Today, it is necessary to have central theme of the research and planning towards the socio-economic upliftment of the rural sector. Therefore it is better to have an idea of regional disparities in the levels of development for the present and future planning. Development is a multidimensional phenomena which is governed by several factors of a region. The mode of development is concerned to planned-industrialisation, rapid development of modes of transport and communications, the development of financial aid giving institutions with various branches in villages, towns, and cities, establishment of different types of educational institutions, health facilities, technological and institutional innovations in agriculture. However, it may not be possible to have all these infrastructural facilities in a region on an uniform pattern due to various reasons. In order to reduce or eliminate such regional disparities, more attention should be given towards the lesser developed regions. The overall development of a region is based on the growth and development of certain
suitable factors, which the agricultural development is also governed by several indicators of the region which may act directly or indirectly. Therefore, the taluks which are highly developed in terms of social, economic and demographic factors can also show significant growth and development in terms of intensive and optimum landuse and agricultural development. This may be a reverse case in those taluks where the above factors are not adequately developed. Therefore it is felt relevant to identify the regional disparities of Dharwad district.

**Identification of Regional Disparities:**

The regional disparities are due to the variations in the number, nature of the existence of physical, economical, social and demographic factors and their spatial spread. To minimise such disparities, the aspects of its identification is the first-step. There are number of factors to measure regional disparities. But, based on the available data 28 indicators are taken to findout the regional disparities in the levels of development, and these indicators (factors) are broadly divided into social, economic and demographic. Because of the different views of the various authors regarding the development through various angles, the selection of these indicators is purely arbitrary which are as follows:
Social Indicators:

1. Educational institutions (Kindergartens, Primary and High schools).
2. All types of colleges.
3. Post and Telegraphic offices.
4. Villages with drinking water facility.
5. Primary health and Family Planning Centres.
6. Adult Education Centres.
7. Veterinary Hospitals.
8. Film Theatres.
9. Electrified villages as percentage to the total number of villages.

Economic Indicators:

1. Number of commercial banks.
2. Percentage of net area sown to total geographical area.
3. Percentage of net area irrigated to the net sown area.
4. Percentage of area under H.Y.V. to the net sown area.
5. Number of agricultural implements.
6. Number of industries.
7. Length of roads (in Kms.)
8. Length of Railways (in Kms.)
9. Number of agricultural co-operative societies.
10. Percentage of agricultural workers to the total workers.
11. Total number of livestock.
12. Fertilizer consumption in tonnes.
13. Number of regulated and non-regulated markets, and

Demographic Indicators:
1. Number of urban centres.
2. Density of population.
3. Percentage of total workers to the total population.
4. Percentage of literacy to the total population.
5. Percentage of urban population to the total population.

Methodology:

To know the regional disparities in Dharwad district the 'Combined Rank Score Method' is adopted. The values of each indicator are ranked 1 to 17 in all taluks. For calculation of combined score, Kendall’s (1979) ranking co-efficient method is used. The respective rank order score for 28 selected indicators is posted, added and averaged to get averaged rank score. This score is considered as an index of regional
disparity. Regional disparities in the levels of development are inversely related to the total rank score, i.e., higher the score lower is the taluk on the level of development and vice-versa. The ranks of 17 taluks of Dharwad district with respect to individual selected indicators and the total averaged rank order score is worked out and the results are shown on map.

Regional Disparities in the Levels of Social Development
(Based on Social Indicators 1985-86)

<table>
<thead>
<tr>
<th>Group</th>
<th>Range</th>
<th>No. of taluks</th>
<th>Name of the Taluks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Mean - 2 SD and below 1.46</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>High</td>
<td>Mean - 2 SD to Mean - 1 SD i.e. 1.46 to 3.57</td>
<td>5</td>
<td>Dharwad, Hangal, Hirekerur, Ranebennur, Ron.</td>
</tr>
<tr>
<td>Medium</td>
<td>Mean - 1 SD to Mean i.e. 3.58 to 5.68</td>
<td>3</td>
<td>Gadag, Haveri, Hubli</td>
</tr>
<tr>
<td>Low</td>
<td>Mean to Mean + 1 SD i.e., 5.69 to 7.79</td>
<td>6</td>
<td>Kalaghatagi, Kundagol, Mundargi, Navalgund, Shiggaon, Shirhatti.</td>
</tr>
<tr>
<td>Very Low</td>
<td>Mean + 1 SD and above i.e., above 7.79</td>
<td>3</td>
<td>Byadgi, Naragund, Savanur.</td>
</tr>
</tbody>
</table>

Under the category of very high development in Dharwad district no taluk is noticed.
High Developed Regions: (Fig 26)

This region includes Dharwad, Hangal, Hirekerur, Ranebennur and Ron taluks. The high development in these taluks is observed mainly because of the more availability of the facilities like education, medical, post and telegraphic, drinking water, recreation and electrification etc. It is specifically noted that among these Dharwad taluk is more developed socially, being the district head quarter followed by Ranebennur, Hirekerur, Hangal and Ron taluks.

Medium Developed Regions:

This region covers the taluks of Gadag, Haveri and Hubli. Among these taluks high medium development is observed in Hubli and Gadag taluks followed by Haveri. All these taluks have medium rank values in most of the social indicators. Whereas Hubli stands first in primary and high school education, health, recreation and electrification. Both Gadag and Haveri stand first rank in case of electrification.

Low Developed Regions:

This region covers the taluks of Kalaghatagi, Kundagol, Mundargi, Navalgund, Shiggaon and Shirahatti taluks. These taluks come under this group because almost all the taluks are far behind in social indicators except electrification.
Very Low Developed Regions:

In this group the taluks are: Byadgi, Naragund and Savanur. These taluks have scored the lowest rank in almost all the social indicators except electrification.

Regional Disparities Based on Economic Indicators

<table>
<thead>
<tr>
<th>Groups</th>
<th>Range</th>
<th>No.of Taluks</th>
<th>Name of the Taluks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Mean - 2 SD and below i.e. 4.44 and below.</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>High</td>
<td>Mean - 2 SD to Mean - 1 SD i.e. 4.45 to 6.22</td>
<td>4</td>
<td>Dharwad, Haveri, Hubli, Ranebennur.</td>
</tr>
<tr>
<td>Medium</td>
<td>Mean - 1 SD to Mean 1 SD i.e. 6.25 to 8.00</td>
<td>6</td>
<td>Gadag, Hangel, Hirekerur, Navalgund, Ron, Shirahatti.</td>
</tr>
<tr>
<td>Low</td>
<td>Mean to Mean + 1 SD i.e., 8.01 to 9.78</td>
<td>3</td>
<td>Kelaghatagi, Savanur, Shiggson.</td>
</tr>
<tr>
<td>Very Low</td>
<td>Mean + 1 SD and above i.e., above 9.78.</td>
<td>4</td>
<td>Byadgi, Kundagol, Mundargi, Naragund.</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Very High Developed Regions:

Not a single taluk is found in this group in Dharwad district.
High Developed Region:

This region consists of Dharwad, Haveri, Hubli and Ranebennur taluks. The high development in these taluks is observed because of the higher proportion of the availability of the facilities like bank, co-operative societies, electric power, agricultural implements, industries, railway, markets, fertiliser consumption and livestock. Among these taluks Hubli taluk is more developed being the commercial node of the district (which acts as growth foci in the state next to Bangalore in Karnataka) followed by Dharwad, Ranebennur and Haveri taluks.

Medium Developed Regions:

This region includes the taluks of Gadag, Hangal, Hirekerur, Navalgund, Ron and Shirahatti. All these taluks have medium rank values in most of the social indicators. Among these taluks Hirekerur is more developed having the first place in case of length of roads, followed by Hangal, Ron, Shirahatti, Navalgund and Gadag taluks.

Low Developed Regions:

In this group the taluks are Kalaghatagi, Savanur and Shiggaon. These taluks are having low rank values in most of
the economic indicators. Among these taluks Kalaghatagi has got more rank value followed by Shiggaon and Savanur.

**Very Low Developed Regions:**

This group covers the taluks of Byadgi, Kundagol, Mundargi, and Naragund. In these taluks almost all the economic indicators rank very low, but Naragund has got first rank in percentage of net irrigated area to the net sown area.

### Regional Disparities in the Levels of Development
*(Based on Demographic Indicators 1985-86)*

<table>
<thead>
<tr>
<th>Groups</th>
<th>Range</th>
<th>No. of Taluks</th>
<th>Name of the Taluks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Mean - 2 SD and below i.e., 3.12 and below</td>
<td>0</td>
<td>Nil</td>
</tr>
<tr>
<td>High</td>
<td>Mean - 2 SD to Mean - 1 SD i.e., 3.13 to 5.38</td>
<td>3</td>
<td>Gadag, Hubli, Ranebennur</td>
</tr>
<tr>
<td>Medium</td>
<td>Mean - 1 SD to Mean i.e., 5.39 to 7.64</td>
<td>7</td>
<td>Byadgi, Haveri, Kundagol, Naragund, Navalgund, Ron, Shirahatti</td>
</tr>
<tr>
<td>Low</td>
<td>Mean to Mean + 1 SD i.e., 7.65 to 9.90</td>
<td>5</td>
<td>Hangal, Hirekerur, Mundargi, Savanur, Shiggaon</td>
</tr>
<tr>
<td>Very Low</td>
<td>Mean + 1 SD and above i.e., above 9.90</td>
<td>2</td>
<td>Bharwad, Kalaghatagi</td>
</tr>
</tbody>
</table>

**Total**: 17
Very High Developed Region:

There is no taluk found in this group.

High Developed Region:

There are three taluks in this group like Gadag, Hubli and Ranebennur. The high development in these taluks is observed because of the high literacy rate, density of population and percentage of urban population to the total population. Among these taluks Gadag taluk is more developed being the taluk headquarter with number of educational institutions, followed by Hubli and Ranebennur.

Medium Developed Regions:

The taluks which come under this category are Byadgi, Haveri, Kundagol, Naragund, Navalgund, Ron, and Shirahatti. The demographic rank score in most of these taluks is more or less medium. Among these taluks Navalgund and Ron are having equal rank score i.e. 32 followed by Naragund, Byadgi, Kundagol, Shirahatti and Haveri.

Low Developed Regions:

This region includes the taluks of Hangal, Hirekerur, Mundargi, Savanur and Shiggaon. These taluks have low rank score in most of the demographic indicators. Among these taluks
Hirekerur and Savanur have equal rank score i.e., 45 followed by Hangal, Shiggaon and Mundargi.

**Very Low Developed Regions:**

In this group there are only two taluks, viz., Dharwad and Kalaghatagi. In these taluks the demographic rank score in most of the indicators is very low. Dharwad has got 55 rank score followed by Kalaghatagi i.e., 62.

**Regional Disparities Based on Combined Indicators**

*Social, Economic and Demographic Indicators*

<table>
<thead>
<tr>
<th>Groups</th>
<th>Range</th>
<th>No. of Taluks</th>
<th>Name of the Taluks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Mean - 2 SD and below i.e., 3.89 and below.</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>High</td>
<td>Mean - 2 SD to Mean -1 SD i.e., 3.88 to 5.54</td>
<td>2</td>
<td>Hubli, Ranebennur.</td>
</tr>
<tr>
<td>Medium</td>
<td>Mean - 1 SD to Mean i.e., 5.55 to 7.19</td>
<td>7</td>
<td>Dharwad, Gadag, Hangal, Haveri, Hirekerur, Ron, Shirshatti</td>
</tr>
<tr>
<td>Low</td>
<td>Mean to Mean +1 SD i.e., 7.20 to 8.84</td>
<td>2</td>
<td>Navalgund, Shiggaon,</td>
</tr>
<tr>
<td>Very Low</td>
<td>Mean + 1 SD and above i.e., above 8.84</td>
<td>6</td>
<td>Byadgi, Kalaghatagi, Rundagol, Mundargi, Naragund, Savanur</td>
</tr>
</tbody>
</table>

**Total** 17
DHARWAD DISTRICT
REGIONAL DISPARITIES IN THE LEVELS OF DEVELOPMENT (1985-86)

Fig 26

AS PER SOCIAL INDICATORS (1985-86)

- BELOW 146: VERY HIGH
- 146 TO 357: HIGH
- 358 TO 568: MEDIUM
- 569 TO 779: LOW
- ABOVE 779: VERY LOW

AS PER ECONOMIC INDICATORS (1985-86)

- BELOW 444: VERY HIGH
- 444 TO 622: HIGH
- 623 TO 800: MEDIUM
- 801 TO 978: LOW
- ABOVE 978: VERY LOW

AS PER DEMOGRAPHIC INDICATORS (1985-86)

- 312 & BELOW: VERY HIGH
- 313 TO 538: HIGH
- 539 TO 764: MEDIUM
- 765 TO 990: LOW
- ABOVE 990: VERY LOW

REGIONAL DISPARITIES BASED ON COMBINED INDICATORS (1985-86) (SOCIO ECONOMIC AND DEMOGRAPHIC INDICATORS)

- 389 & BELOW: VERY HIGH
- 390 TO 554: HIGH
- 555 TO 719: MEDIUM
- 720 TO 884: LOW
- ABOVE 884: VERY LOW
Very High Developed Region:

There is not a single taluka falling under very high developed region.

High Developed Regions:

This group includes only two taluks viz., Hukil and Ranebennur. The high development in these taluks is mainly observed because of the more availability of facilities like education, post and telegraph, health, recreation, electrification, banking, industries, railway, co-operative societies, regulated markets, consumption of power, and population density. These two taluks have highest rank score in most of the social, economic and demographic indicators.

Medium Developed Regions:

This class covers the 7 taluks viz., Byadgi, Haveri, Kundagol, Naragund, Dharwad, Ron and Shirshatti. These taluks are having medium development in most of the social, economic and demographic indicators. Among these taluks the total averaged rank score of all indicators is more in Ron taluka, i.e., (5.75) followed by Haveri (5.96) Shirshatti (7.07).
Navalgund (7.25), Kundagol (8.86), Byadgi, (8.93), and Naragund (9.21). But in case of electrified villages most of these taluks have first rank value.

Low Developed Regions:

In this class there are only two taluks, viz., Navalgund and Shiggaon. These taluks have low rank values in most of the combined indicators. In these taluks the combined rank value of Navalgund taluka is more (7.25) followed by Shiggaon (8.61). But in electricity and fertilizer consumption Navalgund taluka is leading.

Very Low Developed Regions:

This group covers six taluks viz., Byadgi, Kalaghatagi, Kundagol, Mundargi, Naragund and Savanur. Almost all the ranks of combined indicators in these taluks are very low. Among these taluks the combined indicators rank is more in Kundagol taluka followed by Byadgi, Savanur, Kalaghatagi, Kundagol, and Mundargi.

It is hypothesised that index of regional development depends on social, economic and demographic development in the
Therefore, with an endeavour to know the relationship amongst these indices the correlation is calculated. The 'r' value of regional disparity with social, economic and demographic indicators is found to be 0.91, 0.96 and 0.43 respectively. The 'r' values indicate that all they are positively correlated with the regional development. But the degree of relationship is not equal. The degree of relationship with social and economic indicators is highly significant positive, whereas with demographic indicators it is nearly medium. In this study as we are more concerned to the agricultural development, it was hypothesised that the relationship of regional disparity when worked out with the agricultural development would be positive. But the 'r' value is found to be -0.57. It shows a medium negative correlation with the regional disparity. Though all the selected indicators to determine the regional disparity are strongly and positively co-related each other and yet it may be effective, quite natural to say that agricultural indices of development have a negative correlation with regional disparity in relation to certain times and space.