CHAPTER VI

FINDINGS, HYPOTHESIS TESTING, POLICY IMPERATIVES AND CONCLUSION
Introduction:

There are three sections in this chapter. The first section presents major findings of the study. The second section, test the hypotheses framed in the first chapter. And the third section presents policy imperatives along with conclusion.

Section 1:

This section provides major findings of the Study.

Major Findings:

- The second chapter presented reviews and it has found from the literature that there are disparities between male and female, in terms of educational performance, allocation of resources for male and female child, disparities in income, disparities in health standards, regional based disparities, and others.
- The previous studies have failed to capture the sequence and process of empowerment in general and women empowerment in particular.
- The reasons for disparities have also not identified by the previous studies.
- The multiple dimensions like level of development, urbanisation, social status, level of education, nature of work and family income have not used by the previous researcher in identifying the disparities.
- Hitherto, based on entitlements, disparities within the women folk have not at all systematically examined by the previous researchers.
- Theoretically, it has found that human development is main goal for the all developing countries like India.
- All individuals are the centre of development. Development without human development is meaningless and of no use.
- In the global era, all the countries in the world have been tried to achieve advanced human development through providing better health facilities, education, income earning opportunities, freedom for choices and to have a decent standard of living.
- It has been widely received that better education leads to more income earning opportunities, which in turn result in women empowerment, which reflects the high human development.
It is also confirmed from the conceptual arguments that, gender equality and human development have circular linkages, in the initial stages of development, gender equality leads to women empowerment, however, later gender equality leads to better economic status for women and thereby ultimately result in achieving human development.

The third chapter has analyzed the regional disparities in human development and gender development of Karnataka.

Human development with its three dimensions have been analysed in this chapter.

It has been found from the study that the education index, health index, income index, gender development index and human development index have found high in Bangalore Urban, Dakshina Kannda, Kodagu, Udupi and Shimoga districts.

The values of human development indices and gender development indices were found significantly very low in Gulbarga, Raichur, Koppal and Chamarajanagar districts.

There has been positive correlation among economic development, development of education and health and human development.

Economic development is prerequisite for human development.

In the fourth chapter, gender disparities between male and female has been analysed.

The adult sex ratio has gradually increased in Karnataka over the period.

The child sex ratio significantly decreased in Karnataka over the period.

The decreasing child sex ratio is a negative symbol of healthy society.

The gross enrolment ratios of both boys and girls have increased significantly.

The rate of growth of female enrolment was higher than the enrolment of male students.

Still, the enrolment ratio of boys is higher than enrolment ratio of girls.

The literacy rates for both male and female were increased significantly in Karnataka.

The gap between male and female in terms of literacy rate has not been reduced significantly.

In Karnataka, the female work participation was very low compared to male.
The gender disparities between male and female significantly exists in Karnataka.

The fifth chapter presents perception of women in Karnataka about empowerment of women gender disparities.

The study identifies that the process of development and urbanisation provides better education and lead to higher socio economic and political participation of women and there by result in women empowerment. And, development reduces discrimination.

Discriminations found less in socially upward classes and among the educated women.

Women being educated and working in the market place have less discrimination and more equitable opportunities for empowerment.

Family income has played secondary role in reducing the disparities and empowering women.

The process of development, urbanisation, level of education and nature of work have been played predominant role in reducing gender disparities and empowering women.

The study also found that women being educated and engaged in the market place earn more income compared to others.

Section II:

Hypotheses Testing:

In the following section an attempt has been made to test the hypotheses constructed in the formation of research work.

Hypothesis Testing: 1

$H_0$: There is no significant regional disparity in human development of Karnataka.

$H_1$: There is significant regional disparity in human development of Karnataka.
Disparities in Human Development:

Disparities in Human Development of Karnataka during 2001:

Disparities in terms of human development were computed for the year 2001. The following table presents the data about the value of human development index for the period 2001. The table presents the information about the high, medium and low human development of districts.

Disparities in Human Development of Karnataka during 2001
(In Terms of HDI Value)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Level of HDI</th>
<th>Districts</th>
<th>No. of Districts</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High HDI</td>
<td>Bangalore Urban, Dakshina Kannada, Kodagu, Udupi.</td>
<td>04</td>
<td>0.148</td>
</tr>
<tr>
<td>2</td>
<td>Medium HDI</td>
<td>Bagalkote, Bangalore Rural, Belgaum, Bellary, Bidar, Bijapur, Chickmagalur, Chitradurga, Davangere, Dharwad, Gadag Hassan, Haveri, Kolar, Mandya, Mysore Shimoga, Tumkur, Uttara Kannada.</td>
<td>19</td>
<td>0.704</td>
</tr>
<tr>
<td>3</td>
<td>Low HDI</td>
<td>Chamarajanagar, Gulbarga, Koppal, Raichur.</td>
<td>04</td>
<td>0.148</td>
</tr>
<tr>
<td>4</td>
<td>Total</td>
<td></td>
<td>27</td>
<td>1.000</td>
</tr>
</tbody>
</table>


The above table presents the status of Human Development Index (HDI) of Karnataka during 2001. The average human development index value during 2001 was 0.633 and the standard deviation was 0.048. The Cohort designed that the districts having the HDI value of 0.682 and above were considered as high human development districts and the districts having the HDI value of 0.585 and below are considered as low human development districts and the districts having the HDI value between 0.682 and 0.585 were considered as medium human development districts. Accordingly, Bangalore Urban, Dakshina Kannda, Kodagu and Udupi were
considered as high human development districts. Chamarajanagar, Gulbarga, Koppal and Raichur were considered as low human development districts. The remaining districts were considered as medium human development districts.

The following dummy variable regression model has been used to measure the significant disparities among high, medium and low human development districts.

\[ \text{HDI}_{2001} = \alpha + \beta_1 D_1 + \beta_2 D_2 + e \]

Where,

- \( \text{HDI}_{2001} \): Human Development Index during 2001.
- \( \alpha \): the constant which represents the benchmark, in the present analysis high human development districts are treated as benchmark.
- \( \beta_1 \): Difference between benchmark and medium human development districts.
- \( \beta_2 \): Difference between benchmark and low human development districts.
- \( D_1 \): 1 (one) if medium human development districts: 0 (zero) otherwise.
- \( D_2 \): 1 (one) if low human development districts: 0 (zero) otherwise.

\[ \text{HDI}_{2001} = 0.721 - 0.093D_1 - 0.154D_2 \]

\[ t: \quad (65.484) \quad (-7.657) \quad (-9.899) \]

\[ \text{Sig}: \quad 0.000 \quad 0.000 \quad 0.000 \]

The average index value of high human development districts (benchmark) was 0.721. The coefficient values of \( d_1 \) and \( d_2 \) were -0.093 and -0.154 respectively. The constant and the coefficient values are accepted at one per cent level. Therefore, the human development in medium and low human development districts were significantly lower than the high human development districts during 2001. Hence, the human development of Chamarajanagar, Gulbarga, Koppal and Raichur was significantly low.

Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. Hence, there is significant regional disparity in human development of Karnataka.
Hypothesis Testing: 2

H₀: There is no significant regional disparity in gender development of Karnataka.

H₁: There is significant regional disparity in gender development of Karnataka.

Disparities in Gender Development of Karnataka during 2001:

The following table presents the data about the value of Gender Development Index for the period 2001. The table also presents the information about the level of gender development in terms of high, medium and low.

Disparities in Gender Development Index of Karnataka during 2001 (In Terms of GDI Value)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Level of GDI</th>
<th>Districts</th>
<th>No. of Districts</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High GDI</td>
<td>Bangalore Urban, Dakshina Kannada, Kodagu, Udupi.</td>
<td>04</td>
<td>0.148</td>
</tr>
<tr>
<td>2</td>
<td>Medium GDI</td>
<td>Bagalkote, Bangalore Rural, Belgaum, Bellary, Bidar, Bijapur, Chamarajanagar, Chickmagalur, Chitradurga, Davangere, Dharwad, Gadag, Hassan, Haveri, Kolar, Mandya, Mysore Shimoga, Tumkur, Uttara Kannada.</td>
<td>20</td>
<td>0.741</td>
</tr>
<tr>
<td>3</td>
<td>Low GDI</td>
<td>Gulbarga, Koppal, Raichur.</td>
<td>03</td>
<td>0.111</td>
</tr>
<tr>
<td>4</td>
<td>Total</td>
<td></td>
<td>27</td>
<td>1.000</td>
</tr>
</tbody>
</table>


The above table presents the status of Gender Development Index (GDI) in Karnataka. The average gender development index value during 2001 was 0.620 and the standard deviation was 0.050. The Cohort designed that the districts having the GDI value of 0.669 and above were considered as high gender development districts and the districts having the GDI value of 0.570 and below were considered as low.
gender development districts and the districts having the GDI value between 0.669 and 0.570 were considered as medium gender development districts. Accordingly, Bangalore Urban, Dakshina Kannda, Kodagu and Udupi were considered as high gender development index districts. Gulbarga, Koppal and Raichur were considered as low gender development index districts. The remaining districts were considered as medium gender development districts.

The following dummy variable regression model has been used to measure the significant disparities among high, medium and low gender development index districts.

\[
GDI_{2001} = \alpha + \beta_1 D_1 + \beta_2 D_2 + e
\]

Where,

- \( GDI_{2001} \): Gender Development Index during 2001.
- \( \alpha \): the constant which represents the benchmark, in the present analysis high gender development index districts are treated as benchmark.
- \( \beta_1 \): Difference between benchmark and medium gender development index districts.
- \( \beta_2 \): Difference between benchmark and low gender development index districts.
- \( D_1 \): 1 (one) if medium gender development index districts: 0 (zero) otherwise.
- \( D_2 \): 1 (one) if low gender development index districts: 0 (zero) otherwise.

\[
GDI_{2001} = 0.710 - 0.097 D_1 - 0.165 D_2
\]

\[
t: \quad (58.863) \quad (-7.344) \quad (-8.963)
\]

\[
Sig: \quad 0.000 \quad 0.000 \quad 0.000
\]

The signs of the coefficient explain the positive or negative difference with the benchmark. The t value reveals acceptance or rejection of constant and coefficients. The average gender development index value of high gender development districts was 0.710. The coefficient values of \( d_1 \) and \( d_2 \) were -0.097 and -0.165 respectively. The constant and the coefficient values are accepted at one per cent level. Therefore, the gender developments in medium and low gender development districts were significantly lower than the high gender development index during 2001.
Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. Hence, there is significant regional disparity in gender development of Karnataka.

**Hypothesis Testing: 3**

H₀: Child sex ratio has not declined in Karnataka  
H₁: Child sex ratio has declined in Karnataka

**Comparison of Sex Ratio between the Years 1991 and 2011 (0-6 years)**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childsexratio1991</td>
<td>27</td>
<td>960.4815</td>
<td>7.70799</td>
</tr>
<tr>
<td>Childsexratio2011</td>
<td>30</td>
<td>946.4000</td>
<td>11.33685</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>3.983</td>
<td>.051</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>5.530</td>
<td>51.336</td>
</tr>
</tbody>
</table>


The t-test was computed to identify the significant difference in sex ratio between the years 1991 and 2011. It has been found from the F-test result that the variance between the two periods is statistically not significant at five percent level. It has been found from the descriptive statistics that the average sex ratio during the years 1991 and 2011 were 960 and 946 respectively. The difference in sex ratio between 1991 and 2011 was 14.0 and this difference is significant at one percent
level. Therefore, the sex ratio was significantly higher during the year 1991 compared to 2011. Hence, the sex ratio in Karnataka for the age group of 0 to 6 years has been significantly declined.

Therefore, null hypothesis is rejected and alternative hypothesis is accepted. Hence, child sex ratio has been declined in Karnataka over the period of time, which is a negative sign of human development.

**Hypothesis Testing: 4**

H$_0$: There is no significant difference in literacy rate between male and female.
H$_1$: There is significant difference in literacy rate between male and female.

**Comparison of Literacy Rate between Male and Female during 2011**

The following table presents male and female literacy rate for the period 2011.

**Comparison of Male and Female Literacy Rate in the Period of 2011**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>30</td>
<td>81.4950</td>
<td>6.78780</td>
<td>1.23928</td>
</tr>
<tr>
<td>female</td>
<td>30</td>
<td>65.9907</td>
<td>10.08545</td>
<td>1.84134</td>
</tr>
</tbody>
</table>

**Independent Samples Test**

<table>
<thead>
<tr>
<th>Description</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>3.589</td>
<td>.063</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>6.985</td>
<td>50.799</td>
</tr>
</tbody>
</table>


The t-test was computed to identify the significant difference between male and female literacy rate. It has been found from the F-test result that the variance between the groups is statistically not significant. It has been found from the
descriptive statistics that the average literacy rate of male and female were 81.5 and 66.0 respectively. The difference between male and female literacy rate was 15.5 and this difference is significant at one percent level. Hence, the literacy rate for male was higher than the female, during the year 2011.

Therefore, there is significant difference in literacy rate between male and female.

**Hypothesis Testing:**

**H0:** Education not has significant influence on empowerment of women.

**H1:** Education has significant influence on empowerment of women.

**Empowerment of Women with Education:**

The binary Probit model was used for the analysis.

\[
P = \beta_0 + \beta_1 D + \beta_2 R + \beta_3 S + \beta_4 L + \beta_5 N + \beta_6 F + \epsilon
\]

Where,

\[
P = \text{Perception of respondents on empowerment of women with education.}
\]

\[
P = -2.197 + 0.402D + 0.437R + 0.245S + 0.019L + 0.265N + 1.268F
\]

\[
Z = (-4.04) (2.11) (2.27) (2.64) (1.03) (1.22) (2.35)
\]

\[
P > [Z] = (0.000) (0.035) (0.023) (0.008) (0.304) (0.222) (0.019)
\]

Number of obs = 240   LR chi² (6) =38.24 Prob > chi²=0.000 Pseudo R² =0.1320

The probit model was used to estimate the impact of dimensions on respondents' perception on empowerment of women with education. It has been found from the results that the constant parameter was negative and it is significant. The impact of development was positive and it is significant; education along with development leads to empowerment of women. The impact of region was positive and significant; education along with urbanization leads to empowerment of women. The impact of social status was positive and significant; higher the social status with education, higher is the empowerment of women. The level of education has positive impact on empowerment, but not significant. Nature of work has positive impact on
empowerment, but not significant. The impact of family income was positive and significant; education with higher family income the greater will be the empowerment of women. All the $\beta$’s are positive and confirms the positive impact of education on women empowerment.

Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. Hence, education has significant impact on empowerment of women.

Section III:

Policy Imperatives;

Based on the study the following policy imperatives have been suggested;

- The study identified that the values of human development indices and gender development indices were found significantly very low in Gulbarga, Raichur, Koppal and Chamarajanagar districts. The study also identified the positive correlation among economic development, development of education and health and human development. Therefore, economic development is prerequisite for human development. Hence, the study suggests for area specific programmes rather than simply introducing general programmes to eliminate the regional disparities.

- The study observed that the gender disparities between male and female significantly exists in Karnataka. Therefore, without solving the problem of gender disparities, the holistic development of Karnataka is a myth. Hence, the government may take necessary actions to improve the sex-ratio, enrolment, literacy and thereby enlarging the choices of women to effectively participate in labour market.

- The impact of entitlements, like education immense in reducing gender disparities in human development. Therefore, there has been inverse relationship between entitlements and gender disparities in human development. Hence the study strongly advocates improving the entitlements of women in order to reduce the gender disparities in human development.

- The study identified that empowerment of women and reduction of gender disparities could have been achieved by enlarging the working choices for
women through better education. Therefore, education could be made compulsory for all the women folk.

- The study also identified that the working women, living in the developed urban region have effectively participated in decision making process. Therefore programmes for development and urbanisation are also equally important for empowerment of women and their by reducing gender disparities in human development.

**To Sum-Up**

The present study has analysed three types of disparities; regional disparities, gender disparities and disparities within women folk. Development is crucial for eliminating regional disparities. Human development found to be played vital role in reducing gender disparities. The impact of entitlements, like, education are immense in reducing gender disparities in human development. Therefore, there has been inverse relationship between entitlements and gender disparities in human development. Hence the study strongly advocates to improve the entitlements of women in order to reduce the gender disparities in human development.