

A QUALITATIVE DECISION-SUPPORT MODEL FOR EVALUATING INDIAN STATES AND UNION TERRITORIES

Sehaj Duggal ^a, Deepak Sharma ^b, Sarita Azad ^c

^a School of Computing and Electrical Engineering, IIT Mandi, Himachal Pradesh, India.

^b School of Engineering, IIT Mandi, Himachal Pradesh, India.

^c School of Basic Sciences, IIT Mandi, Himachal Pradesh, India.

^c Corresponding author: sarita@iitmandi.ac.in

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Abstract: This paper “A qualitative decision-support model for evaluating Indian states and Union Territories” deals with hierarchically defining the requirements for sustainable development of India by analysing socio-economic indicators and presenting qualitative results. India is one of the most diversified nation in terms of social, cultural and economic factors. As per the International Monetary Fund’s (IMF) world economic database, 2012, India ranks as 10th largest economy in the world by nominal Gross Domestic Product (GDP) and 3rd largest in the world by its purchasing power parity. But, to develop a sustainable nation which is at peak of diversity requires further considerations at deeper levels rather than the global variables referred by GDP. Therefore, further sub-categories relating to the socio-economic development of India need to be considered to analyze the standard of living and development of its dwellers, who are the major stakeholders of any sustainable nation. This work deals with the development of qualitative parameters for measuring the overall current condition of states of India based on such socio-economic indicators using a multiple-attribute decision making (MADM) tool called DEXi. DEXi is a widely used decision making tool which provided an effective qualitative data for various important attributes concerning different states in India and their state of holistic development. DEXi is a complete shell for qualitative multi-attribute decision modeling and support. During the last decade, it has been applied several times in complex real-world decision-making. Further, Modified Digital Logic (MDL) is also used for assigning weights to different attributes to produce an effective and suitably weighed analytical results. The qualitative data is reasoned from actual quantitative data which is analyzed using DEXi. The socio-economic indicators used for the analysis are education; basic living, awareness and health care; economic status and energy consumption; crime and public protection and social status of women. These

six main topics are further subdivided to make a deeper level in the hierarchy and henceforth, provide useful and ease to interpret qualitative results using linguistic terms. For e.g.; for any state, under the basic living, awareness and health care indicator; households having safe drinking water facility, households having permanent structure, media exposure, HIV awareness, hospitals (per unit population) and life expectancy at birth are the sub categories considered. The result of this in-depth MADM analysis provides the measurement of root socio-economic causes in different states of India. This work emphasizes on different weak points of the Indian states (including the capital; Delhi) and provides with different areas on which improvements can be made to for improving the conditions of states and nation as a whole. This analysis can be acted upon any developing nation which aims to find the variables effecting its socio-economic development. Hence, the work could be mainly used by developing nations like Asian nations like China and many African and European nations like Nigeria, Kenya, Somalia, etc. This study can help policy makers (for e.g.; for the amendments in energy policy) and higher level dignitaries involved in strategic development of five year plans to address to the issues of great importance.

Keywords: states, qualitative, DEXi, MADM, policy

INTRODUCTION

This work deals with hierarchically defining the requirements for sustainable development of India by analysing socio-economic indicators and presenting qualitative results. India is one of the most diversified nation in terms of social, cultural and economic factors. As per the International Monetary Fund’s (IMF) world economic database, 2012, India ranks as 10th largest economy in the world by nominal Gross Domestic Product (GDP)

and 3rd largest in the world by its purchasing power parity.

But, to develop a sustainable nation which is at peak of diversity requires further considerations at deeper levels rather than the global variables referred by GDP. Therefore, further sub-categories relating to the socio-economic development of India need to be considered to analyze the standard of living and development of its dwellers, who are the major stakeholders of any sustainable nation. So, to study the behavior of its dwellers, study of different states would be one of the most efficient way. This is because, a comparison can be made depending upon different geographical locations and regional cultures.

This is done in this paper using the qualitative data for different parameters such as Education; Basic Living, Awareness and Health Care; Economic Status and Energy Consumption; Crime and Public Protection; Status of Women. The qualitative data is reasoned from actual quantitative data which is analyzed using DEXi. These six main topics are further subdivided to make a deeper level in the hierarchy and henceforth, provide useful and ease to interpret qualitative results using linguistic terms. For e.g.; for any state, under the basic living, awareness and health care indicator; households having permanent structure, media exposure, HIV awareness, hospitals (per unit population) and life expectancy at birth are the sub categories considered.

The result of this in-depth MADM analysis provides the measurement of root socio-economic causes in different states of India. This work emphasizes on different weak points of the Indian states (including the capital; Delhi) and provides with different areas on which improvements can be made to for improving the conditions of states and nation as a whole. This analysis can be acted upon any developing nation which aims to find the variables effecting its socio-economic development.

DATA

Here in this work qualitative data is taken. The qualitative data is reasoned from actual quantitative data. The data has been taken from reliable resources [1][2][3]. The reason for using qualitative data is variation of the parameters with the time. Actual data can vary with time, but, using qualitative approach, fuzziness can be introduced in the parameters. The qualitative data is given in Table 2.

METHODOLOGY

A selection or ranking problem where multiple conflicting criteria have to be considered is categorised as a Multiple Criteria Decision Making (MCDM) problem. Such problems are solved by

using MCDM tools and methods. These methods can be broadly classified as Multiple Objective Decision Making (MODM) and Multiple Attribute Decision Making (MADM) techniques. Most of these techniques use a quantitative set of inputs, but as set of inputs here are qualitative (i.e. quantized), we are using a software named DEXi[4]. DEXi is a computer software for multi-attribute decision making which is aimed at development of qualitative multi-attribute decision models. Here, a multi-attribute model is a hierarchical structure that represents the decomposition of the decision problem into subproblems, which are smaller, less complex and possibly easier to solve than the complete problem. In this work the parameter for a particular state is divided into Education; Basic Living, Awareness and Health Care; Economic Status and Energy Consumption; Crime and Public Protection; Status of Women. Each parameter is further categorized as follows: (a) Education is further categorized into Literacy rate, Per capita expenditure on education, Number of colleges, number of high schools, Number of primary schools and pupil-teacher ratio. (b) Basic Living, Awareness and Health Care is further categorized into Households having permanent Structure, Media Exposure, HIV awareness, Hospitals (per unit population) and Life Expectancy at birth. (c) Economic Status and Energy Consumption is further categorized into Per capita income, Per capita net SDP, Employment status in organized sector, Per capita Energy consumption, Households having electricity and Population below poverty line. (d) Crime and Public Protection is further categorized into Rate of Riot, % of cases pending for investigation, Strength of Civil Police and Strength of Armed Police. (e) Status of Women is further categorized into Rate of Harassment, Rate of cruelty by Husband and Relatives, Females per 1000 males and Contribution to crime rate against women to all India total.

All these are considered to be the major parameters for deciding the importance and ranking of the state.

Even though the categorization of the criteria into groups simplifies the ranking procedure, some criteria hold more importance than others in the same group. For example, under the category of education literacy rate holds more importance than the number of educational institutions in the area. Thus, relative weights must be provided to the criterion prior to the ranking procedure to signify their relative importance. To this effect we make use of an expert weighing method known as Modified Digital Logic (MDL)[5]. It is used to calculate subjective weights for the attributes. MDL has been derived from Digital Logic (DL) approach which compares two attributes at a time to determine the relative importance of one over another.

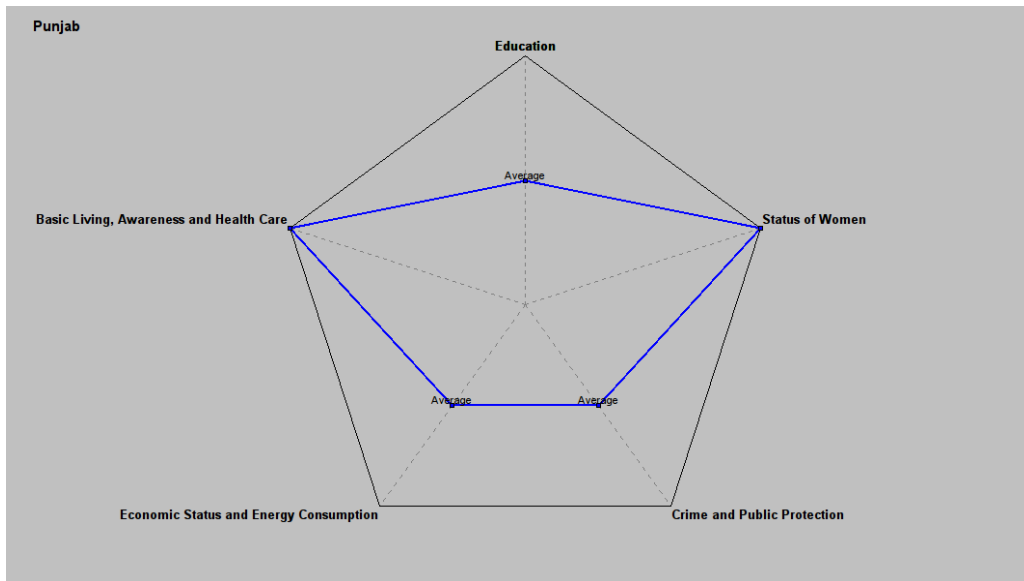


Figure 1: Rank model for Punjab.

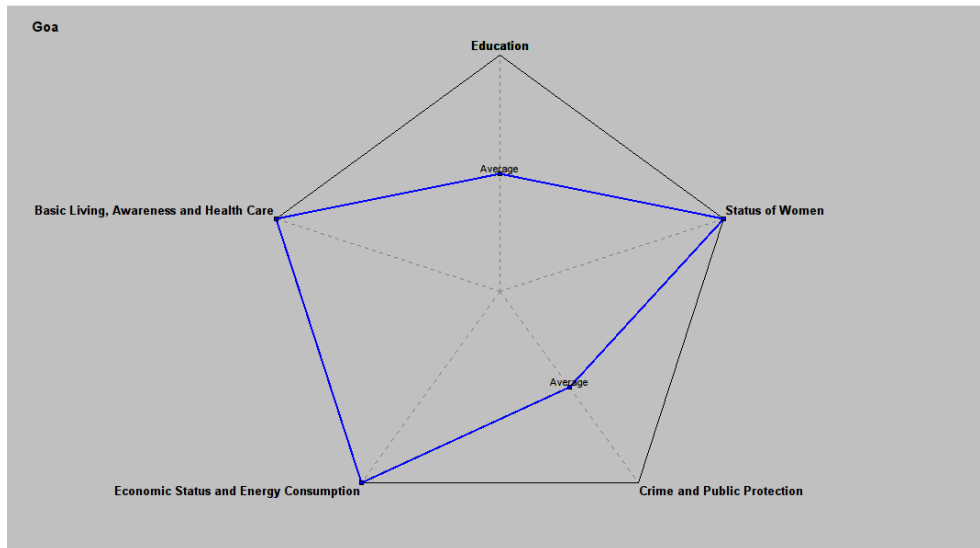


Figure 2: Rank model for Goa.

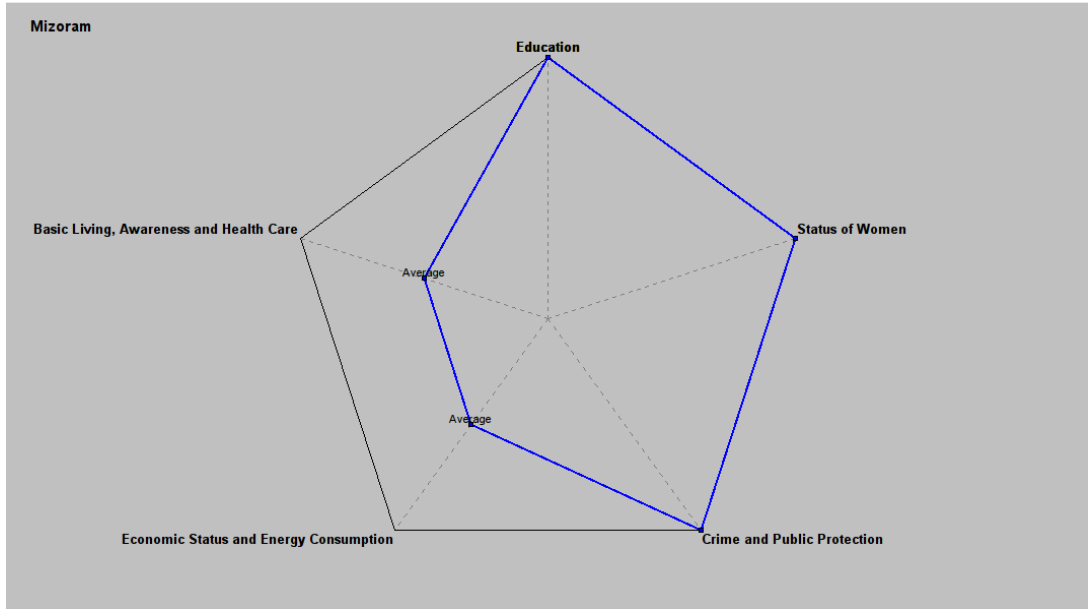


Figure 3: Rank model for Mizoram.

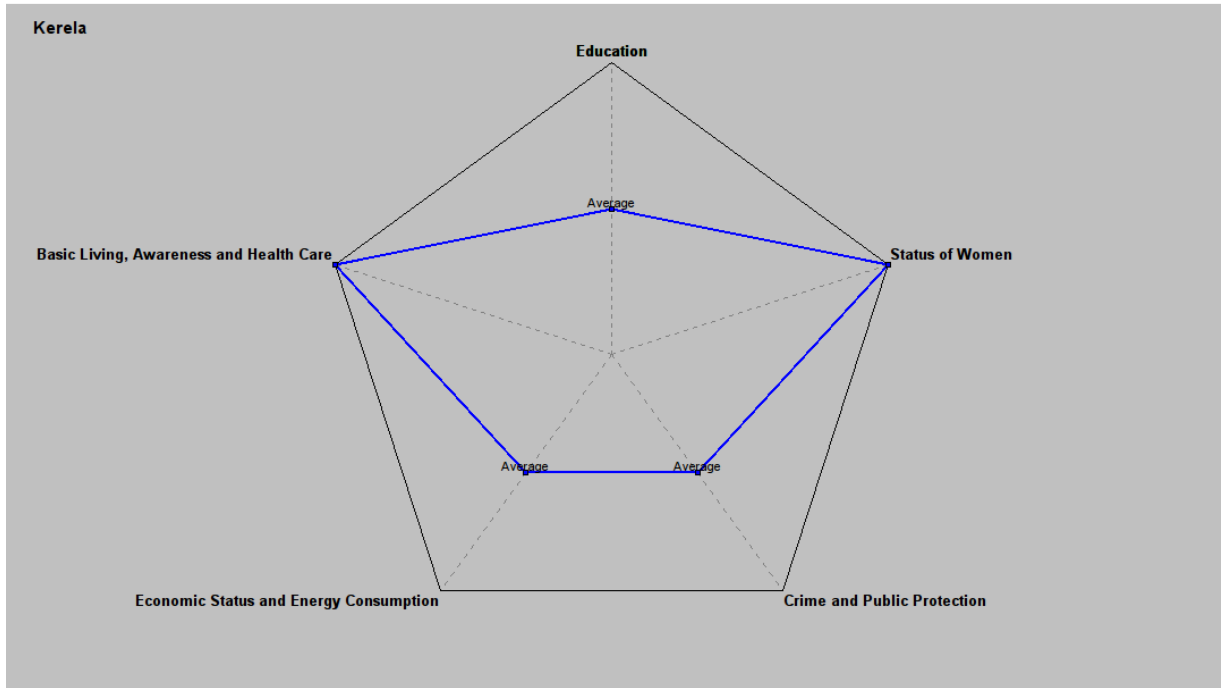


Figure 4: Rank model for Kerala.

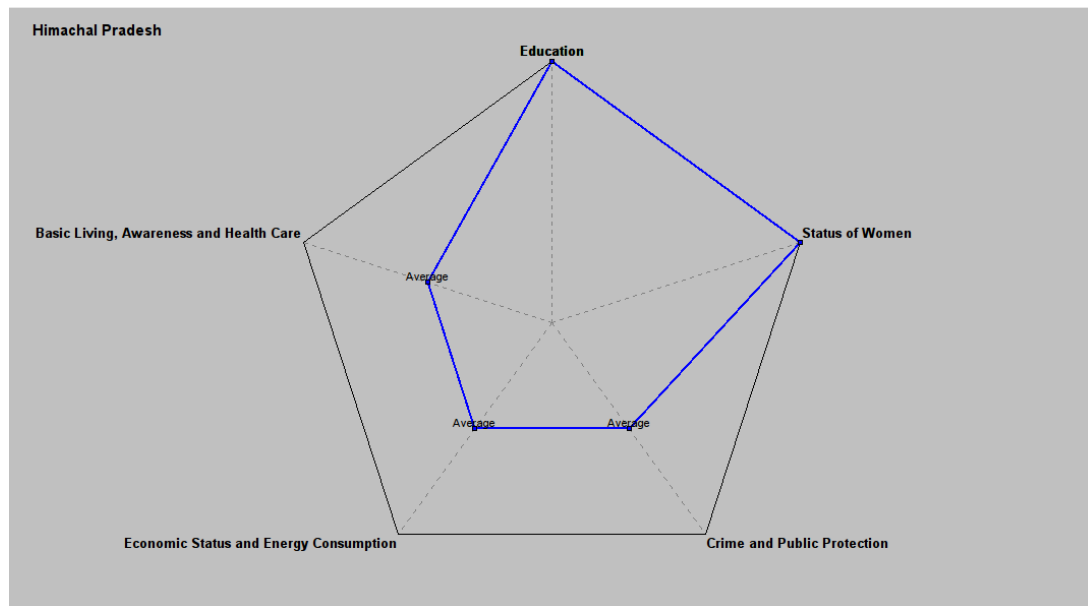


Figure 5: Rank model for Himachal Pradesh.

The total number of possible decisions or outcomes are given by $N(N-1)/2$ where, N represents the number of attributes under study. If the given attribute is more important than the considered attribute; 3 is assigned as the outcome of the decision else 1 is assigned. If both the given attribute and considered attribute rank equally important; 2 is assigned. It gives user a flexibility to provide lesser, more or equal importance to attributes. In this manner all the attributes are compared two at a time. The weights are determined by dividing the number of positive outcomes for a given attribute by the total number of possible outcomes. DL however has some inherent drawbacks, it can only distinguish between the given criterions as either less or more important which may not always be the case as when two properties are correlated or the user feels that they are equally important. To overcome this shortcoming MDL was first proposed by Manshadi et al. The relative weights are calculated in the same manner as DL, by dividing the number of outcomes for a given attribute by the total number of outcomes of the decision matrix. Weights of all the attributes are shown in Table 1.

RESULTS AND DISCUSSIONS

The rankings of the various states of India as per the different categories are given in Table 2.

It can be observed that top five states are: Goa, Mizoram, Kerala, Punjab and Himachal Pradesh. The

decision models for Punjab, Goa, Mizoram, Kerala and Himachal Pradesh are shown in Figure 1, Figure 2, Figure 4, Figure 4 and Figure 5 respectively.

The main problem however lies with the weakness. The states with the lowest qualitative rankings are Bihar, Chhattisgarh, Rajasthan and West Bengal. Improvements are needed for all these states in all the parameters.

CONCLUSION

Through this study an attempt has been made to qualitatively compare the states of India based on various socio-economic factors. Over twenty-five criteria were considered, grouped under the following five criteria namely: Education; Basic Living, Awareness and Health Care; Economic Status and Energy Consumption; Crime and Public Protection; Status of Women. A qualitative comparison was created based on individual groups and finally fuzzy/qualitative ranking was awarded based on a collective basis. It was found that the top five performing states are: Goa, Mizoram, Kerala, Punjab and Himachal Pradesh. While the worst four states are: Bihar, Chhattisgarh, Rajasthan and West Bengal. This study can help policy makers (for e.g.; for the amendments in energy policy) and higher level dignitaries involved in strategic development of five year plans to address to the issues of great importance.

TABLES

Table 1: Weights for different attributes

Attribute	Local	Global	Loc.norm.	Glob.norm.
└─Education	20	20	20	20
└─Literacy Rate	24	5	24	5
└─Per captia expenditure on education	15	3	15	3
└─Colleges	14	3	14	3
└─High Schools	14	3	14	3
└─Primary Schools	18	4	18	4
└─Pupil-Teacher Ratio (High School)	14	3	14	3
└─Basic Living, Awareness and Health Care	20	20	20	20
└─Households having permanent Structure	20	4	20	4
└─Media Exposure	12	2	12	2
└─HIV awareness	24	5	24	5
└─Hospitals (per unit population)	20	4	20	4
└─Life Expectency at birth	24	5	24	5
└─Economic Status and Energy	20	20	20	20

Consumption				
└─Per capita income	20	4	20	4
└─Per capita net SDP	20	4	20	4
└─Employment status in organized sector	20	4	20	4
└─Per capita Energy consumption	3	1	3	1
└─Households having electricity	8	2	8	2
└─Population below poverty line	29	6	29	6
└─Crime and Public Protection	20	20	20	20
└─Rate of Riot	27	5	27	5
└─% of cases pending for investigation	35	7	35	7
└─Strength of Civil Police	19	4	19	4
└─Strength of Armed Police	19	4	19	4
└─Status of Women	20	20	20	20
└─Rate of Harassment	23	5	23	5
└─Rate of cruelty by Husband and Relatives	23	5	23	5
└─Females per 1000 males	20	4	20	4
└─Contribution to crime rate against women to all India total	33	7	33	7

Table 2: Results and qualitative values of all the parameters

<u>Attribute</u>	<u>Andhra Pradesh</u>	<u>Arunachal Pradesh</u>	<u>Assam</u>	<u>Bihar</u>	<u>Chattisgarh</u>
Rank	Average	Average	Average	Poor	Poor
—Education	Poor	Poor	Average	Poor	Poor
—Literacy Rate	Poor	Poor	Poor	Poor	Poor
—Per capita expenditure on education	Poor	Average	Poor	Poor	Poor
—Colleges	Average	Poor	Average	Poor	Poor
—High Schools	Average	Poor	Average	Poor	Poor
—Primary Schools	Poor	Average	Average	Poor	Average
—Pupil-Teacher Ratio (High School)	Average	Average	<i>Less</i>	More	<i>Less</i>
—Basic Living, Awareness and Health Care	<i>Good</i>	Average	Poor	Poor	Poor
—Households having permanent Structure	<i>Good</i>	Poor	Poor	Average	Poor
—Media Exposure	<i>Good</i>	Average	Average	Poor	Poor
—HIV awareness	<i>Good</i>	Average	Average	Average	Poor
—Hospitals (per unit population)	Average	<i>Good</i>	Poor	Poor	Poor
—Life Expectancy at birth	Average	Average	Poor	Poor	Poor
—Economic Status and Energy Consumption	Average	Average	Average	Poor	Poor
—Per capita	Poor	Poor	Poor	Poor	Poor

income					
—Per capita net SDP	Poor	Poor	Poor	Poor	Poor
—Employment status in organized sector	Good	Poor	Average	Poor	Poor
—Per capita Energy consumption	Average	<i>Less</i>	<i>Less</i>	<i>Less</i>	More
—Households having electricity	Good	Average	Poor	Poor	Average
—Population below poverty line	<i>Less</i>	<i>Less</i>	<i>Less</i>	More	More
—Crime and Public Protection	Average	Average	Average	Poor	Average
—Rate of Riot	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average	<i>Less</i>
—% of cases pending for investigation	Average	<i>Less</i>	Average	More	<i>Less</i>
—Strength of Civil Police	Poor	Poor	Poor	Poor	Poor
—Strength of Armed Police	Poor	Poor	Poor	Poor	Poor
—Status of Women	Poor	Good	Average	Good	Good
—Rate of Harassment	More	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Rate of cruelty by Husband and Relatives	Average	<i>Less</i>	Average	<i>Less</i>	<i>Less</i>
—Females per 1000 males	Average	Average	Average	Average	Good
—Contribution to crime rate against women to all India total	More	<i>Less</i>	Average	Average	<i>Less</i>

<u>Attribute</u>	<u>Delhi</u>	<u>Goa</u>	<u>Gujrat</u>	<u>Haryana</u>	<u>Himachal Pradesh</u>
Rank	Average	Good	Average	Average	Good
—Education	Average	Average	Poor	Average	<i>Good</i>
—Literacy Rate	<i>Good</i>	<i>Good</i>	Average	Average	<i>Good</i>
—Per capita expenditure on education	Poor	<i>Good</i>	Poor	Poor	Average
—Colleges	Poor	Average	Poor	Poor	Average
—High Schools	<i>Good</i>	Average	Poor	Average	Average
—Primary Schools	Poor	Poor	Poor	Poor	<i>Good</i>
—Pupil-Teacher Ratio (High School)	Average	<i>Less</i>	Average	<i>Less</i>	<i>Less</i>
—Basic Living, Awareness and Health Care	Average	<i>Good</i>	Average	Average	Average
—Households having permanent Structure	<i>Good</i>	<i>Good</i>	<i>Good</i>	Average	<i>Good</i>
—Media Exposure	<i>Good</i>	<i>Good</i>	Average	Average	<i>Good</i>
—HIV awareness	Average	<i>Good</i>	Average	<i>Good</i>	<i>Good</i>
—Hospitals (per unit population)	Poor	Average	Poor	Poor	Poor
—Life Expectancy at birth	Average	Average	Average	Average	Average
—Economic Status and Energy Consumption	Average	<i>Good</i>	Average	Average	Average
—Per capita income	<i>Good</i>	<i>Good</i>	Average	Average	Poor

—Per capita net SDP	<i>Good</i>	<i>Good</i>	Average	Average	Average
—Employment status in organized sector	Poor	Poor	Average	Poor	Poor
—Per capita Energy consumption	More	More	More	Average	Average
—Households having electricity	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>
—Population below poverty line	Average	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Crime and Public Protection	Average	Average	Average	Average	Average
—Rate of Riot	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average
—% of cases pending for investigation	Average	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Strength of Civil Police	Average	Poor	Poor	Poor	Poor
—Strength of Armed Police	Poor	Poor	Poor	Poor	Poor
—Status of Women	<i>Good</i>	<i>Good</i>	<i>Good</i>	Average	<i>Good</i>
—Rate of Harassment	<i>Less</i>	<i>Less</i>	<i>Less</i>	More	<i>Less</i>
—Rate of cruelty by Husband and Relatives	<i>Less</i>	<i>Less</i>	Average	Average	<i>Less</i>
—Females per 1000 males	Poor	Average	Average	Average	Average
—Contribution to crime rate against women to all India total	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>

<u>Attribute</u>	<u>Jammu & Kashmir</u>	<u>Jharkhand</u>	<u>Karnataka</u>	<u>Kerala</u>	<u>Madhya Pradesh</u>
Rank	Average	Average	Average	Good	Average
—Education	Average	Poor	Average	Average	Average
—Literacy Rate	Poor	Poor	Average	<i>Good</i>	Poor
—Per capita expenditure on education	Poor	Poor	Poor	Poor	Poor
—Colleges	Poor	Poor	Average	Poor	Average
—High Schools	Average	Poor	Average	Poor	Poor
—Primary Schools	Average	Poor	Poor	Poor	Average
—Pupil-Teacher Ratio (High School)	<i>Less</i>	More	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Basic Living, Awareness and Health Care	Average	Poor	Average	<i>Good</i>	Poor
—Households having permanent Structure	Average	Poor	Average	<i>Good</i>	Average
—Media Exposure	<i>Good</i>	Poor	<i>Good</i>	<i>Good</i>	Poor
—HIV awareness	<i>Good</i>	Poor	<i>Good</i>	<i>Good</i>	Poor
—Hospitals (per unit population)	Poor	Poor	Poor	Average	Poor
—Life Expectancy at birth	Average	Average	Average	<i>Good</i>	Poor
—Economic Status and Energy Consumption	Average	Average	Average	Average	Average
—Per capita income	Poor	Poor	Poor	Average	Poor

—Per capita net SDP	Poor	Poor	Poor	Average	Poor
—Employment status in organized sector	Poor	Poor	<i>Good</i>	Average	Average
—Per capita Energy consumption	Average	Average	Average	<i>Less</i>	<i>Less</i>
—Households having electricity	<i>Good</i>	Poor	<i>Good</i>	<i>Good</i>	<i>Good</i>
—Population below poverty line	<i>Less</i>	<i>Less</i>	More	Average	<i>Less</i>
—Crime and Public Protection	<i>Good</i>	Average	Average	Average	Average
—Rate of Riot	Average	<i>Less</i>	<i>Less</i>	More	<i>Less</i>
—% of cases pending for investigation	<i>Less</i>	Average	Average	<i>Less</i>	<i>Less</i>
—Strength of Civil Police	<i>Good</i>	Poor	Poor	Poor	Poor
—Strength of Armed Police	Average	Poor	Poor	Poor	Poor
—Status of Women	Average	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>
—Rate of Harassment	More	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Rate of cruelty by Husband and Relatives	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average	<i>Less</i>
—Females per 1000 males	Poor	Average	Average	<i>Good</i>	Average
—Contribution to crime rate against women to all India total	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average

Attribute	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland
Rank	Average	Average	Average	Good	Average
—Education	Average	Average	Average	<i>Good</i>	Average
—Literacy Rate	Average	Average	Average	<i>Good</i>	Average
—Per capita expenditure on education	Poor	Poor	Poor	<i>Good</i>	Poor
—Colleges	Average	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>
—High Schools	Average	Average	Average	<i>Good</i>	Average
—Primary Schools	Poor	Average	<i>Good</i>	Average	Average
—Pupil-Teacher Ratio (High School)	Average	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>
—Basic Living, Awareness and Health Care	Average	Average	Poor	Average	Average
—Households having permanent Structure	Average	Poor	Poor	Average	Poor
—Media Exposure	<i>Good</i>	<i>Good</i>	Average	<i>Good</i>	Average
—HIV awareness	<i>Good</i>	<i>Good</i>	Poor	<i>Good</i>	<i>Good</i>
—Hospitals (per unit population)	Poor	Average	Poor	Poor	Poor
—Life Expectancy at birth	Average	Average	Poor	<i>Good</i>	Average
—Economic Status and Energy Consumption	Average	Poor	Average	Average	Average
—Per capita income	Average	Poor	Poor	Poor	Poor
—Per capita net SDP	Average	Poor	Poor	Poor	Poor

—Employment status in organized sector	Good	Poor	Poor	Poor	Poor
—Per capita Energy consumption	Average	Less	Less	Less	Less
—Households having electricity	Good	Average	Average	Good	Average
—Population below poverty line	More	Average	Less	Less	Less
—Crime and Public Protection	Average	Good	Average	Good	Average
—Rate of Riot	Less	Less	Less	Less	Less
—% of cases pending for investigation	More	Less	Less	Less	Less
—Strength of Civil Police	Poor	Average	Poor	Average	Poor
—Strength of Armed Police	Poor	Good	Poor	Good	Poor
—Status of Women	Good	Good	Good	Good	Good
—Rate of Harassment	Less	Less	Less	Less	Less
—Rate of cruelty by Husband and Relatives	Less	Less	Less	Less	Less
—Females per 1000 males	Average	Average	Average	Average	Average
—Contribution to crime rate against women to all India total	Average	Less	Less	Less	Less

Attribute	Odisha	Punjab	Rajasthan	Sikkim	Tamil Nadu
Rank	Average	Good	Poor	Average	Average
—Education	Average	Average	Poor	Average	Poor
—Literacy Rate	Average	Average	Poor	Average	Average
—Per capita expenditure on education	Poor	Poor	Poor	<i>Good</i>	Poor
—Colleges	Average	Poor	Poor	Poor	Poor
—High Schools	Average	Poor	Poor	Average	Poor
—Primary Schools	Average	Poor	Average	Average	Poor
—Pupil-Teacher Ratio (High School)	<i>Less</i>	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average
—Basic Living, Awareness and Health Care	Poor	<i>Good</i>	Poor	Average	Average
—Households having permanent Structure	Poor	<i>Good</i>	Average	Average	<i>Good</i>
—Media Exposure	Average	<i>Good</i>	Poor	Average	<i>Good</i>
—HIV awareness	Average	<i>Good</i>	Poor	<i>Good</i>	<i>Good</i>
—Hospitals (per unit population)	Poor	Poor	Poor	Poor	Poor
—Life Expectancy at birth	Poor	<i>Good</i>	Poor	Poor	Average
—Economic Status and Energy Consumption	Average	Average	Average	Poor	<i>Good</i>
—Per capita income	Poor	Average	Poor	Poor	Average

—Per capita net SDP	Poor	Average	Poor	Poor	Average
—Employment status in organized sector	Poor	Poor	Average	Poor	Good
—Per capita Energy consumption	Average	Average	Less	Average	Average
—Households having electricity	Poor	Good	Average	Good	Good
—Population below poverty line	Less	More	Less	Average	Less
—Crime and Public Protection	Average	Average	Average	Average	Average
—Rate of Riot	Less	Less	Less	Less	Less
—% of cases pending from investigation	Average	Less	Less	Less	Average
—Strength of Civil Police	Poor	Poor	Poor	Average	Poor
—Strength of Armed Police	Poor	Poor	Poor	Poor	Poor
—Status of Women	Good	Good	Average	Good	Good
—Rate of Harassment	Less	Less	Less	Less	Less
—Rate of cruelty by Husband and Relatives	Less	Less	More	Less	Less
—Females per 1000 males	Average	Poor	Average	Poor	Good
—Contribution to crime rate against women to all India total	Less	Less	More	Less	Less

Attribute	Tripura	Uttar Pradesh	Uttranchal	West Bengal
Rank	Average	Average	Average	Poor
—Education	Average	Poor	Average	Poor
—Literacy Rate	<i>Good</i>	Poor	Average	Average
—Per capita expenditure on education	Average	Poor	Average	Poor
—Colleges	Poor	Poor	Poor	Poor
—High Schools	Poor	Poor	Poor	Poor
—Primary Schools	Poor	Poor	Average	Poor
—Pupil-Teacher Ratio (High School)	<i>Less</i>	More	<i>Less</i>	More
—Basic Living, Awareness and Health Care	Average	Average	Average	Average
—Households having permanent Structure	Poor	Average	<i>Good</i>	Average
—Media Exposure	<i>Good</i>	Average	<i>Good</i>	Average
—HIV awareness	<i>Good</i>	Average	<i>Good</i>	Average
—Hospitals (per unit population)	Poor	Poor	Poor	Poor
—Life Expectancy at birth	Average	Poor	Poor	Average
—Economic Status and Energy Consumption	Poor	Average	Average	Poor
—Per capita income	Poor	Poor	Average	Poor
—Per capita net	Poor	Poor	Poor	Poor

SDP				
—Employment status in organized sector	Poor	<i>Good</i>	Poor	<i>Good</i>
—Per capita Energy consumption	<i>Less</i>	<i>Less</i>	Average	<i>Less</i>
—Households having electricity	Poor	Poor	Average	Poor
—Population below poverty line	Average	<i>Less</i>	Average	More
—Crime and Public Protection	Average	Average	Average	Poor
—Rate of Riot	<i>Less</i>	<i>Less</i>	<i>Less</i>	Average
—% of cases pending from investigation	<i>Less</i>	<i>Less</i>	<i>Less</i>	More
—Strength of Civil Police	Poor	Poor	Poor	Poor
—Strength of Armed Police	Average	Poor	Average	Poor
—Status of Women	Average	Average	<i>Good</i>	Average
—Rate of Harassment	<i>Less</i>	<i>Less</i>	Average	<i>Less</i>
—Rate of cruelty by Husband and Relatives	More	<i>Less</i>	<i>Less</i>	More
—Females per 1000 males	Average	Poor	Average	Average
—Contribution to crime rate against women to all India total	<i>Less</i>	More	<i>Less</i>	More

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