Ever since 2500 BC, Urban places have played an important role in the evolution of India’s political, economic, social and cultural life. Through this long period of 4,500 years the proportion of the country’s total population living in urban areas has fluctuated between five to twenty five percent. These statistics, however, hide the more significant events of the rise and fall of individual cities and systems of cities which made lasting impressions on the country’s cultural and social advancement. The past and present influence of cities, on our life style can not by any standards be considered as a simple and unidimensional process. On the other hand, the emergence, spatial spread, growth and decline of cities, have meant different things at different points in reference to time and space. There are, in fact, not one but several process of urbanisation work at any given point in reference to time and space. All these processes are interdependent and inter-related, yet varies in terms of their underlying causes and the manifestations of their impacts. However the history of urbanisation in India reveals, broadly, four processes of urbanisation at work throughout the historical period i.e.

(a) The emergence of new social relationships among people in cities and between those people living in the villages through a process of social change;

(b) The rise and fall of cities with changes in the political order;

(c) The growth of cities based on new productive processes, which alter the economic base of city; and
(d) The physical spread of cities with the inflow of migrants, who come in search of a means of livelihood as well as to adopt the new way of life.

**URBANISATION AS A SOCIO CULTURAL PROCESS**

Cities are social artifacts and have originated as a result of the emergence of the ruling classes i.e. the people who have controlled and regulated the distribution of goods and services within the society as a whole. The rulers were supported for this task by the literate, the educated upper class people, the militia, and host of servants and occasionally slaves. Thus, the early tribals or folk societies were transformed into present or feudal societies in which the urban foci played a crucial role. Sometimes the change from a tribal society, in which no urban centres were present, to a present or feudal society occurred as a result of invasion by the people representing different ethnic groups. In these situations most of the urban rulers invariably were outsiders, while the rural people represented the original population. As a result the relations between the country and city were characterized by servitude of the rural people to urban dwellers. When outsiders invaded the present and/or feudal society, the existing urban places recorded a considerable social change depending on the diversified role played by the outsiders. The foreigners representing various cultures came as merchants, mercenaries, or as rulers with their vassals. They brought with them their customs, dresses, religion and social values. With these cross-cultural interactions number of new societies
emerged in which the outsiders eventually became indistinguishable from the local population.

In recent times, the mobility of people between and within countries and the flow of information through the mass media, have been contributing towards change in urban as well as rural society. However, in this process the urban place acted as transmitters and interpretators of outside influences. The cities today stand apart from the countryside in terms of the higher degree of its acceptance of outsiders and cross-cultural influence. Over the period of time the cities have become the melting pot of people with diverse ethnic, linguistic and religious backgrounds. Urbanisation as a socio-cultural process not only has helped in transforming the folk, peasant but also the feudal village societies.

**URBANISATION AS A GEOGRAPHICAL PROCESS**

The proportion of a country’s total population living in urban areas has generally been considered as a indicator used for measuring the levels of urbanisation. Since the industrial revolution, which began in the latter half of the 18th century, most of the western countries have experienced rapid urbanisation, in the sense that the proportion of urban population to total population has increased steadily from around 10.0 per cent to nearly 80.0 per cent. In India, the proportion of urban population to total population remained static at about 10.0 per cent over a long period until 1931. Thereafter it increased to 18.0 per cent in
1951 and was around 24.0 per cent in 1981. Since 1951, there has been a remarkable growth of larger cities. Their share in the total urban population has increased from 44.0 per cent in 1951 to 73.83 per cent in 2001. This means that there has been a major shift of population specially to larger cities, while the smaller towns virtually have remained stagnant.

Population growth in urban areas is partly a function of natural increase in population and partly the result of migration from rural areas as well as from the smaller towns. An increase in the level of urbanisation, that is an increase in the proportion of population living in the urban areas, becomes possible only through continued in migration of people from rural to urban areas. Hence, migration or changes in the location of residence of people refers to a basic mechanism of urbanisation. This is essentially a geographical process, in the sense that it involves the movement of people from one place to another.

The spatial movements can occur in many ways, and not all of these may lead to urbanisation. For example, people in India do migrate from one village to another. Such rural to rural migration is recorded any time and in any season. These migrations are substantially explained by the permanent and temporary movement of agricultural labourers from densely populated areas to the areas of increased agricultural activity and/or potential areas. This type of migration does not concern us at all. On the other hand there are three major types of
spatial movements of people relevant to the process of urbanisation. These are (i) the migration of people from rural villages to towns and cities, (ii) the migration of people from smaller towns and cities to larger cities and capitals, and (iii) the spatial overflow or shift of metropolitan population into the villages located on the peripheral urban fringe areas. The first type leads to a general process of urbanisation of macro-urbanisation, while the second leads to metropolization, and the third leads to a process of suburbanisation.

MACRO URBANISATION

The level of urbanisation was remarkably stable in India from the 6th century BC to AD 1900. Throughout this long period the level of urbanisation was never higher than 12.0 per cent, nor was it ever lower than 5.0 per cent of the total population. Since 1900, however, there has been a slow but steady upward trend in the level of urbanisation. By 1981, India’s urban population reached 159 million people. Perhaps the largest in the world, constituted about 24.0 per cent of the total population. The increase in the urban population is substantially high due to migration from rural areas to urban areas. During 1961-71 about 24 million people migrated from rural areas to urban areas in India. Currently, every year about 3 million rural people migrate to the cities, and this flow also shows a steady increase.

The importance of rural-urban migration was exaggerated importance during 1950s and this led to the fear of over-urbanisation.
Over-urbanisation refers to a level of rural-urban migration far in excess of what can be absorbed by the urban areas. It is true that, following the partition of the subcontinent, millions of people from East and West Pakistan flocked to the metropolitan cites of India, particularly Calcutta and Delhi. However, this was a temporary phenomenon and the proportion of urban population in India did not rise to any significant extent between 1951 and 1971.

Rural people in India migrate to cities in small trickles rather than large flow. An important aspect in rural-urban migration is the push factor that is the increasing pressure of population in rural areas and the consequent poverty of the people. However, the proportion of people living below the poverty line is marginally higher in rural, as compared to urban areas. Nevertheless, the rural poor are attracted to the cities, where employment opportunities as perceived by them are greater and region under study is not an exception to this. In fact, the slow growth of modern industry and tertiary activities in Indian cities has been inadequate to provided jobs for all migrants. The result is that the rural poor eventually end up as the urban poor, just a change of status and carries no meaning. The cause of rural-urban migration and also its consequences are still not fully understood.

Not all rural-urban migrants are poor or illiterate. In fact the rural rich also migrate to cities in greater proportion to their numbers than the rural poor. There is a tendency that the better educated and skilled
workers from the rural areas migrates to the city. This drains the rural areas of their human resource and adds to the city’s skilled manpower. Such migrants have been contributing significantly to the urban economy and polity and some of them occupy positions of power and influence. It is not unusual to meet an influential urbanite who boasts of his rural background.

Interestingly, rural-urban migration has generated a parallel rural as well as urban society in the urban areas, in which the Verna and caste system too have perpetuated. The lower castes from rural areas continue to dominate the lower status jobs in the city, while the higher caste tend to obtain higher status jobs. The status of the scheduled caste shows little difference between urban and rural areas.

Both the rich and the poor from rural areas who migrate to the city use family and social links to establish themselves in the urban areas. In the city, people congregate in dwellings, on the basis of family, village and caste relationship. Thus the city instead of contributing to the loosening of family and caste affiliations, often tends to increase these features.

**URBANISATION AS AN ECONOMIC PROCESS**

A classical view of urbanisation characterizes an urban place as an economic parasite thriving on the agricultural surplus produced in its hinterland. This view, which had, perhaps, same value when considering the emergence of ancient cities from a predominantly present society, is no longer tenable in the post industrial revolution period. Today, the city
is a focal point of productive activities. It exists and grows on the strength of the economic activities existing within itself. It does in addition, provide services and goods to its hinterland; and to a large extent, it is the hinterland that is economically dependent on the city. Farmers have to go to the city to obtain new seed varieties, fertilizers, for the purchase of tractors or repair of agricultural equipments. They also move to the city to buy a variety of consumer goods i.e. transistor sets, bicycles watches, clothing, footwear and electrical items. The city offers a wide variety of goods and services and these are sold and provided both within and outside the city. It does not and cannot exist by itself. Its economic relations with its hinterland and other cities of the nation even the world is important to it. It is the level and nature of the economic activity in the city that generates growth and, therefore, further leads to urbanisation. Considering this angle, urbanisation in modern times has essentially become an economic process.

The nature of economic activities in a town or city, in simple terms, relates to production at three levels i.e. Primary, secondary and tertiary. The character of urbanisation mostly depends up on the type of economic production taking place in the city.

**PRIMARY PRODUCTION AND URBANISATION**

Primary production is concerned with agriculture, fishing, forestry and mining activities. It is well known, particularly since AD 1850 that a large number of towns have emerged in India with the expansion of mining activities. The entire coal region extending over
West Bengal, Bihar and Orrisa has a number of mining towns, the chief among which are Jharia, Raniganj, Keonjhar and Asansol. The list of mining towns throughout the world runs into hundreds. They not only include coal mining towns, but also towns specializing mining of iron ore in the country from Rajasthan to Manipur and Tamil Nadu to Kashmir. Today mining is done with the help of advanced technology. On the other hand apart from a large number of unskilled labourers over the period of time the proportion of highly skilled workers engaged in the mining activities has increased significantly.

**Parameters of Urban Growth**

Urban growth connotes a wide and complex phenomenon and is amenable to analyse various diverse angles. It may be studied in terms of variations over a stipulated period of time in a multiplicity or related elements such as the ratio of urban population to the total population, number of urban centres, population size and areal expansion of individual town, quality of urban life, enhancement of rural-urban relationship and various others related aspects. Each of these factors has its own merits and demerits and can not cover all the aspects of urban growth. Moreover, each is a beset with its own specific problems of measurement and availability of suitable statistics.

**Population Size of Town**

This is the most important element and fundamentally signifies the dimensions of urban territory. The availability of population figures
related to individual town for varying periods from the census reports and Municipal records, facilitates their analysis. The usefulness of these data is however substantially impaired due to the changes in the statutory limits of town over the period of time.

**Physical Size**

A positive change in this element encompasses both the horizontal expansion of urban territory as well as the vertical rise of buildings to accommodate the increasing population and expanding activities. As to the horizontal expansion, figures showing the expanding territory of the town invariably includes a greater proportion of vacant open land with wide variations within the municipal limits which not only makes the comparison of towns difficult, but on this basis also impairs the density of population.

**Functional Base**

It signifies the functional and economic base alongwith the total infrastructure of town, while it appears to be a highly significant criterion for the growth of a town. There is, however, not one single concrete measure to represent it. The number of industrial units with employment figures, and other services, commercial and administrative units together are used as indicators. Similarly, the total output of these units or the income generated by them too can be considered. However there is seldom a good record of such data while the labour involved is
also far from being commensurate with the output of such an exercise. Some attempts in this direction have been made, in deciphering the changes in the functional structure of towns during 1961-1971. This factor has been used to identify and underline the significance of dominant and/or stagnant sectors influencing the urban economy.

**Hinterland**

Towns can not afford to be self contained entities and essentially function in the context of their hinterland which makes their *raison detre*. Thus the size of hinter land and the degree of a town’s dominance over it certainly makes a very important element of the status and its functional potency. However, much of these formidable problems are discussed in reference to the functional base of town.

The last three elements of size and status of town therefore are rarely used while studying the growth of towns, and one ultimately falls back on the population size which not only is of primary importance but is mostly considered for this purpose.

As regards the growth in total urbanisation of a region is taken collectively, however the limitations are even more stringent. Thus little can be done beyond pursuing the variation over the period of time in reference to the total urban population, proportion in total population, size-class and structure of town, and the composition of work force forms the economic sector of town.


**Measurement of Urban Growth**

The growth of urban population is an outcome of (i) Natural growth i.e. excess of births over deaths (ii) Reclassification of rural settlements into urban settlements and (iii) Net in-migration (excess of in-migration over outmigration). Normally, the rate of natural growth is supposed to be almost same in both the rural and urban areas as the reproductive change is roughly the same in both cases. Hence there can be very little urbanisation on this account alone. The classification or upgrading of the converted rural settlements, when they grow and fulfill certain stipulated conditions, which may be of a factor in the growth of urban population. In any region where the influence of this factor is not profound and the rate of urbanisation is influenced by the rate of net in-migration into the urban settlement. The magnitude of the net change is expressed in reference to the initial size of population over and above where this net change has occurred.

Urbanisation is the most important feature of human evolution. Though the cities appeared about five thousand years ago (end of the stone age), and were small in size and were surrounded by rural societies and agricultural fields. But in the contemporary period, throughout the world large urban centers have sprung up and urbanisation has become a universal phenomenon, and greater part of population resides in the cities of the developed countries (189, Tripathi, 1999, p.242). At present urbanisation has become an index of development. The countries which
are highly urbanised and are considered as developed countries. With the growing impact of modernisation and changing nature of the human society at present urbanisation is being accepted as a way of life and it has become the essential part of the growth as well as an important index of prosperity alongwith materialistic progress of Indian society. In the post independence period continuous migration of rural population into the urban centres and rapid growth of urban population has become a dominant and universal phenomena, the region under study is not an exception to this.

Trends of Urban Growth

The factor which promoted urban growth in early historical period most of them were of historic significance rather than of economic, while in post independence period it has been governed by the technical and economic factors which have been responsible for industrial revolution and have been positively correlated with the process of urbanisation. This is how urbanisation is the spatial concomitant phenomena initiates the social changes, modernization and also encourages population concentration.

Urbanisation is considered as an indicator of change in occupation, socio-economic values and systems, way of life, degree of socio-economic awakening, level of socio-economic awakening and level of socio-economic interactions. Urbanisation in demographic sense, is an increase in the proportion of the urban population (u) to the total
population (t) over a period of time. As long as urban and total population increases there is urbanisation (189, Tripathi, 1999, p.243). Thus, it is quite evident that not a single but a combined set of socio-economic as well as demographic factors are used for measuring the process of urbanisation in a region.

Creation of a new urban centre, initiates the conversion of villages into town territory as well as migration of people from rural to urban areas are considered as the basic tenets of urbanisation accommodates unemployment and employed persons with lower income. Wide variety of urban facilities like higher education, technical and professional trainings, hospitals, sanitations and growing employment opportunities etc. too have been attracting rural people to adopt urban life style. Thus, the push from rural side and pull from urban side has been responsible for urban growth in addition to the natural growth of existing urban centres.

**Table No. 2.1**

**Jabalpur Region : Growth of Population and Area**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Area</th>
<th>Urban Population</th>
<th>Per cent of urban population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (in Km²)</td>
<td>Total</td>
<td>Per cent Change</td>
</tr>
<tr>
<td>1961</td>
<td>67.09</td>
<td>3,74,462</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>229.67</td>
<td>5,46,657</td>
<td>+242.33</td>
</tr>
<tr>
<td>1981</td>
<td>240.90</td>
<td>7,73,556</td>
<td>+4.88</td>
</tr>
<tr>
<td>1991</td>
<td>242.62</td>
<td>9,10,276</td>
<td>+0.71</td>
</tr>
<tr>
<td>2001</td>
<td>263.52</td>
<td>11,25,113</td>
<td>+2.51</td>
</tr>
<tr>
<td>1961-2001</td>
<td>292.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source**: District Census Handbook : 1961-2001, Jabalpur
It is quite evident from the table no.2.1 that the proportion of urban population to total population has substantially increased during 1961-2001. In 1961, 54.62 per cent of total population of the region was residing in urban centres, which rose to 61.31 per cent in 1971 and 65.44 per cent in 1981. In 1991 the proportion of urban population to total population with a record rise reached the level of 75.16 per cent and with a slight decline in 2001 remained at to 73.83 per cent. It is much higher than the state’s average of 26.0 per cent. In the region, urbanisation has proceeded at faster growth ratio and as a result during last four decades urban centre has experienced an increase of 200.46 per cent in proportion of total population.

It is also evident from the table no.2.1 that not only the urban population but urban area too has recorded an increase in the last four decades. In 1961 the territory of the study region covering an area of 67.09 sq.kms. as urban area rose to 263.52 sq.kms. in 2001. In last four decades the region has recorded an increase of 292.78 per cent in the territory of the urban area.

Similarly a close look of the plate 2.1 clearly explains that in 1971 pace of urban development was confined to the north-west direction and in 1981 the process of development shifted towards the north-east area. While in 1991 expansion of urban development shifted towards eastern direction. Surprisingly in 2001 the process of urban development moved to the southern, south-western and even eastern direction availability of
area colonies have been developed. It becomes clear that in last four decades maximum urban development is being witnessed by the areas of lying in northeastern, northwestern and southern direction as compare to the areas located on eastern and western directions representing older areas of the study region.

**Outgrowth Centres**

Due to the process of centrifugal force the various activities including the residential activities gradually have moved towards the fringe area, and the availability of cheap and sufficient land in these rural areas has become main the pull factor. As a result, those activities which require cheap as well as adequate land assessing the future expansion have preferred to shift their activities on the outer margins of the city and the Jabalpur region is not an exception such changes. Some of the activities includes establishment of industries, transport nodes i.e. station, bus stand, educational institutions and residential colonies etc. as horizontal expansion requires more space. The process of decentralisation towards the outer margins, play a key role in the growth and expansion of towns as well as of the villages. As a result the adjoining areas have emerged as an out growth areas of the urban centres under study.

The development of centrifugal of any town is supported by its situation. The nature of land, transportation and availability of various facilities emerge as the main factors responsible in the development of
its adjoining rural areas. Among various factors availability of open space has become the main factor in the transformation of the emerging out growth areas supporting the expansion of urban areas with adequate space gradually transformed for establishing industrial units, transportation network and/or for residential colonies. Gradually after gauging the problem of space within the urban areas, movement starts to such outgrowing areas after assessing the availability of adequate space on reasonable cost as compared to the escalating cost of land in the core areas of the urban centres.

Emergence of such out growth areas with the transformation of rural space plays an important role in the growth of urban population as well as diversification of activities of urban centres. Such areas are suitably connected with the main urban centres and they cater to the growing needs of the urban centres as well as of the adjoining rural areas in many ways. Similarly the study region too is being supported by 16 outgrowth centres being created in various directions include Manegaon (9174), Suhagi (8371), Maharajpur (6962), Karmeta (6686), Aamkhera (5341), Khairi (3370), Regwa (1263), Pipariya (4483), Jabalpur Cantt. (66482), Khamariya (14557), Ghana (1928), Tighra (697), G.C.F. Jabalpur (15274), Bilpura (11812) and Heavy Vehicle Factory Jabalpur (11956). Expansion of the diversifying commercial and industrial activities of the study region are being suitably supported by above growth centres as well as by the adjoining rural areas.
TRANSFORMATION OF LANDUSE

Urban landuse refers to the spatial distribution of various functions mainly include its residential communities or living areas, industrial, commercial and retail business areas or major work areas, institutional areas and areas for leisure time functions within the territory of the city and/or urban areas.

Land is the basic resource of human society and landuse is the surface utilisation of the developed and available vacant land on a specific point at a given time and space. Landuse is the systematic arrangement of various classes of land placed for diversified uses on the basis of certain similar characteristics, mainly to identify and understand the fundamental uses intelligently and effectively to fulfil the emerging needs of human society and other related activities. Hence land has to be carefully used, so that it may fulfill growing and varied needs, after its proper allocation. Use of land has been changing to meet the varying demands considering the level of the society and the life style of the local people.

Thus land plays an important role in determining man’s economic, social and cultural progress. Considering the growth of population and changing needs of population the use of land also changes. Over the period of time a large proportion of agricultural land has been transformed, to meet the growing needs of non-agricultural activities. Attempts have also been made to ensure the proper utilisation of the
available land within the urban territory. Patterns of land-use in the region has been presented in the table no.2.1.

In 1971, with the share of 49.62 per cent (3029 hectares) of the total developed urban area residential area ranked first. This clearly shows the dominance of the residential activities. However even with the expansion of space its proportion has declined to 42.02 per cent of total developed urban area in 1991 clearly indicates the growing pressure on the available space and the facilities. During this period as compare to the population growth, decline in the developed residential areas, specially the pressure on the available residential space has gradually increased in various localities i.e. Wright-town Napier-town, Civil Lines and Ghantaghar etc. Simultaneously the pressure has also increased on available developed areas i.e. Garha, Amanpur, Baldeobagh, Laxmipura, Madan Mahal and Adhartal areas adjacent to Damoh road and Ranjhi area. In these areas substantial increase in the population density as well as house density too has been recorded.

Transport and roads ranks next to the residential land with 21.3 per cent (1971) and has declined to 20.61 per cent and 15.1 per cent in 1991 and 2001 respectively. This clearly explains the inadequacy of the development of roads and transport facilities in reference to the growth of population causing frequent congestion and traffic jams not only are improperly developed but are poorly maintained. As compare to the increasing number of vehicles, with enhanced frequency the intensity of
the traffic jams and other problems have start causing pollution in certain parts of the urban area has gradually increased. It has also been noticed that most of the residential areas suffer badly, because of unmetalled roads and poor maintenance of roads.

**Table No. 2.2**

**Jabalpur Region : Changing Pattern of Land use**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Residential</td>
<td>49.62</td>
<td>42.02</td>
<td>52.0</td>
<td>+141.8</td>
<td>+153.3</td>
</tr>
<tr>
<td>2</td>
<td>Commercial</td>
<td>2.24</td>
<td>5.91</td>
<td>6.1</td>
<td>+652.9</td>
<td>+554.4</td>
</tr>
<tr>
<td>3</td>
<td>Industrial</td>
<td>8.68</td>
<td>8.17</td>
<td>7.5</td>
<td>+168.8</td>
<td>+109.5</td>
</tr>
<tr>
<td>4</td>
<td>Public &amp; Semi Public</td>
<td>6.87</td>
<td>12.99</td>
<td>11.9</td>
<td>+119.9</td>
<td>+71.4</td>
</tr>
<tr>
<td>5</td>
<td>Transport &amp; Roads</td>
<td>21.29</td>
<td>20.63</td>
<td>15.1</td>
<td>+176.7</td>
<td>+71.6</td>
</tr>
<tr>
<td>6</td>
<td>Recreation &amp; parks etc.</td>
<td>1.28</td>
<td>10.24</td>
<td>7.4</td>
<td>+2171.7</td>
<td>+1284.6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>+185.5</td>
<td>+141.9</td>
</tr>
</tbody>
</table>

**Source:** Town and Country Planning, Jabalpur

* 2001 – Proposed land
* LUR – Land utilization rate in hect/1000 population

On the other hand the proportion of area under commercial activities has recorded a substantial increase i.e. from 2.2 per cent (1971) to 5.9 per cent and 6.1 per cent during 1991 and 2001 respectively. Wide variations in the concentration of the developed commercial centres with in the urban territory have been recorded. Few of important commercial areas i.e. civic centres, shopping area in
Madan Mahal along with the major roads, Naudra bridge, Russel Chowk and other developed complexes in the major commercial zones of the region. To meet the growing demand of commercial activities in various localities sizable portions of the residential houses too have been converted to meet the demand of commercial activities. The continued expansion of commercial areas clearly indicates the growing pressure on the available land and even on residential areas.

Surprisingly the proportion of industrial area too has recorded a slight decline from 8.7 per cent in 1971 to 8.2 per cent in 1991 clearly indicates that the areas could not be developed as per the desired and planned target. As a result gradually the penetration of small-scale industries has increased into the residential areas. As a result the problem of over crowding with increased dirtiness and deteriorating the living environment etc. As a result gradually the environment of the area has start degenerating.

Thus the above discussion clearly explains that considering to 1971 the changes in the pattern of landuse in 1991 were inadequate as compared to the required proportion assessing the population growth and other activities. Because of the unplanned and unsystematic landuse with increasing pressures numerous environmental problems have been witnessed. This together has start creating polluting conditions specially in certain areas with increased pressure of diversified activities and population pressure, even the beginning of
environmental degradation too can be witnessed. Due to the non-availability of adequate developed land, the excessive pressure on the available limited developed land is gradually mounting. Ultimately the urban dwellers are forced to live with minimum or inadequate facilities causing deterioration in the quality of their living conditions and environment.

The changes recorded in urban landuse clearly indicate that during the period of 1971-91 the total area has recorded an increase of 185.5 per cent. While during 1971-2001, the increase was of + 141.86 per cent. During the period of 1971-1991, overall increase in the proportion of the landuse has been recorded. The maximum change was made in the areas of the recreational sector with the development of adequate facilities in the region. Under this category land is being used for playgrounds, public places and parks have been included in this category. After the recreation areas, the areas meant for commercial activities too have recorded an increase of + 652.9 per cent followed by residential, transport & roads, industries, public and semi public land with +141.8, +176.7, +168.8 and 119.9 per cent respectively.

Considering the land utilisation rate in the region commercial areas have recorded the highest change with + 213.30 per cent in 1971-1991 and further rose to + 554.41 per cent in 1971-2001, as compared to the use of land by other categories. The maximum changes in the commercial areas have been noticed, mainly due to the increasing
interest of people towards the self-employment. As a result sizeable area of the residential houses too is being converted into commercial space to meet the need of the growing requirement. With the expansion of markets and other related activities additional areas have been developed in the existing and other developing localities to fulfill the basic and emerging needs of the people as well as of emerging activities. That is why as compared to other uses of land major changes has been recorded in the share of commercial activities.

Problems Related to the Changing Pattern of Landuse

Number of problems have emerged with the growth of rural-urban fringe of the study region. Firstly, the transformation of agricultural land has increased with the expansion of non-agricultural activities and growth of population. As a result continued attempts are made on large scale to convert the agricultural land to be used for residential and/or commercial purposes. Secondly there has been an increase in the proportion of non-agricultural land due to the growing pressure of population and other related activities. Gradually the pressure on the available land has been increasing and causing the decline in the quality of land and as a result it has been badly affected. Thirdly, the gap between the growth of population and availability of adequate facilities in most of the outgrowing localities has increased. Similarly, the recently developed colonies too have suffered and/or suffering from numerous emerging problems with enhanced multiplicity.
Of course as an exception some of the localities might have developed their own water facilities and sewage system. But the area under study as a whole has been suffering from the non-availability of adequate amenities e.g. network of standard roads and means of transport, education, recreational facilities, shopping centre, street lighting, supply of treated water and sewage system. With the non-availability of all these amenities, individuals have attempted to develop their own options or substitute to fulfill their needs. Due to the non-availability of the dependable transport system, people largely are forced to use their own vehicle in performing their various activities. In such a situation the composition of vehicles too has changed and the total number of vehicles in the city too has increased. This has caused and/or causing traffic and air pollution in most of the upcoming areas to generate the additional income and to meet the growing demand for space. Gradually small portions of the residential houses have been converted into the commercial space. As a result the residents have start buying various products from these commercial places, which not only has helped in saving their time but keep them away from polluting conditions of the main markets and that of roads causing health disorders.

Lastly with the growth of the newly developed localities in the adjoining villages, the urban areas of study region has been developed for dual purpose with mixed character. On one hand, some of the slums which are known as urban villages present the rural life style i.e.
residential areas with minimum or without proper civic amenities and most of the residents are often engaged in un-skilled and semi-skilled, caste based and traditional occupations. On the otherhand, residents of the adjoining villages of the urban territory have a higher socio-economic background, due to the adoption of modern life style and are living in houses with better facilities which provide a favourable living environment. Sharp spatial inequalities in the rural-urban fringe of the study region have been noticed.

**Suburbanisation**

The rapid growth of metropolitan cities has also brought about the spatial spread of urban areas. Cities have expended into the adjoining rural areas in a most unplanned and haphazard manner. At places one can see the movement of people from the city to the countryside due to the nonavailability of living space on reasonable cost. As a result the agricultural land of the peripheral villages is gradually but continuously converted into industrial, commercial and residential use. As a result the city folk have started migrating to these newly developed areas, in search of cheaper and better accommodation. These areas often do not have basic urban amenities such as systematic supply of treated drinking water and proper sewage system. However these areas remain outside the ambit of municipal taxes and regulations. Urbanisation of the rural urban fringe areas of metropolitan cities is a recent phenomenon, hardly a couple of
decades old. It is essentially, an outgrowth of metropolization but nevertheless different from it in terms of the nature of migration and other related concomitant problems.

The process of urbanisation in India, relating to the past as well as the present are highly varied and complex. A multiplicity of forces operates simultaneously. Predictions of future urbanisation in India as well as in Madhya Pradesh must highlight the positive aspect as well as the possible pitfalls.

**Central Place Theory**

The distribution of settlements, ranging from farmstead to metropolis though uneven, is not disorderly. Central place theory hypothesises this orderly distributional pattern of settlements (not all types of settlements) and demonstrated its validity with reference to the macro region of Southern Germany in the 1930s. What is often not emphasised is the first requirement, i.e. the very character of the area/region where the theoretical idea becomes the best fit. Such an area/region is poor in natural resource endowment and thinly settled agricultural area which is **most nearly self contained**. Attention to this basic requirement was rightly drawn by Munnich (1974): quoting Neef (1950) when he referred to the area specificity of the theory refers to:

**Thinly and evenly settled areas with a predominantly agricultural population.** Next in importance to region specificity is the central place principles. The fundamental principle of the central place theory is the
Centralistic principle. While settlements vary in size, number and functions, the Centralistic principle is to be sought in the location of economic, social and administrative structures and their visible and not-so-visible forms of expressions. The principle becomes evident in the location of the settlement with reference to its hinterland, and even in the location and form of structures like church or temple, town hall, school, university, the secretariat in a capital city, and market place within a settlement. Thus the centralistic principle has intra and inter-settlement reflecting the regional dimensions. Regional importance versus local importance and ubiquitous versus non-ubiquitous distribution and services determine the importance of centrality. Centrality (C) is the relative importance of a place or the surplus of its regional importance over its local importance (L) a discrete unit, consuming central goods and services: \( C + L = N \) (Nodality). Thus centrality and modality are distinct but related concepts. Though it is difficult to measure centrality in view of the vague and varied notions of central place, centrality and nodality are distinct but related concepts.

Though it is difficult to measure centrality in view of the vague and varied notions of central place, but centrality is basic to the theory. While in the region low level of development and natural resource endowment, geographic centrality, a function of physical proximity acquires significance, in the better developed and better resource endowed regions. It is the more accessible functional centre which
becomes important even with eccentric location. The availability of a surplus goods for the complementary area of the central place and the attractiveness of a place for goods and services are the other common measures of centrality both surplus and attractiveness are not static and hence centrality. Consequently centrality can increase or decrease. However an ideal location is one where the geographic centre and the functional centre coincides. But location becomes more complex where relative location has more than one attribute e.g. contact zone and frontier location.

A settlement could be central within the territory of its catchment area, and yet functions as a satellite to a metropolis. What underlies centrality and the centralistic principles are the reciprocal structural and behavioural relationships between central places and their hinterlands which are discrete spatial units. This constitutes the logic of central place theory. The three principles – the market, transport/traffic and administrative (political/administrative separation) which determine the organisation of the central place systems are valid even today. The chance of simultaneous operation of the three principles is greater in the lower order central places.

The potential value of central place theory got lost mainly because of the emphasis or initial overemphasis on the theories – rigidity in the numbers of central places and hierarchic levels with nesting following the rules of 3, 4 and 7 hexagonal geometry, treating hinterlands of
centrals places as closed areas, the role of physical proximity, and the very concept of homogeneity in population distribution, purchasing power and transportation surface, all in a static framework. Locational analysis drawn into locational planning exercises are rightly stressing that the power of the central place theory lies in its concepts/principles and logic and not in its theorems.

That central place theory relates basically to the spatial distribution and optimum location of the tertiary sector leading to a competitive equilibrium over space, and is not able to deal with the dynamics of regional development and with non-uniform economic landscapes like industrial and mining landscape repeated and reiterated many times. Wholesale trade has also not been drawn explicity into central place theory. This does not exclude attempts to introduce a dynamic elements into central place theory. Likewise, border regions are fragile in Christaller's scheme as complementary regions are cut up by international frontiers. However, the administrative principle has not received due attention in developing countries with their colonial, political and economic legacies. This principle has probably greater relevance in India where the development patterns to a great extent are moulded by the administrative framework. If central place theory is considered equally deficient, since the theory is concerned basically with the location of the individual production unit as a point location to the exclusion of other related activities.
Like Christaller, Losch set himself to the task of explaining why and where town grow. Like Christaller's basic distinction between urban and rural Losch recognized the fundamental contradiction between agriculture as a production-oriented activity dispersed over the space and industry with its production and processing of industrial goods, concentrated in space. Here concentration is the consequence of specialization and large scale production. The locus of the industry is the city with its external economics. In loschain landscape towns are “punctiform agglomerations of non-agricultural locations”. Here production and/or processing units serve much larger areas. In Loschian system the structural distinction between towns as producers of industrial goods and consumers of agricultural commodities and commodities, and consumers of industrial goods is well maintained.

Here is a clue to those who advocates of integrated development. But with greater technological mobility and better transport accessibility, industrial units with their links with higher order centres are getting dispersed into villages. Yet the processing function of the industry distinguishes it form production function from the soil of village. Losch’s economic region/landscape is the market area, which is a part of a market network. Here, spatial structure includes three main types of economic regions – market areas, regional networks and regional systems. Each regional system has a large town as its centre; every large town is not the centre of a regional system. In the landscape so constructed, there
is equilibrium of locations under certain assumptions. Their need not to be hierarchical progression on central places and the associated with cotton growing forms, cotton gins located in cotton producing areas, a network of presses, oil mills, transport points, collection depots and cotton mills.

The regular flow of raw, processed and semi-processed cotton goods link the rural and urban and yet cannot remove the structural distinction between the village, a part of the production area, and the town with its service and processing function. Losch’s postulation of uniform distribution of consuming population with different scales of concentration of industrial activity and employment base at various production centres has been critically commented upon. The Losch model like Christaller’s model, is static and is also based on unrealistic homogeneous surfaces – population, raw materials, transport, consumer tastes and preferences. In spite of criticisms, the chapters on Christaller’s and Losch’s models are not to be completely closed.

The relevance of these models in a revised form, the availability of excess or normal profits to the traders & entrepreneurs, and consumer & producer, travel patterns to proximate or farther but higher order locations are being reinterpreted in the context of changing mobility patterns and transport technology, new forms of business and service organization and policy interventions. The applicability of the central place theoretical framework to intra-city structural analysis of the distribution of the tertiary
sector is being reemphasised. The earlier debate on the hierarchic structure – step like or continuum is being revived.

Housing along with other facilities is the basic requirement of man beyond the air, water and food. Nature and size of the residential accommodation is required for the physical and mental health as well as social well being of a family provision of affordable housing besides providing a shelter, is of considerable importance for the socio-economic upliftment of the urban society along with quality of life for the residents of the urban areas. Housing is one of the key sectors, which apart from giving general protection provides, access to health, education and general sanitation and other welfare services being ensured by the civic bodies.

Housing in the context of city structure, bears strong spatial relationship and provides a appropriate structure of living areas in relation to work centres, production centres and access to various facilities becomes a key to the success of development strategy being planned and implemented for the urban area as has been done for the study region also.

It is evident from table no.2.3 that during the period 1961-2001 number of occupied residential houses and the number of households has recorded an increase of 141.14 per cent and 176.46 per cent respectively. In the year 1961 number of occupied residential houses were 75,429, with an increase of 141.13 per cent in the year 2001
reached to 1,81,886. While in the case of households in the year 1961, which were 79096. And with an increase of 176.46 per cent the number of houses reached to 2,18,673 in the year 2001. This clearly explains that constantly the pressure on the available space is increasing. As a result the pressure on the available residential houses with the increase of households too is in increasing. To meet the growing and expanding needs the available residential houses have been divided to accommodate the households and the quality of living environment has been compromised. In some of the localities considering the cost not only the size of the residential houses has been compromised but the non-availability of adequate open space too has become responsible for various emerging problems.

According to table no. 2.4 it is concluded that during the year 1961 total population of the Jabalpur region was 3,74,462, out of this

Table No. 2.3
Jabalpur Region : Proportion of Occupied Residential Houses and Households 1961-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>No. of Occupied Residential Houses</th>
<th>Per cent Change</th>
<th>No. of Households</th>
<th>Per cent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>75429</td>
<td>-</td>
<td>79096</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>94340</td>
<td>+ 25.07</td>
<td>105302</td>
<td>+ 33.13</td>
</tr>
<tr>
<td>1981</td>
<td>136353</td>
<td>+ 44.53</td>
<td>139433</td>
<td>+ 32.41</td>
</tr>
<tr>
<td>1991</td>
<td>162747</td>
<td>+ 19.35</td>
<td>165189</td>
<td>+ 18.47</td>
</tr>
<tr>
<td>2001</td>
<td>181886</td>
<td>+ 11.75</td>
<td>218673</td>
<td>+ 32.37</td>
</tr>
<tr>
<td>1961-2001</td>
<td>+ 141.13</td>
<td></td>
<td>+ 176.46</td>
<td></td>
</tr>
</tbody>
</table>

male population recorded 2,06,635 while female population was 1,67,827.

Table No. 2.4
Jabalpur Region : Composition of Population
1961-2001

<table>
<thead>
<tr>
<th>Years</th>
<th>Total Population</th>
<th>Per cent Change</th>
<th>Total Male</th>
<th>Per cent Change</th>
<th>Total Female</th>
<th>Per cent Change</th>
<th>Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>374462</td>
<td></td>
<td>206635</td>
<td></td>
<td>167827</td>
<td></td>
<td>812</td>
</tr>
<tr>
<td>1971</td>
<td>546657</td>
<td>+45.98</td>
<td>300622</td>
<td>+45.48</td>
<td>246037</td>
<td>+46.60</td>
<td>818</td>
</tr>
<tr>
<td>1981</td>
<td>773556</td>
<td>+41.50</td>
<td>418080</td>
<td>+39.07</td>
<td>355476</td>
<td>+44.48</td>
<td>850</td>
</tr>
<tr>
<td>1991</td>
<td>910276</td>
<td>+17.67</td>
<td>483501</td>
<td>+15.64</td>
<td>426775</td>
<td>+20.05</td>
<td>882</td>
</tr>
<tr>
<td>2001</td>
<td>1129113</td>
<td>+23.60</td>
<td>596441</td>
<td>+23.35</td>
<td>532672</td>
<td>+24.81</td>
<td>893</td>
</tr>
<tr>
<td>1961-2001</td>
<td>200.46</td>
<td>+188.64</td>
<td></td>
<td></td>
<td></td>
<td>+217.39</td>
<td></td>
</tr>
</tbody>
</table>


Surprisingly in 2001 the region under study recorded an increase of 200.46 per cent in its total population of the region which rose to 11,29,113 and total male population with 5,96,441 recorded an increase of 188.64 per cent, while total female population with 5,32,672 recorded an increase of 217.39 per cent.

**OCCUPATIONAL STRUCTURE**

Occupational structure presents the magnitude of people living in a region and who are engaged in various economic activities to earn their livelihood. Persons who are not engaged in an economic activity are treated as non-workers or dependents. The capacity of a city to provide variety of jobs and absorb its working population in various sectors of economy directly and indirectly indicates the economic ability of the region and the
Jabalpur region is not an exception to this. The participation rate also gives an idea about the share of working population in proportion to the dependent and non-working population residing in the study region.

During 2001 the proportion of main workers known as participation rate in the region was 30.05 per cent. The proportion for the region is slightly higher than the state’s average of 31.7 per cent. It is an indicative of the fact that economic activities are of higher order, more remunerative and enjoys the higher supporting capacity, thereby necessitating less people to work for livelihood in the region. During the period 1961-2001 the participation rate has declined remarkably and clearly explains the economic advancement of the region (Table no.2.5) where gradually the proportion of labour oriented activities are declining.

In last forty years the proportion of agricultural workers has declined tremendously from 36.05 per cent in 1961 to 23.78 per cent in 1981 and again to 18.19 per cent in 2001. This negative trend has been due to the mechanization of agriculture, and gradually the local people have become surplus and have start moving out from villages in search of the employment.

Beside this the proportion of non-agricultural workers out of the main workers has recorded a considerable rise from 63.95 per cent in 1961 to 76.22 per cent in 1981 and 81.81 per cent in 2001. Thus 38.05 per cent of the main workers were added to various sectors of non-agricultural
workers. This clearly indicates the emergence of a good administrative character with a growing and diversified trade and commercial activities, as an out of the increasing pressure of population in urban area.

The economic opportunities offered by a developing city has initiated a series of new activities for the villagers, signalling a point of departure from their traditional occupation. For instance in and around the large cities in our country, villages have entered the market economy not only by selling vegetables and milk products but also by providing labourers to meet the expanding and increasing demand for labourers. The cities have opened up for the villagers a wider range of employment opportunities being offered along with the commercialisation of agriculture and other related activities.

Villages adjoining to the urban areas in the study region include Saliwara, Maharajpur, Nimkhera, Aamanala, Kungwa, Pipariya, Umariya Choubey and Matamer are now well known for their developed and well organized dairy and poultry farming. To meet the growing demand of milk, milk products and eggs, available agricultural land has been transformed and systematically developed to accommodate the dairy and poultry units. This how gradually the proportion of rich agricultural land has start declining. The private dairy and poultry farms though are small in size but their number in constantly increasing as compare to the large scale government dairies and poultry units. Maharajpur, Saliwara and
Nimkhera sample villages are well known for their well developed dairy and poultry related activities.

It has also been noticed that about 70.00 per cent farmers are keeping their own cow and a pair of buffalo. To ensure the supply of milk to their families the farmers too are keeping milch animals and at times the surplus quantity of milk is sold in the city. But with the growing demands in urban areas, the number of milch animals has increased, and other related activities have started on the commercial level and gradually have become the major source of income.