaji, the sultan of Delhi.

Pune later developed into a small town ruled by Mohammedans and was known as 'Kasbe Pune'. In 1630 the forces of Adilshah burned it down. The power was transferred from one dynasty to another until it became part of the Maratha kingdom founded by Shivaji. Due to unsettled political situation in Deccan during 17th century Pune was in the hands of Marathas and Moghals alternately and finally came in the possession of Peshwas in 18th century. With the expansion of the Maratha Empire, the Peshwas began to feel the pressing need of a capital from where to conduct the affairs of the State. Peshwa Bajirao I selected Pune as the capital of Maratha Empire (1730 A. D.). As the war was pushed away from the Pune, it enjoyed a peaceful and comparatively prosperous time and began to expand and grow. In 1749, Pune was officially made the capital of the Maratha Empire by the third Peshwa.

The glory of the Marathas, and so also of Pune, was short lived. In 1761, the Marathas sustained a severe defeat at Panipat in North India. Taking advantage of the
confusion at this juncture, the Nizam attacked and overwhelmed Pune in 1763. His forces ransacked the city, burnt and damaged it. The Maratha forces were, however, able to recapture Pune in 1765. This did not bring the necessary order and prosperity. Internal frauds had weakened the Maratha Empire and Pune as the seat of the Government lost the effective control of the rest of the empire. Collection of revenue became a problem, and the flow of resources from different parts stopped. Administrative control weakened and there commenced the sad story of political insecurity, financial exaction and social disturbances. Conditions of insecurity reached a stage where major disorders even in the streets of the capital itself were by no means unusual. The troops of Bajirao II, which were not paid regularly, broke into a revolt and reimbursed their dues by a direct levy from the local people. Between them Bajirao and his ambitious chieftains thus reduced Pune to a place of utter insecurity and desolation. Bajirao chieftain Holkar attacked and defeated the Peshwa at Hadapsar and plundered the city in 1802. Bajirao had to flee for life and joined English and by treaty of Bassein, purchased his safety and position at the cost of his own independence and the freedom of his people. This treaty was practically the end of the independent Maratha Empire. What remained and continued for some more years was the pale shadow of a once mighty power. In 1803, the British reinstalled the Peshwa. In his new role as a protégé of the English, Bajirao really was never settled either in his policy or in his actions. During the next few years, the disintegration of the Maratha power continued apace. Many Maratha ‘Sardars’ made peace with the English and accepted their sovereignty. The Peshwa began to feel the growing burden of the English yoke. His attempts at throwing it away were unsuccessful and on 17th November
1817 the English forces occupied Pune and deprived the Peshwa of whatever power he had. Pune thus came to be governed by the English. (Sawant 1972: 7)

1.3.4 The British Period 1817-1947

Under the British rule, law and order was restored and administration was properly established. Pune became the seasonal capital of the Bombay Presidency. It was made head-quarters of the Pune district as well as the Pune division. To control the region around Pune and the important routes passing through this region, the British established Pune and Kirkee cantonments near Pune. During this period of peace, a number of educational institutions came up, roads were improved and railway lines were laid joining Pune with Bombay (Mumbai), Calcutta (Kolkata) and Madras (Chennai), and the population of Pune rose to over two lakhs (i. e. 200,000).

After Independence, Pune continued to enjoy its status as head - quarters of the Pune division as well as of the Pune district. During this period a University was established in 1949, Pune Municipal Corporation was established in 1950 and a number of Central Government institutions and industries came up around Pune. The dawn of industrialization came over Pune in the second quarter of the 20th century. Many industrial establishments developed and many suburbs grew up around the town and the population rose to over nine lakhs (i. e. 900,000) in 1971 (District Census Handbook 1971).
1.3.5 Economical Development of Pune city

Economical development of Pune city occurred mainly after 1961. By 1960, Government of Maharashtra realized that there were too many industries in Bombay (Mumbai) and efforts were then made towards decentralization of industries. Maharashtra Industrial Development Corporation was established for this purpose. It was decided to establish 52 industrial estates. One of them was established at Bhosari to the north near Pune. At the same time Pune Municipal Corporation established industrial estate at Hadapsar to the east near Pune. Establishment of both these industrial estates attracted industrialists to Pune creating a large number of job opportunities. To take up these jobs, people came to Pune from all over the country.

After 1960, Maharashtra Government decided to put certain restrictions on new industrial units coming up in Bombay. Industrialists were required to look for some alternative. Because of the fact that, Pune is connected with Bombay (Mumbai) port by an electrified, broad gauge, double line railway route, accessibility to Bombay (Mumbai) port was easy. Besides, Pune is also connected with Bombay (Mumbai) by national highway number 4, the busiest highway in the country. Pune enjoys good climate. In the vicinity of Pune there was ample barren land available. Pune is an educational center having a large number of educational institutions of repute, which provided trained manpower. By 1960 Koyna project was completed making ample power available. After 1961 Panshet dam was rebuilt making ample water available. All these improvements helped industrialists to come to Pune. So, Pune Municipal Corporation decided to give concession in octroi. All
these attracted large-scale modern industries to Pune between 1960-1990, to name a few, Tata Electronic and Locomotive Company, Bajaj, Philips, Kirloskar, Garware all came to Pune between 1960 and 1980. To supply these large-scale units with spare parts a large number of small-scale units also came up creating large-scale job opportunities in industrial sector. To take up these jobs a large number of people came from all over the country to Pune.

After Independence, a large number of central government establishments also came to Pune. Just to name a few, National Defense Academy, National Chemical Laboratory, College of Military Engineering, Indian Institute of Tropical Meteorology, Indian Meteorology Department, Central Water and Power Research Station all came to Pune. This further increased the job opportunities. Because of all these, the population of Pune, which was 320,000 in 1941, increased to 2.4 million in 1991. Pune, therefore, was taken as a case study.

1.3.6 Population Growth of Pune

The growth rate of population of Pune urban agglomeration varied from as low as 5.34 per cent for the decade 1901-1911 to as high as 148.21 per cent for the decade 1981-1991.
During the decade 1901-1911 the growth rate of population for the Pune urban agglomeration was as low as 5.34 percent. Due to activities related to the First World War, the growth rate for Pune urban agglomeration increased to 14.84 per cent. As plague epidemic was brought under control, the growth rate of population for Pune urban agglomeration increased to 26 per cent during the decade 1921-31. Due to activities related to the Second World War, which began in 1939, during the decade 1931-41, the growth rate further increased to 29.62 percent. The growth rate of population for Pune urban agglomeration, which consists of two cantonments (Pune and Kirkee), increased to 29.62 per cent. With partition of the country in 1947, a large number of refugees came from Pakistan and were rehabilitated in the vicinity of Pune, at Pimpri, Aundh and Pashan. The population of Pune urban agglomeration, therefore, increased by 86.72 per cent during the decade 1941-51. One more reason contributing towards this increase was the establishment of Pune Municipal Corporation in 1950, which helped the growth of population still further. In first two Five-Year Plans stress was given on the development of agricultural sector and not so much on industrialization. The growth rate of population
for Pune urban agglomeration declined to 30.60 per cent during the decade 1951-61. After Chinese aggression in 1962, stress was given on industrialization. To improve infrastructure facilities, loans were taken from the World Bank and the International Monetary Fund. Steps were taken towards industrialization in general and decentralization of industries in particular. Pune urban agglomeration started experiencing industrialization during the decade 1961-71 and growth rate of population for Pune urban agglomeration increased to 43.53 per cent. This trend continued even during the decade 1971-81 and the growth rate of population for Pune urban agglomeration increased to 48.48 per cent during the decade 1971-81. During the decade 1981-91, a large number of small-scale and large-scale industries came up in and around Pune and Pune urban agglomeration recorded a phenomenal growth rate of population of 148.21 per cent during the decade 1981-91. During the last three decades the character of the city has changed from Pensioners city and educational centre with slow tempo of life to an industrial city with fast tempo of life. This change from a typical Maharashtrian city to a cosmopolitan modern city was primarily due to inmigrants who came from all over the country in search of employment to Pune city during the period 1961-91. This has been noted that development planning at national level was taken up immediately after independence. The first Five-Year Plan was taken during 1952 - 1957 and the Second during 1957-1962.
1.4 Literature Review

Several scholars have studied many aspects of migration.

Among the earlier studies of migration, Ravenstain's laws of migration (1885, 1889) are useful for making broad generalizations on the characteristics of the migration streams.

According to Lee (1966), who has modified and elaborated on Ravenstain's work, migration flows can be combined in a single ratio to derive an index of migration efficiency, whereby the flow in one direction is divided by its counter flow.

Oliver in 1964 used net migration flows between regions, whereas Hart's (1970), study made use of the gross flow. Grandstaff (1975) worked on migration in the Soviet Union using the laws of population migration.

Useful collections of papers on various aspects of migration are found in Jackson (1969), where details about the distinction between semi-permanent and temporary movement is related to the behavioral approach of people. Brown and Neuberger (1977) discuss the comparative perspective of internal migration. Wolpert (1965), on the other hand, has the behavioral concepts in migration analysis. According to him, if migration occurs as a result of the perception by individuals and differences between places in the opportunities offered for fulfilling of wants and needs. Wills (1974) gives a more detailed consideration to migrant and comparison between different places. Zelinsky (1971) discusses the way in which the character of migration flow changes over time. On the question of the relationship between migration and distance, Hagerstrand (1957) highlights the intervening obstacles in migration. Recent discussions on the impact of intervening
obstacles may be found in Cavalli-sfrza (1962); Morill (1963); Olsson (1965) and Taylor (1975). Stouffer's paper (1960), on intervening opportunities is also relevant here, while Courgeau (1970) provides a detailed examination of distance questions in the case of migration within France. Mabogunje (1970) gives the most important example of a general system approach to migration analysis. Methods of migration analysis are referred to in Wood's paper (1979).

Among the studies of migration in Britain, Pattern (1973) gives a useful overview of pre-industrial mobility and Clark (1972) provides more detailed examples about pre-industrial mobility. Redford's book (1926) remains an important examination of population movement in the early nineteenth century, and both Pooly (1977), and Dennis (1977), show the extent and impact of migration in Victorian cities. Saville's volume (1957) is a major discussion of rural - urban movement in Britain. Among the literature on recent migrations Hart (1970), and Peach (1968), may be cited as important works.

Papers on European migration as a whole are contained in Salt and Clout (1976). Bohning (1972) summarizes the importance of labour migration in the continent. Morill's work (1965) on the growth of the urban system in Sweden is an important methodological contribution to migration analysis. Beijer (1963) provides a compendium of material on the movement of rural populations to cities, while Ogden and Winchester (1975) consider in detail patterns of migrant segregation in Paris in 1911. Migrants to Paris are also the subject of a study by Pourcher (1964), who makes use of a massive questionnaire survey. Merlin's book (1971) is unequalled as a study of rural migration in the context of a single country in the case of France. Douglas (1975) considers in detail the relationship between migration, agriculture and community in two villages of the Basque country of Spain. On a
much larger scale, Thomas (1954) studies the relationship between Trans Atlantic migration and economic development on both sides of the Ocean.

Africa has been particularly well studied by population Geographers interested in migration. Hance (1970) provides a useful general overview of migration and urbanization. While detailed national examples are given by Caldwell (1969), and by De Graft-Johnson (1974), for Ghana and by Riddell (1970b), for Sierra Leone. East Africa has been the context for important studies by Masser and Gould (1975), Claeson (1974) and Hirst (1976). The above general review is based on the references from various sources used for the general study of population changes and migration; and many of the references are coated as they were noted in these references.

Among the studies of migration in India, Zacharia and Bougué (1962) provide information about the relationship between urbanization and migration and movement of rural population to city, Haseena (1985), discusses the pattern of seasonal migration of Kashmiri labour. Pednekar and Sita (1991), analyze the pattern of migration and their impact on place of origin and the place of destination. Bhattacharya (1985, 1993) summarizes the importance of labour migration in India. Among the regional studies for different states mention needs to be made of Oberai and Singh (1983), for Punjab, who provide information about reasons for migration and impact of migration on the place of destination. Joshi (1985) has worked on Karnataka; while Reddy (1982), for Sikandarabad, and Sharma and Gupta (1996), for Madhya Pradesh.

According to Oberai and Manmohan Singh (1983), 'push' and 'pull' factors are closely interrelated, because, those who are pushed into migration are simultaneously
pulled by the hope of finding something better elsewhere. Likewise, those who are pulled by urban opportunities are simultaneously pushed by the lack of opportunities in rural area.

Zacharia (1985) dealt with migrants in Bombay. He discusses the net migration, migration flow, pattern of migration, and reasons of migration, impact of migration on the city and the impact of city on the migrants.

Shrivastava’s (1968) study shows that migrants continually sent money to their relatives left behind. These are generally spent on marriages, festivals, to purchase cattle and jewelry, and for extending and improving the residential buildings rather than on agricultural implements and fertilizers.

Zacharia (1968), in “A historical study of internal migration in the Indian subcontinent”, describes the pattern of interstates and intrastate migration in the area on the basis of migration by age and sex for regions, states and to a limited extent for towns with a population of 20,000 or more. He gives some idea about redistribution of population due to migration in India.

Mehta (1996) has examined the question of migration policy in India. She made notable observations that even in the absence of an expressive migration policy per se; migration pattern in India has shown persistence over time. In other words, even without enunciating a clear migration policy, the states can indirectly generate or stabilize or destabilize characteristic flows and patterns of migration.

Nazim and Siddiqui (1996) compared socio-economic characteristics of migrant and non-migrant households in the Kosi Plain area of Bihar. They concluded that migrants primarily come from both the top layer as well as the bottom layer of the ruralities. On the other hand, the middle rung of rural people has much less propensity to migrate. Likewise,
Singh and Sajjid (1997) examined migration of landless labourers from rural areas of Aligarh district. Archana and Mukharji (1997) found that inter-district migration of males in Bihar is mainly directed towards more developed districts, i.e., those with mining and quarrying activity as well as those having urban centers and administrative head quarters.

Meera Kosambi (2000), found that the rural urban migration is more male dominated than urban-urban migration. The male dominance increases with distance both in rural-urban and urban-urban migration. In the case of immigrants to Mumbai two 'pull' factors are important, namely proximity to Bombay city and access to communication routes. The share of the neighboring states has decreased over the last few decades and the share of the distant but poverty and unemployment - stricken states has increased. The chief reason for migration is sex specific, for a woman it is largely a marriage-related phenomenon, while for males it is employment among other reasons.

While discussing commuters' patterns, she stated that Mumbai city, is a centre, that attracts massive commuters flow not only from the suburbs but also from the twin city of Navi Mumbai and even from other large cities in the states of Maharashtra and Gujarat in Western India.

This shows that, many Indian and foreign scholars have done several such studies dealing with a large number of aspects of rural - urban migration.
1.5 Hypotheses

The present study aims at the analysis of migration to Pune urban centre and for providing explanations for identified characteristics of the same. For this purpose the geographical variation in terms of the areas from which the migration takes place has been considered in terms of the distance of the sending region form the receiving urban centre that is Pune. For an appreciation of the nature of 'pull' factors, the economic opportunities available in Pune as the cause of migration were to be examined.

Further for the examination of the impact of migration on the socio-cultural distribution of population within the urban centre the process of cultural enclave formation also had to be examined. Therefore, the following three hypotheses were formulated for the study of these aspects.

1) **Volume of migration decreases with increasing distance.**

2) **The major reason for the migration is economic.**

3) **Socio – economic enclaves are formed by migrants speaking common languages.**

1.6 Methodology

For this study Census data has been taken for volume of migration from different regions to Pune city. It was noted that, the migration tables published by census of India are based on the place of birth statistics collected at the time of census. It was noted that this has lead to exaggeration and erroneous conclusions regarding volume of migration to the city. Therefore, besides the Migration Tables, estimation of inmigration based on
available primary data on vital statistics (number of deaths and births) along with total increase in population was used separately for similar analysis of change in the volume of migration.

To reduce (avoid) the exaggerations in the data regarding volume of migration given in Migration Tables published by Census of India, a method was prepared for estimation of migration data.

In order to study the relationship between distance and volume of migration regression analysis have been used.

In order to study the factors affecting volume of migration, seventeen variables (given in Appendix I) have been consider for correlation matrix and regression analysis.

In the present study various cartographic methods for comparison and presentation of data have been used to show the spatio-temporal variation of different aspects of migration to Pune.

All maps and figures have been designed and drawn by the author. All references are alphabetically arranged and given at the end of the work.

1.6.1 Sample design

For collection of the first hand data, a sample of 1000 households of migrants was according to their participation in different occupational category.

For the analysis of the formation of enclaves of migrants within the city a separate sample of 500 households of migrants has been taken.
1.6.2 Sources of Data

For this work data have been taken from various sources.

For the historical records regarding origin, volume, reasons and period of migration data have been used from Gazetteer of the Bombay presidency (1818), Pune district, and volume number – III. Data have also been taken from Poona - A socio - economic survey (1937) volume II, by Dr. D.R.Gadgil and Poona - A resurvey (1956) by Dr. N. V. Sovani both published by Gokhale Institute of Politics and Economics, Pune. For changes in the volume of migration, data have been used from the Migration Tables published by Census of India for census years of 1961, 1971, 1981 and 1991. To study factors affecting volume of migration, data given in the Migration Tables published by Census of India for the census years 1961, 1971, 1981 and 1991 have been used. Data for this purpose also have been taken from Statistical Abstracts for Maharashtra state for 1961, 1971, 1981 and 1991 published by Directorate of Economics and Statistics, Government of Maharashtra. Similarly data given in the General Population Tables published by Census of India for the years 1961, 1971, 1981 and 1991 have been used. Data for the purpose have also been taken from Economic Tables published by Director of Census Operations for the years 1961, 1971, 1981 and 1991. Data regarding scheduled caste and scheduled tribes population, used in chapter IV has been taken from Special Tables for Scheduled Caste and Scheduled Tribes for the years 1961 and 1991. Data from the District Census Handbook published by the Department of Census Operations for the year 1961, 1971, 1981 and 1991 have been used. Natural Disaster Tables have been used for data regarding frequency of natural disasters.
for the years 1961 and 1991. Data regarding number of industrial establishments and employment have been taken from Industrial and Commercial Directory published by Maharatta Chamber of Commerce. Data regarding composition of migrants for four major cities of Maharashtra have been taken from Migration Tables for Maharashtra for the years 1961 and 1991. Data regarding first five largest migrant groups speaking languages other than Marathi were taken from Migration Tables for the year 1991. To identify first five sending regions Districts Census Handbooks for the year 1991 have been used. To identify first six sending regions migration tables 1991 have been used. Data regarding socio-economic characteristics of migrants in the city of Pune according to their economic categories and formation of enclaves was supplemented by field survey conducted with the help of a questionnaire.

1.7 Chapterwise outline

The work is divided into seven chapters.

The first chapter gives objectives, choice of the region, physical, historical an economic background of the city, literature review, hypotheses, methodology, and sources of data and limitations of the study.

This is followed by a chapter, which deals with phases of population growth of Pune city this is given in four phases' namely 1) Muslim period 2) Maratha period 3) British period and 4) Post Independence. Both, contribution by natural increase and migration have been studied.
The third chapter studies the origin of migrants. It tries to find out the places from where the migrants have come including their number and percentage from districts of Maharashtra to Pune, states of India to Pune and Countries of World to Pune. The reasons for migration and the relationship between distance and volume of migration also have been studies.

Chapter four studies pull - push factors particularly economic, social and natural factors affecting volume of migration from districts of Maharashtra to Pune and from states of India to Pune.

Chapter five dealt with composition of migrant population including, age, sex, literacy, education attainment, marital status and occupation structure for the four cities of Maharashtra.

Chapter six studies characteristics of migrants in the city, which is on the basis of first hand information, for this purpose author has taken 1000 samples of migrants according to occupational categories from the different parts of the city. This chapter deals with migrant’s age, family, educational attainment, marital status, reasons for migration and information about their links with sending regions. Author also studied formation of linguistic enclaves by migrants in Pune, for this purpose a separate sample of 500 migrants from the different pockets of the city has been taken into consideration.

The last chapter gives note on the findings and observations of the present research.