Chapter -I

Introduction and Methodology
"Like slavery and apartheid, poverty is not natural. It is man-made and it can be overcome and eradicated by the actions of human beings."

-Nelson Mandela

1.1 INTRODUCTION

People are the real assets of a nation. The basic objective of development is to create an enabling environment for people to live a long healthy and creative life. This is otherwise known as Human Resource Development\(^1\). This may appear to be a simple truth. But it is often forgotten, in the immediate concern, with the accumulation of commodities and financial wealth.

Human development means a process of enlarging people’s choice. The most critical ones in Human Development Index (HDI) are to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and self-respect – what Adam Smith called the ability to mix with others without being “ashamed to appear in public”. The HDI enables innovative thinking about progress by capturing the simple yet powerful idea that development is about much more than income\(^2\).

The concern of development economists in recent years has shifted from economic growth to human development. For too long, the recurrent question was how much is a nation producing? Increasingly now the question that is being asked is how are its people faring? The main reason for this shift in focus is the growing recognition that the real objective of development is to enlarge people’s option\(^3\). Income is only one of the options and an extremely important one. But, it is not the sum-total of human life. Education and literacy, health, physical environment, equality of opportunities to all people irrespective of sex, caste and creed, political freedom etc., may be just as important as or more important than income.

However, while human development is indeed the ‘end’ of all activity, its measurement is not an easy task. While economic growth has traditionally been measured in terms of GNP or GNP per capita, later it was Physical Quality of Life Index (PQLI). It is difficult to decide how human development is to be measured
particularly in view of various dimensions as pointed out earlier. The United Nations Development Programme (UNDP) introduced the HDI in its first *Human Development Report* prepared under the able stewardship of Mahabub-ul-Haq, and published in 1990. The measure has been enlarged and refined over the years and many related indices of human development like Gender-Related Development Index (GDI), Gender Empowerment Measure (GEM) and Human Poverty Index (HPI) have been developed in subsequent *Human Development Reports* published annually by the UNDP.

### 1.2 DIMENSIONS AND CALCULATION

HDI measures the average achievement in three basic dimensions of human development:

- A long and healthy life as measured by life expectancy at birth.
- Knowledge as measured by the adult literacy rate (with two-third weight) and combined primary secondary and tertiary gross enrolment ration (with one-third weight)
- A decent standard of living as measured by GDP per capita (PPP US $).

Before calculating HDI, an index for each of the three dimensions is created. For this purpose, maximum and minimum values are chosen for each indicator.

**Table 1.1**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Maximum Value</th>
<th>Minimum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth</td>
<td>85</td>
<td>25</td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Gross enrolment ratio</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>GDP per capita (PPP US $)</td>
<td>40000</td>
<td>100</td>
</tr>
</tbody>
</table>

Performance in each dimension is expressed as a value between 0 and 1 by applying the following formula:

\[
\text{Dimension Index} = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}
\]
The HDI is calculated as a simple average of the dimension indices. According to HDI value countries have been grouped under three categories:

1. Countries in the HDI range 0.8 and above are in the High HDI group;
2. Countries in the HDI range 0.5 and 0.8 are in Medium HDI group; and
3. Countries in the HDI range less than 0.5 are in the Low HDI group.

Today, human development is no longer confined to the Human Development Report. Related concepts and new measurement tools are being elaborated throughout the world. More than 135 countries have prepared similar reports. The reports are used extensively by non-governmental organizations for giving suggestions and advices to the governments. The governments, in turn, use them for reviewing policies. The donor agencies use these indices for examining priorities, the academicians, media and citizens groups employ them to draw attention to research, news and campaigns for improving human well-being. Research publications as well as policy workshops and seminars that are organized in different parts of the world regularly discuss conceptual refinements, supplementary measures and the policy implications of adopting a human development approach.

The Planning Commission of India has computed human development indices for the years 1981, 1991 and 2001 and brought out the same in the year 2002. Many state governments in India have been preparing such reports for their states or at least improved the data base for the Human Development Reports. In Andhra Pradesh, the Centre for Economic and Social Studies (CESS) has made an attempt to compute Human development indices for various districts. In the present study, an attempt is made to compute and to identify determinants of Human Development in Kurnool District of Andhra Pradesh through sample survey.
1.3 NEED FOR THE PRESENT STUDY

To establish the link between economic and social progress, one must see how income is distributed and how it is used in a society and how far it has been translated into the lives of people. If a country’s HDI rank is more favorable than its GNP per capita rank, it assures to the policy makers that their social priorities are heading in the right direction, and that the country is building up adequate base of human capital to accelerate economic growth. It should also remind them that social progress cannot be sustained for long without an adequate economic base, so they should also correct the imbalance on the economic growth side.

But if the HDI rank is far less favorable than the GNP per capita rank, this should indicate the policy-makers that the benefits of economic growth are not flowing to the people in the expected and right direction. It should prompt them to examine whether the problem lies in mal-distribution of income or assets, or in wrong development priorities, or in lack of public policy attention to social services. Comparison with other countries with similar incomes should reassure them that it is possible to generate greater human welfare at that level of income. So, there should be no tension between the HDI and GNP measures. Both can inform public policy. In this context, the micro-level studies like this would provide useful information to the planners and policy makers whether or not the public funds are used in the right direction. Any deviation from this norm can be corrected immediately at the micro-level.

With this backdrop, the present study is proposed in Kurnool district of Andhra Pradesh through a sample survey.
1.4 OBJECTIVES OF THE STUDY

The specific objectives of the present study are:

1. To compare the Human Development Index of India with other selected countries;
2. To elucidate inter-state differences in HDI in India;
3. To outline HDI in Andhra Pradesh vis-à-vis different districts in the state;
4. To measure the HDI of Kurnool district of Andhra Pradesh; and
5. To understand the determinants of Human Development in Kurnool district of Andhra Pradesh.

1.5 HYPOTHESES

As against the objectives set above the following hypotheses are formulated:

1. There is no significant improvement in HDI of India in contrast to other developing countries.
2. There are no marked differences in HDI among different states in India.
3. Human Development Index in Andhra Pradesh does not show any improvement.
4. Human Development Indices of three divisions in Kurnool district are not uniform.
5. Human Development in Kurnool district is not influenced by a multiplicity of determinants.

1.6 METHODOLOGY

The analysis is based on

► Data sources, and
► Sample selection

1.6.1 Data Sources: The study is based both on secondary and primary sources of data. The major sources of secondary data are the annual Human Development
Reports published by the UNDP since 1990. Data are also culled out from World Development Reports published by the World Bank, Economic Surveys published by the Government of India, and Reserve Bank of India Reports on Currency and Finance. Human Development Report published by the Planning Commission, Government of India and the Human Development Reports published by various state governments in India are also made use of. Nevertheless, as the available secondary data are not adequate to fulfill the objectives of the study, the present investigation predominantly depends on the primary data collected from the sample households in Kurnool district of Andhra Pradesh as far as computation of Human Development indices of Kurnool district are concerned.

1.6.2 Sample Selection: Multi-stage random sampling technique is used in the present study to select sample households in various villages of Kurnool district.

1. At first stage: There are three revenue divisions in the district of Kurnool viz., Kurnool, Nandyal and Adoni.

2. Twelve mandals at the rate of four mandals from each revenue division are selected using Simple Random Sampling Without Replacement (SRSWOR).

3. From each mandal, two villages are chosen again using SRSWOR.

4. Thirteen households are selected from the first village and twelve households are selected from the second village.

5. Thus, the total sample size is 25 households X 12 mandals=300 households from the district.

6. Specially designed and pre-tested interview schedules are made use of to elicit information from the sample households.

Figure 1.1 portrays the location of sample mandals in Kurnool district. The details of mandals, villages and households selected from the three revenue divisions are furnished in Table-1.2.
FIGURE 1.1

LOCATION OF SAMLE DISTRICT AND MANDALS
Table 1.2
Details of Sample selection in Kurnool district of Andhra Pradesh

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name of the Revenue Division</th>
<th>Name of the Mandal</th>
<th>Name of the Village</th>
<th>No. of Sample House holds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kurnool</td>
<td>-do-</td>
<td>Konidela</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>-do-</td>
<td>-do-</td>
<td>Bollavaram</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>-do-</td>
<td>Atmakur</td>
<td>Karivena</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>-do-</td>
<td>-do-</td>
<td>Krishna puram</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>-do-</td>
<td>Kurnool</td>
<td>Gargayapuram</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>-do-</td>
<td>-do-</td>
<td>Kurnool</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>-do-</td>
<td>Bethamcherla</td>
<td>Emboy</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>-do-</td>
<td>-do-</td>
<td>Rangapuram</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>Nandyal</td>
<td>Gadivemula</td>
<td>Pesarvai</td>
<td>13</td>
</tr>
<tr>
<td>10</td>
<td>-do-</td>
<td>-do-</td>
<td>Bilakalagudur</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>-do-</td>
<td>Allagadda</td>
<td>Abobilam</td>
<td>13</td>
</tr>
<tr>
<td>12</td>
<td>-do-</td>
<td>-do-</td>
<td>Pedakandla</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>-do-</td>
<td>Gospadu</td>
<td>Julepalli</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>-do-</td>
<td>-do-</td>
<td>Pasurpadu</td>
<td>12</td>
</tr>
<tr>
<td>15</td>
<td>-do-</td>
<td>Owk</td>
<td>Owk</td>
<td>13</td>
</tr>
<tr>
<td>16</td>
<td>-do-</td>
<td>-do-</td>
<td>Singanapalle</td>
<td>12</td>
</tr>
<tr>
<td>17</td>
<td>Adoni</td>
<td>Adoni</td>
<td>Adoni</td>
<td>13</td>
</tr>
<tr>
<td>18</td>
<td>-do-</td>
<td>-do-</td>
<td>Peddaharivany</td>
<td>12</td>
</tr>
<tr>
<td>19</td>
<td>-do-</td>
<td>Mantralayam</td>
<td>Sugur</td>
<td>13</td>
</tr>
<tr>
<td>20</td>
<td>-do-</td>
<td>-do-</td>
<td>Madhavaram</td>
<td>12</td>
</tr>
<tr>
<td>21</td>
<td>-do-</td>
<td>Devanakonda</td>
<td>Tennekal</td>
<td>13</td>
</tr>
<tr>
<td>22</td>
<td>-do-</td>
<td>-do-</td>
<td>Kapparallla</td>
<td>12</td>
</tr>
<tr>
<td>23</td>
<td>-do-</td>
<td>Maddikera</td>
<td>Hampa</td>
<td>13</td>
</tr>
<tr>
<td>24</td>
<td>-do-</td>
<td>-do-</td>
<td>Deravali</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>12</td>
<td>24</td>
<td>300</td>
</tr>
</tbody>
</table>

1.6.3 Analysis of Data:

The collected data were analyzed using two-way tables, percentages, ratios and human development indices. Statistical tools like ANOVA, F tests were also employed to analyse the significance of inter-group differences on different variables. An attempt was also made to run multiple-regression to identify the core determinants of human development.
1.6.3.1 Calculation of human Development Index (HDI): The HDI is a summary composite measure of human development. It measures the average achievements in a society in three basic dimensions of human development viz.,

- A long and healthy life, as measured by life expectancy at birth
- Knowledge, as measured by the Adult literacy rate (with two-third weights) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight)
- A decent standard of living, as measured by GDP per capita.

As a first step, an index needs to be created for each of these dimensions. To calculate these dimension indices the life expectancy, education and GDP, minimum and maximum values, called ‘goal posts’ are to be determined. Table 1.3 provides the goal posts fixed for the present study.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Indicator</th>
<th>Maximum value</th>
<th>Minimum value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Life expectancy at birth (years)</td>
<td>70</td>
<td>32</td>
</tr>
<tr>
<td>2</td>
<td>Adult literacy rate (%)</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Combined gross enrolment ratio (%)</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>GDP per capita (Rupees)</td>
<td>98,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

The actual performance in each dimension between these goal posts is calculated as a value by applying the following general formula:

\[
Dimension \ Index = \frac{Actual \ Value - Minimum \ Value}{Maximum \ Value - Minimum \ Value}
\]

The HDI then calculated as a sample average of the dimension indices, i.e.,

\[HDI = \frac{1}{3} \text{ (life expectancy)} + \frac{1}{3} \text{ (education Index)} + \frac{1}{3} \text{ (GDP Index)}\]

1.6.3.2 Determinants of Human development

In the present study an attempt is also made to analyze the determinants of human development using multiple regression analysis. The model is
\[ Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + U \]

\( Y = \) Human development index at district level

\( x_1 = \) Caste

\( x_2 = \) Education index

\( x_3 = \) Per capita income

\( x_4 = \) proportion of people above 60 years

\( x_5 = \) Household type

\( x_6 = \) Drinking water facility

\( U = \) random disturbance term

The variable takes the following type of data:

\( x_1 = \) Caste group variable takes the following values:

- ST = 1
- SC = 2
- BC = 3
- OC = 4

\( x_2 = \) Education variable is in terms of Index values.

\( x_3 = \) Per capita income is in thousand rupees.

\( x_4 = \) Proportion of people above 60 years is in terms of pure numbers.

\( x_5 = \) Household type takes three values according to quality of housing

- Kutchha - 1
- Semi -pucca - 2
- Pucca - 3

\( x_6 = \) Drinking water variable takes three values. According to quality of drinking water as follows:

- Well - 1
- Borewell - 2
- Safe drinking water through taps - 3

The drinking water variable was included only at the revenue division and district level analyses.
The increasing values of these variables indicated increased importance in
the society or their quality. Household was taken as the basic unit of observation.
Accordingly, 25 observations were included in the regression analysis for each of
the 12 mandals, 100 observations for each of the three revenue divisions and 300
observations for the entire district.

1.7 LIMITATIONS OF THE STUDY

The study, however, has certain limitations. The study as its nature is not
based on census data. Since it would be difficult for an individual research scholar
to go for such a census study. A sample study is undertaken with 300 sample
households in Kurnool district of Andhra Pradesh. However, since the size of the
sample is very small, there could be sampling errors to some extent, but non-
sampling errors would be minimum. The great merit of the present study is that
apart from analyzing Human Development in terms of absolute values, indices, an
attempt is also made to analyze the determinants of Human development with the
help of multiple-regression analysis. The non-availability of life expectancy data at
village or Mandal level could be considered as a limitation and hence the study
forced the researcher to use district level life expectancy data furnished by the
District Medical and Health Officer for the entire district of Kurnool.

1.8 CHAPTER SCHEME

The study is presented in seven inter related chapters as detailed below:

Chapter-1 is an introduction and methodology chapter introducing the topic
of human development and its importance over the traditional
measures of economic development It also provides objectives,
hypotheses, methodology, tools of data analysis, significance and
limitations of the study.

Chapter-2 presents a brief survey of available empirical works on human
development at international, national, state and regional levels.

Chapter-3 sets out the Human Development Index an overview —
international, national, state levels.
Chapter 4 deals with the profile of the study district viz., Kurnool, and its three revenue divisions in terms of some key economic and social indicators. It also highlights the areas of human development viz., enrollment at primary, secondary, and tertiary levels, adult literacy, levels of income and other indicators by geographical and social groups.

Chapter 5 provides human development indices for various households at village, mandal, divisional and district levels as well as for different Caste group households.

Chapter 6 furnishes the determinants of human development as obtained from multiple regression analysis by geographical and Caste groups.

Chapter 7 summarizes the major findings of the study and offers policy implications and suggestions of the Study.
REFERENCES:


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