Chapter Three

PROCESS OF URBANIZATION – AN OVERVIEW
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3.1 Introduction

The term ‘urban’ seems to be simple but in reality it connotes a very complex and wider meaning. It is apt to quote two major observations here:

“City is like a mirror and each person, whether he is a historian or geographer, a demographer or a sociologist, an administrator or the town planner, sees in it the image of his own discipline and this leads to conflict of ideas” (Ashish Bose, 1974).

“Urbanization is a balloon into which each social scientist blows his own meaning” (McGee, 1971).

These observations explain that urbanization is a complicated process with multidisciplinary overlap. Enhancing the complexity, the new modes of transportation and communication have rendered the political boundaries of modern cities ineffective. Modern urbanism tends to be much less confined than ever before, becoming more global than was ever possible. Urban planning therefore is not possible unless one understands the process in the proper perspective. The purpose of the present discussion is to bring out the varied dimensions of urbanization because of which it is necessary to study its regional pattern.

3.2 Underlying principles that make urbanization complex

It is possible to identify a few points which are responsible for the complexity of the urban process.
a) Cities are as old as human civilization but global spread of urbanization is a comparatively recent phenomenon

b) There is no universal definition for the term ‘urban’

c) It requires a multidisciplinary approach

d) There exists wide differences in the process of urbanization between Developed and Developing countries

e) There has been a shift in the focus of functions in urban centres

It is apt to elaborate the above points here.

3.2.1 Cities are old but global urbanization is relatively recent

Human civilization and development of urban centres have a very long history. The cultivation of plants enabled man to produce food and to live in permanent settlements. Thus, settlements were established as small units along river valleys and over a period of time they grow in size. Harappa and Mohenjodaro are the two ancient cities that had a well planned layout of angled streets with an efficient drainage system and spacious houses built with baked bricks.

Babylon, Ur, Nineveh etc are some of the other major cities in the past. However these cities rose and fell with empires and do not possess the characteristics of modern cities. They acted mainly as centres of collection, exchange and distribution. A few of them also were centres of administration. For unknown reasons some of them like Ur and Nineveh are totally destroyed while some others like Jerusalem, Rome and Patna survived.

Though cities have been in existence for more than 5000 years, the global spread of urbanization is relatively a century old phenomenon. It should be noted that till 1800 AD only 3% of the world population was classified as urban and even by 1900
only 8% of world population was urban. However during the first half of 20th century rapid urban growth was facilitated by the development of automobile and public transport system, particularly in the Developed countries. The major turning point came only after 1950 when the focus of urban growth shifted from Developed country to Developing country. The shift is so vital that at present more than 95% of urban growth in the world is concentrated in the Developing countries. Thus, the major global spread of urbanization is only a century old phenomenon.

3.2.2 Problems in Definition of ‘Urban’

It is difficult to identify the exact dividing line between ‘rural’ and ‘urban’. In fact, definition for the term urban varies from one country to the other. However, a few parameters are usually considered for defining ‘urban’. They are:

1. Size of population
2. Density of population
3. Occupational structure
4. Type of local government

However some countries take only one or two of the above parameters for defining an urban population. Even here, there are variations. For example, in the case of size of population, the minimum size considered for defining urban varies from 200 in Denmark, 1000 in Canada, 2500 in USA, 5000 in India and 10000 in Greece.

Because of such variations comparative analysis of urban process among the countries becomes difficult. Further, models and planning strategies developed for one country may not be suitable for another country.
3.2.3 Multidisciplinary approach

It may be clear from the quotation of Ashish Bose given at the beginning of this chapter that urban process is studied only from one dimension by different disciplines. A sociologist concentrates only on social dimension while geographers consider spatial dimension. It is apt to quote Lampard’s (1965) approaches to urbanization here. There are 3 types of approaches.

1. Behavioral approach
2. Structural/Economic approach
3. Demographic approach

Behavioral approach

This approach conceives urbanization as an adjustment of personal behavior in the sense that it focuses on the conduct of individuals. Certain patterns of behavior or thought, regardless of social environment and locale, are said to be ‘urban’. Hence the process of urbanization is one experienced by individuals over time. This approach has the special merit of not restricting urbanism to the city’s physical milieu and is one favored by many students of culture and the arts.

Structural/Economic approach

The structural concept ignores the patterned behavior of individual persons and fastens on the patterned activities of whole populations. The process of urbanization is typically said to involve the movement of people out of agricultural communities into other and generally larger non-agricultural communities. The conception gives primary recognition to the differential ordering of occupations or industries within a given territorial space. The structural approach has many applications in the social sciences.
and is the framework for virtually all economic models concerned with development. From the geographical viewpoint, it is this economic basis of urbanization that has been elaborately analyzed.

**Demographic approach**

The demographic approach again focuses on space but it largely ignores individual behavior and the structure of occupations. In its most succinct form it postulates that urbanization is a process of population concentration. Only two variables are recognized: population and space. Hence the connection between urbanization and, say, a certain occupational structure or personality trait is not prejudged. This approach is one commonly adopted by students of population and human ecology.

3.2.4 **There exists wide differences in the process of urbanization between Developed and Developing countries**

After 1950 the process of urbanization mainly shifted from Developed to Developing countries. The available technology and the resource generation vary between Developed and Developing countries. In fact, it is possible to elaborate this dimension taking three crucial aspects. They are:

1. World political situation
2. Forces of urbanization
3. Population resource ratio

1. **World Political Situation**

When Developed countries experienced initial phase of urbanization, there were no international collaboration or agencies. Because of this each country had to tackle
the problem of urban growth only by itself without any external assistance. However, in the case of some colonial powers, resources were available.

In contrast, after 1950, there has been an unprecedented international cooperation, mainly due to world wars. Organizations such as United Nations were established. Through a number of programmes such organizations help the Developing countries to overcome their various problems that include urban growth also. Example for such assistance includes funding for urban transport and water supply in bigger metropolitan cities. In a way, this helps a faster urban growth in Developing countries compared to the initial pace of urban growth in the Developed countries.

2. **Forces of Urbanization**

It is also possible to identify differences in the forces of urbanization between Developed and Developing countries. 3 major points may be elaborated (Parthasarathy, 1985). They are:

a) Role of central planning

b) Market forces versus Exogenous forces

c) Technology and communication facilities

When Developed countries experienced initial phase of their urban growth, there was literally no planning and haphazard urban growth resulted. However, in the case of Developing countries central planning is playing a crucial and dominant role regulating urban growth. Formulation of Town and Country planning Act is a case in point.

There exists yet another difference in terms of the economic forces that help urban growth. In the case of developed countries city growth was due to ‘market forces’. Urbanization process was relatively slow in nature at that time. Economic development started with diversification of economic activities leading to division of
labour. This resulted in the development of economic institutions which helped a higher per capita income. This in turn resulted in the creation of some social institutions such as the emergence of middle class. All these evolved gradually and strengthened the economic base of the city. Thus market forces helped urban growth in the Developed countries.

In contrast cities in the Developing countries were influenced more by ‘Exogenous forces’. Colonial powers were responsible for establishment as well as destruction of cities. In the case of India some cities like Mumbai, Kolkatta and Chennai developed due to colonial influence. In some countries the influence is so much that a single city dominates the urban pattern. Such a condition is called ‘primate pattern’. Thus the largest cities grew mainly as a link between colony and mother country. However this basic function collapsed after 1950 when most of the colonial nations became independent. At present, the growth of these cities is primarily due to rural urban migration even though the economic base of the city is weak or poor.

When cities grew in the Developed countries only 19th century technology and communications were available to them in the initial phase of growth. Transport development was also very limited. In contrast cities in Developing countries have a wide array of communication, technology and transport facilities which can help a faster growth rate than their counterpart in the Developed countries.

3. Population resource ratio

In the case of Developed countries in the beginning population resource ratio was very low. But colonization helped these countries to have more area and resources. When there was population growth in the Developed countries the surplus population could be sent to colonies and the new world countries.
In the case of Developing countries already the base population is large. Further
natural increase is also higher. Such surplus population cannot be sent to any other
place. Since rural areas cannot support increased population, rural to urban migration is
more important and urban growth is inevitable. Such a situation was not there in
Developed countries.

3.2.5 There has been a shift in the focus of functions in urban centres

The basic difference between an urban and a rural settlement lies in its service
or function. A rural settlement performs functions or services mainly related to
agriculture and other related primary economic activities. On the other hand, an urban
centre is noted mainly for its non-primary economic functions. Such functions have not
only helped to establish an urban centre but also decided its pace of growth. However,
such non-primary functions have been continuously changing over a period of time.

Ancient cities acted mainly as centres of collection, exchange and distribution
of various goods including agricultural produce. Trade was thus the basic function then.
As this urban centre was different from other settlements and consisted of the palace of
king or chief, administrative function was also significant.

In medieval period kingdom, palace, defense and administration are important
factors for urban growth. Religion was a more powerful contributor for urban growth
during that period particularly Church. Instability of religion, conflict and war were the
main reasons for limited urban growth in this period. Thus defence and religious
function became dominant in addition to trade and administration in medieval cities. In
fact the entire urban planning of a medieval city evolved around palace.
During 15\textsuperscript{th} and 16\textsuperscript{th} centuries voyages and discoveries of new land resulted in the establishment of a number of colonial settlements, particularly along the coast. War with native population made defence a more significant function during this period.

After industrial revolution, the location of heavy industry played a vital role for a city. Since industry depended upon raw material, many cities were established and grew nearer to coal, iron ore and other mineral areas. Manufacturing replaced other functions and any urban centre was notable only by its secondary economic activity.

After 1950s, development of transport, technology and communication made the world to shrink and become a global village. Thus Tertiary or Service activities started gaining greater emphasis than secondary economic activities.

Thus modern cities in most of the Developing countries have a mixture of all the above functions and the relative significance of service activities varies from one city to the other. Hence in the present study also functional characteristics have been considered as a point of discussion.

The account given so far has brought to light the various nuances of the process of urbanization. It also validates the observation that any effective urban planning strategy must consider the regional characteristics of urban process. Hence it becomes essential to study the regional characteristics of urban process in the study area, namely Theni District.

3.3 Urbanization in Theni

The regional characteristics of urban process of an area may be analysed by taking two different dimensions. The first one is the level of urbanization which is nothing but the share of total urban population of an area to its total population. It is usually given as percentage share.
The second dimension indicates the distribution of urban population in different classes of urban centres. As per census of India, there are 6 classes of towns.

1. Class I : Above 100000
2. Class II : 50000 - 99999
3. Class II : 20000 - 49999
4. Class IV : 10000 - 19999
5. Class V : 5000 - 9999
6. Class VI : Below 5000

Class I is called ‘city’ while other classes are called towns. In general Class II and Class III are combined and known as Medium towns while Class IV, V and VI are combined together and known as Small towns.

In 2001 Class I city is further subdivided as M1 – M7, with details given below.

1. M1 : Below 2000000
2. M2 : 2000000 - 3000000
3. M3 : 3000000 - 5000000
4. M4 : 5000000 - 1 Million
5. M5 : 1 Million - 2 Million
6. M6 : 2 Million - 5 Million
7. M7 : Above 5 Million

The entire urban population is concentrated in these different classes of urban centres. Hence the second dimension analyses the class wise distribution of urban population in an area.
3.3.1 Level of urbanization

The district came into existence in 1997 by carving out some of the western taluks of the then Madurai District. Dominated by the Kambam valley and drained by the Suruli, Mullai Ar and Vaigai, the District was predominantly agricultural. It may be noted that even in 2011, nearly 59% of the total main workers engaged themselves only in primary activities. Because of this the district did not have any Class I city so far. However in the overall level of urbanization, Theni District was ranking comparatively higher among the various Districts of Tamil Nadu.

In 2001, about 44% of the total population in Tamil Nadu State was classified as urban. Out of 32 Districts, Chennai is completely urban. 18 of the rest of the 31 districts had a lower level of urbanization than the State. Of the 13 districts which had a higher urbanization level, Theni ranked 6th (54.1%) proceeded only by Coimbatore, Kanyakumari, Nilgiris, Madurai and Tiruvallur Districts (Table 3.1).

In 2011, there was a slight decline in the level of urbanization in Theni District (53.8%). The average for the State as a whole however increased and was at 48.5%. Theni slipped from 6th rank to 8th rank in the overall level of urbanization. This is mainly because of increased urban growth in Kancheepuram and Tiruppur Districts. Influence of Chennai Corporation helped Kancheepuram to have a faster urban growth. Similarly creation of new Tiruppur District and the export potential helped Tiruppur to have a faster urban growth (Table 3.1).

Even though there was a marginal decline in the level of urbanization in Theni District between 2001 and 2011, it may be noted that there are variations at the block level. Hence it is apt to explain the block level urbanization in the study area here.
### Table 3.1

**Percentage share of urban population in Tamil Nadu State**

<table>
<thead>
<tr>
<th>S.No</th>
<th>States</th>
<th>2001 (%)</th>
<th>2011(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ariyalur</td>
<td>11.4</td>
<td>11.1</td>
</tr>
<tr>
<td>2</td>
<td>Chennai</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Coimbatore</td>
<td>70.7</td>
<td>75.8</td>
</tr>
<tr>
<td>4</td>
<td>Cuddalore</td>
<td>33.0</td>
<td>33.9</td>
</tr>
<tr>
<td>5</td>
<td>Dharmapuri</td>
<td>15.0</td>
<td>17.3</td>
</tr>
<tr>
<td>6</td>
<td>Dindigul</td>
<td>35.0</td>
<td>37.4</td>
</tr>
<tr>
<td>7</td>
<td>Erode</td>
<td>49.0</td>
<td>51.2</td>
</tr>
<tr>
<td>8</td>
<td>Kancheepuram</td>
<td>53.3</td>
<td>63.6</td>
</tr>
<tr>
<td>9</td>
<td>Kanyakumari</td>
<td>65.3</td>
<td>82.5</td>
</tr>
<tr>
<td>10</td>
<td>Karur</td>
<td>33.3</td>
<td>40.3</td>
</tr>
<tr>
<td>11</td>
<td>Krishnagiri</td>
<td>16.7</td>
<td>22.8</td>
</tr>
<tr>
<td>12</td>
<td>Madurai</td>
<td>56.0</td>
<td>60.6</td>
</tr>
<tr>
<td>13</td>
<td>Nagapattinam</td>
<td>22.2</td>
<td>22.5</td>
</tr>
<tr>
<td>14</td>
<td>Namakkal</td>
<td>36.5</td>
<td>40.3</td>
</tr>
<tr>
<td>15</td>
<td>Nilgiris</td>
<td>59.7</td>
<td>59.3</td>
</tr>
<tr>
<td>16</td>
<td>Perambalur</td>
<td>16.1</td>
<td>17.1</td>
</tr>
<tr>
<td>17</td>
<td>Pudukkottai</td>
<td>17.0</td>
<td>19.4</td>
</tr>
<tr>
<td>18</td>
<td>Ramanathapuram</td>
<td>25.5</td>
<td>31.9</td>
</tr>
<tr>
<td>19</td>
<td>Salem</td>
<td>46.1</td>
<td>51.0</td>
</tr>
<tr>
<td>20</td>
<td>Sivaganga</td>
<td>28.2</td>
<td>31.0</td>
</tr>
<tr>
<td>21</td>
<td>Thanjavur</td>
<td>33.8</td>
<td>35.4</td>
</tr>
<tr>
<td>22</td>
<td>Theni</td>
<td>54.1</td>
<td>53.8</td>
</tr>
<tr>
<td>23</td>
<td>Tirunelveli</td>
<td>48.4</td>
<td>49.5</td>
</tr>
<tr>
<td>24</td>
<td>Tirupur</td>
<td>50.2</td>
<td>61.5</td>
</tr>
<tr>
<td>25</td>
<td>Tiruvallur</td>
<td>54.5</td>
<td>65.3</td>
</tr>
<tr>
<td>26</td>
<td>Tiruvannamalai</td>
<td>18.3</td>
<td>20.1</td>
</tr>
<tr>
<td>27</td>
<td>Tiruvurur</td>
<td>20.3</td>
<td>20.4</td>
</tr>
<tr>
<td>28</td>
<td>Trichy</td>
<td>47.1</td>
<td>49.3</td>
</tr>
<tr>
<td>29</td>
<td>Tuticorin</td>
<td>41.7</td>
<td>50.2</td>
</tr>
<tr>
<td>30</td>
<td>Vellore</td>
<td>37.6</td>
<td>43.1</td>
</tr>
<tr>
<td>31</td>
<td>Villupuram</td>
<td>14.4</td>
<td>14.7</td>
</tr>
<tr>
<td>32</td>
<td>Virudhunagar</td>
<td>44.4</td>
<td>50.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>44.0</strong></td>
<td><strong>48.5</strong></td>
</tr>
</tbody>
</table>

*Source: Census of India, 2001 and 2011*

Theni has 8 blocks. Of them K. Myladumparai has no urban population till date and is 100% rural. Among the other blocks, the level of urbanization varies (Table 3.2).

Before bifurcation from Madurai District, Theni had a comparatively lower level of urbanization. Only 32.9% was classified as urban in 1991 compared to 44.7%
for the composite Madurai district as a whole. Among the blocks, Kambam had the highest level of urbanization (57.9%) followed by Theni (44.6%) and Bodinayakanur (42.7%). Only 16.8% the total population of Andipatti was urban (Fig. 3.1).

Table 3.2

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Block Name</th>
<th>1991 (%)</th>
<th>2001 (%)</th>
<th>2011 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bodinayakanur</td>
<td>42.7</td>
<td>60.8</td>
<td>60.9</td>
</tr>
<tr>
<td>2</td>
<td>Periyakulam</td>
<td>24.8</td>
<td>53.5</td>
<td>52.7</td>
</tr>
<tr>
<td>3</td>
<td>Theni</td>
<td>44.6</td>
<td>64.1</td>
<td>62.8</td>
</tr>
<tr>
<td>4</td>
<td>Uthamapalayam</td>
<td>20.4</td>
<td>53.3</td>
<td>54.6</td>
</tr>
<tr>
<td>5</td>
<td>Chinnamanur</td>
<td>32.8</td>
<td>56.1</td>
<td>55.1</td>
</tr>
<tr>
<td>6</td>
<td>Kambam</td>
<td>57.9</td>
<td>85.7</td>
<td>85.0</td>
</tr>
<tr>
<td>7</td>
<td>Andipatti</td>
<td>16.8</td>
<td>19.4</td>
<td>19.7</td>
</tr>
<tr>
<td>8</td>
<td>K. Myladumparai</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><strong>Total Average</strong></td>
<td><strong>32.9</strong></td>
<td><strong>54.1</strong></td>
<td><strong>53.8</strong></td>
</tr>
</tbody>
</table>


After the creation of new Theni District, there was an accelerated pace of urban growth in 2001 in all blocks except Andipatti and K. Myladumparai. Though the District average was only 54.1%, Kambam block had a very high level of urbanization (85.7%). Similarly the location of District Headquarters at Theni helped that block to increase its urbanization level from 44.6% in 1991 to 64.1% in 2001.

Another main reason for increased urban population is the inclusion all Town Panchayats as urban centres as per the Definition of urban area in Census 2001.
Uthamapalayam and Periyakulam blocks experienced more than two fold increase while Chinnamanur experienced slightly lesser increase (Table 3.2). Bodinayakanur had nearly 50% increase in its level of urbanization.

Andipatti is the only block which showed very little variation. Most of it is comparatively dry and the southeastern part is hilly. Andipatti-Jakkampatti is the only Class III town in this block indicating a low level of urbanization.

Between 2001 and 2011 there was a marginal decline is the level of urbanization for the District as a whole and this is reflected in all the blocks except Uthamapalayam and Andipatti (Table 3.2). Even here the increase is only very marginal of around 1% (Fig. 3.1).

### 3.3.2 Class wise distribution of urban population

**Class I Cities**

In 2011, there were 31 Class I cities in Tamil Nadu. However Theni has no Class I city. In fact there are many Districts in Tamil Nadu where there is no Class I city. Out of 31 districts (except Chennai) 10 do not have any Class I city. They are: Ariyalur, Perambalur, Viluppuram, Namakkal, Nilgiris, Karur, Theni, Thiruvarur, Ramanathapuram and Dharmapuri. Of them Nilgiris, Ramanathapuram and Dharmapuri were old Districts while the other 7 have been created comparatively later. It can also be observed that in these 10 Districts, level of urbanization is generally low except in Nilgiris, Theni, Namakkal and Karur.

**Class II towns**

In 2011 there were 80 Class II towns in Tamil Nadu. Ariyalur and Perambalur do not have Class II towns also. In addition, this category is absent in Trichirappalli,
Pudukkottai and Kanyakumari. In Theni there were 3 Class II towns. They are Theni-Allinagaram, Bodinayakanur and Kambam. They remain as Class II towards even from 1981, 1991 and 2001.

**Class III towns**

In 2011, Tamil Nadu had 247 Class III towns and this category is present in all Districts. Theni had 5 Class III towns. They are Periyakulam, Uthamapalayam, Gudalur, Chinnamanur and Andipatti-Jakkampatti. Among them Andipatti-Jakkampatti was a Class IV town upto 1991 and elevated its status only in 2001 (Fig 3.2).

**Class IV towns**

Nearly 409 Class IV towns were distributed all over Tamil Nadu in 2011 in all Districts. There were 15 Class IV towns in Theni District. They are: Boothipuram, Devadanapatti, Genguvarpatti, Hanumanthampatti, Kamayagoundanpatti, Kombai, Melachokkanathapuram, Odaipatti, Palani Chettipatti, Pudupatti, Thamaraikulam, Thenkarai, Thevaram, Vadugapatti and Veerapandi.

Among them Boothipuram and Hanumanthampatti got elevated from Class V in 2001 to Class IV in 2011. The other 13 came into existence as Class IV urban centres newly in 2001. This is because of inclusion of all Town Panchayats as urban centres in 2001 Census (Fig. 3.2)

**Class V towns**

In 2011 there were 296 Class V towns in Tamil Nadu occurring in all Districts except Perambalur. Theni had 4 Class V towns. They are: B. Meenakshipuram,
Theni District

CHRONOLOGICAL EVOLUTION OF URBAN CENTRES

Legend
- Class II
- Class III
- Class IV
- Class V
- Class VI

Scale
0 30 Kilometers

Fig. 3.2
Kuchanur, Markayankottai and Pannaipuram. These 4 centres also classified newly as urban centres only in 2001.

**Class VI towns**

There were only 35 Class VI towns in Tamil Nadu in 2011. This category is absent in many Districts. Theni had only one Class VI town, namely Highwavys (named as Highways in Census). In fact this was a Class V town in 2001 but declassified as Class VI in 2011 due to decline of population (Fig. 3.2). This is a township situated in hill area. This town is situated among tea estates in Megamalai area. Outmigration of workers may be reason for decline of its population between 2001 and 2011.

Fig. 3.2 clearly indicates that the concentration of urban centres is more in the NE - SW axis and follows mostly the Kambam valley. The Southeastern part which is hilly has relatively no urban centre.

It is also significant to explain the share of these different classes of urban centres to the total urban population. In India there is a lopsided distribution of urban population. Nearly two thirds of its total urban population in the country live in Class I cities. A balanced urban development is possible when urban population is distributed somewhat evenly among urban centres of different sizes.

In Tamil Nadu there is a comparatively balanced urban development. In 2011 Class I cities accounted for only 40% of the urban population. Nearly one - sixth of the urban population lived in Class II towns. Class III towns accounted for 21% of the total urban population while it was 16.7% for Class IV. Class V and Class VI had negligible share (Table 3.3).
### Table 3.3

Percentage share of different classes of urban centres to total urban population - 2011

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Classes</th>
<th>Tamil Nadu</th>
<th>Theni District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>39.6</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>II</td>
<td>15.8</td>
<td>35.5</td>
</tr>
<tr>
<td>3</td>
<td>III</td>
<td>20.9</td>
<td>27.4</td>
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<tr>
<td>4</td>
<td>IV</td>
<td>16.7</td>
<td>31.8</td>
</tr>
<tr>
<td>5</td>
<td>V</td>
<td>6.5</td>
<td>4.5</td>
</tr>
<tr>
<td>6</td>
<td>VI</td>
<td>0.4</td>
<td>0.8</td>
</tr>
</tbody>
</table>

*Source: Census of India, 2011*

Theni District also has a balanced urban development. In 2011, nearly 36% of the urban population lived in Class II towns while another 27.4% lived in Class III towns. The share of Class IV was 31.8%. Class V and VI had small share.

### 3.4 Distribution pattern of urban centres in Theni District

Among the different methods used for analysing the distribution pattern of settlements the nearest neighbour technique is most commonly used. The nearest neighbour technique was originally developed by two botanists (P.J. Clark & F.C. Evans, 1954) who were concerned with the distribution pattern of various plant species over the surface of the earth. Later it has been adopted by a number of other disciplines. In geography, it has been applied principally to urban and rural settlement patterns. The spatial distribution pattern of urban centres forms various patterns such as cluster, random and uniform. The pattern of index is calculated with the following formula.
Fig. 3.3
\[ R_n = 2\bar{D} \sqrt{N/A} \]

where,

\( \bar{D} \) – is the average distance between the nearest neighbours

\( N \) – is the number of settlements

\( A \) – is the total area of the region

The urban centres of Theni District are taken and the distance between each urban centre and its nearest neighbour is calculated and tabulated. Then \( R_n \) value is calculated using the above formula. The \( R_n \) ranges between 0 to 2.16 and for the purpose of interpretation a value of ‘0’ represents a cluster pattern of urban centres distribution. The value of ‘1’ represents random distribution and ‘2.16’ represents uniform distribution. Fig. 3.3 shows the distribution pattern of urban centres in the study area in 1991 and 2001. There is no increase in the number of urban centres in 2011. Hence the 2001 distribution remains same in 2011 also.

**Table 3.4**

<table>
<thead>
<tr>
<th>Year</th>
<th>( R_n ) Value</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1.06</td>
<td>Random</td>
</tr>
<tr>
<td>2001 and 2011</td>
<td>0.83</td>
<td>Cluster</td>
</tr>
</tbody>
</table>

*Source: Compiled by Researcher*
Table 3.4 shows the distribution of urban centres in the study area. In 1991 the distribution pattern is random. On the other hand in 2001 and 2011 the distribution pattern has become cluster in nature. In 1991 the Rn value is 1.06. On the other hand the Rn value is 0.83 in 2001 and 2011. The number of urban centres increased from 8 to 28 in 1991 to 2001 and 2011. The cluster pattern indicates that the future growth will also likely to take place nearby the existing urban centres.

3.5 Functional Characteristics of Towns

The significance of any town or urban centre is determined by the nature and status of functions carried out by it. These functions are naturally and culturally influenced by that location and other factors. The most clear index bringing out the functional character of a town is the occupational structure of its population. It is logical to expect a higher concentration of workers in the specialized functions or services of an urban centre. At the next level, towns are even classified based on their functions. In fact such categorization of towns started with the work of Aurousseau as early as 1921. There were numerous studies of urban functional classification in the world. A number of methods are there to analyse the functional characteristics of towns. All these methods take the distribution of workers in different types of economic activities. Based on this distribution, towns are classified into different categories.

In the present study Nelson’s (1955) method of classification has been used. His service classification of American cities is based on “stated statistical procedure”. He calculates the standard deviation from the mean in each of the activity groups and classifies towns and cities according to the degree of variation from the mean. In another word how much deviation trend from mean value of an activity was demonstrated by a town and the degree of specialization it has gained by this deviation,
is important. The Statistical method of standard deviation has been used for calculation of each function. Specialization degree of the town in any activity has been determined by adding 1 standard deviation (M+1SD), 2 standard deviations (M+2SD) and 3 standard deviations (M+3SD) to mean value. While the rates below M+1SD demonstrate diversified, the rates above M+3SD demonstrate a powerful specialization of function in a particular region.

In India 2011 Census categorized the total workers of an area into four categories of occupational division. For the present study the functional characteristics have been analysed for 1991, 2001 and 2011. In 1991 the occupational category has been classified into nine categories. These nine categories are grouped into the present four classes for comparison of functions. This categorization of workers is taken for the Class II, Class III, Class IV, Class V and Class VI towns of Theni District. The percentage share of each of these four categories of workers is calculated for every town. The percentage for Theni district as a whole is considered as the average. The standard deviation is calculated from the average for each of the four occupational categories of all towns for the degree of variation. After that they are grouped into their appropriate functional categories.

For the present study only four categories are considered in functional classification in Theni district. They are as follows:

1. Cultivation (C)
2. Agricultural Labour (A)
3. Household Industries (H)
4. Services (S)
Based on this the average percentage share of different categories of workers is calculated in Theni district towns as a whole. Using the data the S.D is calculated for each category. The percentage share and the Standard Deviation (S.D) for each category of workers is added together. If a town has more than average +1 S.D. value in a category, that activity is calculated as a functional activity for the town.

Table 3.5

Percentage share and Standard Deviation of workers in Theni district towns


<table>
<thead>
<tr>
<th>Year</th>
<th>Cultivators</th>
<th>Agricultural Labourers</th>
<th>Household Industry Workers</th>
<th>Other Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>11.04</td>
<td>5.3</td>
<td>3.93</td>
<td>48.71</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.14</td>
<td>4.03</td>
<td>2.58</td>
<td>8.08</td>
</tr>
<tr>
<td>Average +1 SD</td>
<td>13.18</td>
<td>9.33</td>
<td>6.51</td>
<td>56.79</td>
</tr>
<tr>
<td>Average +2 SD</td>
<td>15.32</td>
<td>13.36</td>
<td>9.09</td>
<td>64.87</td>
</tr>
<tr>
<td>Average +3 SD</td>
<td>17.46</td>
<td>17.39</td>
<td>11.67</td>
<td>72.95</td>
</tr>
</tbody>
</table>

*Source: Compiled by Researcher*

For example in 1991, the average share for cultivation group is 11.04 and the standard deviation is 2.14. Therefore average +1 standard deviation is 13.18. If the
percentage share is less than average +1 Standard Deviation, that group is neglected for a town. If a town has more than average +1 Standard Deviation of its workers in cultivators group, it is included as ‘C’. If the town has more share than the value of average +2 standard deviation it is included as C1, if the value is more than average +3 standard deviation, it is included as ‘C2’. From Table 3.5 shows the method of calculation for Nelson’s functional classification in the study period.

As per the functional classification of these towns of the Theni district could be categorized into the following three categories. They are

1. Unifunctional towns
2. Bifunctional towns and
3. Non specialization towns

### 3.6 Functional characteristics of towns in 1991

In the year 1991 Theni was a part of Madurai district and had only eight urban centres. Hence only they are considered for the classification. There were 3 unifunctional towns in 1991. They are Theni-Allinagaram (S), Bodinayakanur (C1) and Gudalur (A). While Theni-Allinagaram has Services as the dominant function, Agricultural Labour is most important in Gudalur. In the case of Bodinayakanur, there is a stronger specialization of Cultivators (Fig 3.4).

The bifunctional towns are notable for two major functions. Periyakulam and Andipatti-Jakkampatti are the important bifunctional towns in the year 1991. Services (S). Andipatti-Jakkampatti has Household industries (H) and Services (S) as its major functions as well as Cultivation (C) are the dominant functions in Periyakulam. Andipatti-Jakkampatti has Househod industries (H) and Services (S) as its major functions. Andipatti-Jakkampatti is a very specialized town for Household industry.
Theni District
FUNCTIONAL CHARACTERISTICS OF TOWNS

Legend
C - Cultivation
A - Agricultural Labour
H - Household Industries
S - Services

Non specialization town
Specialization town

Scale
0 30 Kilometers

Fig. 3.4
The concentration of weaving textiles is the major reason for this. In fact Andipatti-Jakkampatti is notable for the textile handloom products. The significance is indicated by the notation H4. Marketing of these products may be main factor for this town to have specialization of Services (S) also. Of the 8 urban centres, Chinnamanur, Uthamapalayam and Kambam have diversified functions and no specialization of functions is noticed. Hence they come under Non specialization town category.

Table 3.6
Functional characteristics of towns in Theni District

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Name of the Towns</th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Boothipuram (TP)</td>
<td>*</td>
<td>C1</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>Bodinayakanur (M)</td>
<td>C1</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>3</td>
<td>Melachokkanathapuram (TP)</td>
<td>*</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>B. Meenakshipuram (TP)</td>
<td>*</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>Ganguvarpatti (TP)</td>
<td>*</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>Devadanapatti (TP)</td>
<td>*</td>
<td>A</td>
<td>*</td>
</tr>
<tr>
<td>7</td>
<td>Vadugapatti (TP)</td>
<td>*</td>
<td>*</td>
<td>H</td>
</tr>
<tr>
<td>8</td>
<td>Thamaraikulam (TP)</td>
<td>*</td>
<td>*</td>
<td>H</td>
</tr>
<tr>
<td>9</td>
<td>Periyakulam (M)</td>
<td>C, S</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>10</td>
<td>Thenkarai (TP)</td>
<td>*</td>
<td>A</td>
<td>*</td>
</tr>
<tr>
<td>11</td>
<td>Theni - Allinagaram (M)</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>12</td>
<td>Palani Chettipatti (TP)</td>
<td>*</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>13</td>
<td>Veerapandi (TP)</td>
<td>*</td>
<td>C1</td>
<td>*</td>
</tr>
<tr>
<td>14</td>
<td>Thevaram (TP)</td>
<td>*</td>
<td>C</td>
<td>*</td>
</tr>
<tr>
<td>15</td>
<td>Kuchanur (TP)</td>
<td>*</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>Markayankottai (TP)</td>
<td>*</td>
<td>A</td>
<td>C1</td>
</tr>
<tr>
<td>17</td>
<td>Pannaipuram (TP)</td>
<td>*</td>
<td>*</td>
<td>C</td>
</tr>
<tr>
<td>18</td>
<td>Kombai (TP)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>19</td>
<td>Chinnamanur (M)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>20</td>
<td>Odaipatti (TP)</td>
<td>*</td>
<td>C, A</td>
<td>C, A</td>
</tr>
<tr>
<td>21</td>
<td>Uthamapalayam (TP)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>22</td>
<td>Hanumanthampatti (TP)</td>
<td>*</td>
<td>*</td>
<td>A</td>
</tr>
<tr>
<td>23</td>
<td>Pudupatti (TP)</td>
<td>*</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>24</td>
<td>Kamayagoundanpatti (TP)</td>
<td>*</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>25</td>
<td>Kambam (M)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>26</td>
<td>Gudalur (TP)</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>27</td>
<td>Highways (TP)</td>
<td>*</td>
<td>S</td>
<td>*</td>
</tr>
<tr>
<td>28</td>
<td>Andipatti - Jakkampatti (TP)</td>
<td>H4, S</td>
<td>H3</td>
<td>H1, S</td>
</tr>
</tbody>
</table>

Source: Complied by Researcher
3.7 Functional characteristics of towns in 2001

Theni was bifurcated as a new District in 1997. Further the application of Panchayat Raj Act in 1994 resulted in the inclusion of all Town Panchayats (TP) under urban category. Because of this, the number of urban centres in the study area increased from 8 in 1991 to 28 in 2001. The functional classification for 2001 indicates that there are 17 unifunctional towns, 1 bifunctional town and 10 non specialization towns.

It is interesting to note that Chinnamanur, Uthamapalayam and Kambam continued as Non specialization towns in 2001 also. In addition, Bodinayakanur has also lost its specialized function of Cultivation and became a Non specialization town. Similarly Periyakulam which was bifunctional in 1991 lost its specialization and became a Non specialization town in 2001. The other Non specialization towns are Vadakarai, Thenkarai, Kombai, (all Class IV towns) Hanumanthampatti and Pannaipuram (Class V). Odaipatti is the only bifunctional town in 2001 with specialization in Cultivation (C) and Agricultural labour (A). About 50% of the unifunctional towns have Agricultural labour specialization. There is no change in the status of function as far as Theni-Allinagaram and Gudalur are concerned. Andipatti-Jakkampatti has lost its bifunctional status in 2001 and became specialized only for Household industry.

3.8 Functional characteristics of towns in 2011

There is no increase in the number of urban centres between 2001 and 2011. However the increase of total population resulted in Boothipuram and Hanumanthampatti to become Class IV towns. On the other hand Highways Township which is in the hilly area situated amidst estates has declined in its population and became a Class VI town.
The functional classification also exhibits unifunctional, bifunctional and Non specialization towns in 2011. Andipatti-Jakkampatti again became a bifunctional town with increased specialization of Services. Odaipatti continued as a bifunctional town in 2011 also. Bodinayakanur, Periyakulam, Chinnamanur, Uthamapalayam, Kambam and Kombai continued as Non specialization towns in 2011 also.

Devadanapatti, Thenkarai, Veerapandi, Thevaram and Highways lost their unifunctional status in 2011 and became Non specialization towns. On the other hand Vadugapatti and Thamaraikulam became unifunctional towns with specialization of Household industry. Pannaipuram and Hanumanthampatti shifted from Non specialization status to specialization in Cultivation (C) and Agricultural labour (A) respectively. Theni-Allinagaram and Palani Chettipatti continued their specialization in Services in 2011 also. Similarily Gudalur also continued its specialization status in Agricultural labour in 2011 also. Boothipuram, Melachokkanathapuram and Markayankottai towns specialized in Cultivation (C). Ganguvarpatti, Kuchanur, Pudupatti and Kamayakoundanpatti are the other unifunctional towns with specialization in agricultural labour (A).

3.9 Changing pattern of functional characteristics

- Among the three Class II towns Theni-Allinagaram remained as a Service town for the past two decades. On the other hand Kambam town has diversified functions and no specialization during the same period. Bodinayakanur town which had specialization of cultivation in 1991 lost its significance and became a diversified functional town with no specialization in 2011.

- Among the five Class III towns Chinnamanur and Uthamapalayam towns have no specialized functions during the study period. On the other hand Gudalur
town continued as a unifunctional town with specialization of Agricultural labour (A). Periyakulam which was a bifunctional town in 1991 lost its specialization in 2001 and 2011 and became a Non specialization town. Andipatti-Jakkampatti has bifunctional status in 1991 and 2011 with specialization of Household industry and Service functions. However, it lost its bifunctional status briefly in 2001.

- Among the new towns that came into existence in 2001. Odaipatti is the only bifunctional town with specialization of Cultivation (C) and Agricultural labour (A).
- Devadanapatti and Thenkarai towns lost their significance of specialization in agriculture. Veerapandi and Thevaram lost their specialization of cultivation and Highways Township also lost its Service function.
- Vadugapatti and Thamaraikulam became unifunctional towns with Household industry specialization while Pannaipuram and Hanumanthampatti became specialization towns for agricultural labour.
- In the case of other towns, there is no major change in the functional status.

### 3.10 Conclusion

The present discussion has brought out the spatial variation in the process of urbanization in the study area. It has also indicated the distribution of different urban centres in the District. It has also brought out the fact that further urban growth is likely to occur in areas nearby these existing urban centres, particularly the Class II and Class III towns. Hence it is necessary to have a detailed analysis about these two categories of towns in detail. The subsequent chapter tries to explain the characteristics of Class II towns in the study area.