STUDIES

No. 14-02

Human Development in Madhya Pradesh

Evidence from 2011 Population Census

Aalok Ranjan Chaurasia

'Shyam' Institute

This page is intentionally left blank

Human Development in Madhya Pradesh

Evidence from 2011 Population Census

Introduction

Madhya Pradesh was the first state in India to prepare state specific human development report way back in 1995. The 1995 Report has been followed by similar reports in 1998, 2002 and 2007 (Government of Madhya Pradesh, 1995; 1998; 2002; 2007). An integral feature of these reports has been the estimation of human development index (HDI) for the districts of the state following the methodology popularised by United Nations (UNDP, 1990). The last report prepared by the state provides district level estimates of HDI for the year 2005. Since then, there has been little attempt to measure and monitor human progress by calculating HDI for the state and for its constituent districts. Latest estimates of HDI for the state are available through the national human development report 2011 but latest estimates of district HDI are now 10 years old and, therefore, largely irrelevant for development planning and programming.

The human development reports of the state are silent about social class and rural-urban disparities in human development either at the state or at the district level. Chakraborty (2000) has questioned the logic of computing HDI without giving attention to inequalities in human development by socio-demographic groups. Chaurasia (2013) has estimated HDI for rural and urban areas for different social classes for the state and for its constituent districts and observed that social class and rural-urban inequalities in human development in Madhya Pradesh and in its constituent districts are very strong and appear to have persisted over time.

There has also been no attempt to estimate HDI below the district level to measure and monitor human development. The primary reason for not estimating HDI below the district level has been the lack of appropriate data. The conventional HDI is based on macro-level indicators which cannot be easily estimated at the lower tiers of administration because of a number of methodological considerations and because of the fact that there is no system to estimate these indicators at the grass roots level.

In the present paper, we use the data available through the 2011 population census to estimate HDI at sub-district, district and state level separately for rural and urban areas to analyse the human progress in the state and to highlight disparities across administrative units, especially at the sub-district level. Data available through the 2011 population census also permits to analyse rural-urban disparities in human development across the administrative units. The approach adopted in the present paper can be extended up to village and municipal ward level to measure and monitor human progress.

The paper is organised as follows. The next section of the paper outlines the approach adopted to estimate HDI from the data available through the 2011 population census. The approach is the same as adopted by the United Nations but uses a different set of indicators that can be estimated from the data available through the population census. The third section of the paper presents estimates of HDI for the state and for its constituent districts and analyses the trend in human progress. The fourth section of the paper presents estimates of HDI for the sub-districts of the state and discusses rural-urban disparities in human development at the sub-district level. The last section of the paper summarises the findings of the analysis and discusses its policy implications.

Methodology and Data Source

HDI is a response to the need of a measure that could better represent human development in several basic capabilities than the conventional income based measures (Kelly, 1991; Anand and Sen, 1994; Haq, 1995). It is not a comprehensive measure of human development and well-being as it does not cover all the dimensions of human development (Kovacevic, 2010). It focuses on three basic capabilities that are necessary for human progress - a long and healthy life, knowledge, and a decent standard of living. It is argued that if these three basic capabilities are achieved, they would open up opportunities in other dimensions of human development also (Jahan, *no date*). Despite its many limitations, HDI has now become standard yardstick to measure and monitor human progress. A high level of HDI is used as a means of aggrandisement whereas low level of HDI reflects insufficiencies in efforts directed towards human development. The index has also been used to measure the impact of economic policies on the quality of life (Davis and Quinlivan, 2006).

The framework of HDI is parallel to the framework of capabilities expansion propounded by Sen (1985, 1990). The capabilities expansion framework has three components - endowment, individual capacity and social opportunity. Endowment in Sen's framework is congruent with the standard of living in HDI; individual capacity is congruent with longevity while social opportunity is congruent with education. This congruence suggests that improvements in HDI also reflect expansion in individual capabilities. In this sense, HDI may also be viewed as a measure of the performance of human development processes in terms of individual capabilities expansion. This perspective also argues that regional disparities in HDI are essentially a reflection of the disparities in the capabilities of the people of different regions.

There is considerable variation in the set of indicators used for estimating HDI in India and in its constituent states as compared to the indicators used by the United Nations (Chaurasia, 2013). This variation is compelled primarily by the availability of relevant data required for estimating HDI, especially at the lower level of the development administration system. Indicators conventionally used for estimating HDI are generally not available at lower tiers of the development administration system. Estimates of per capita

income, for example, are not available at sub-district level. Similarly, data required to estimate mean years of schooling, expected years of schooling and expectation of life at birth are also not available at sub-district level to facilitate estimation of HDI. As such, the only way out is to use alternative indicators to estimate HDI at sub-district level to measure and monitor human development.

Estimation of HDI involves measurement of 1) standard of living; 2) health status of the people; and 3) the level of education. The most commonly used indicator of the standard of living is the per capita income. One the other hand, health status of the people is measured through life expectancy. Finally, the level of education is measured in terms of literacy. Indicators used to measure the three components of HDI have evolved over time. For example, the HDI estimated in the first Human Development Report prepared by the United Nations is based on 1) gross national product per capita to measure the standard of living; 2) expectation of life at birth to measure the health status; and 3) adult literacy rate to measure the level of education (United Nations, 1990). By contrast, from 2010 onwards, the HDI is estimated by the United Nations on the basis of four indicators: 1) gross national income per capita in terms of purchasing power parity to measure standard of living; expectation of life at birth to measure health status; and 3) mean years of schooling and expected years of schooling to measure the level of education (United Nations, 2010). Similarly, different indicators have been used to estimated HDI in different national and state human development reports (Chaurasia, 2013). On the basis of the primary census abstract 2011, we have selected the following indicators to calculate HDI:

Standard of living	1.	Proportion of households having none of the seven specified assets - radio/transistor; television; computer with or without internet; phone - landline or mobile or both; bicycle; moped/scooter/motorcycle, etc.; and car/jeep/van, etc. (A)
	2.	Proportion of households using banking facilities. (B)
Health and longevity	3.	Proportion of population 0-6 years of age. (H)
Knowledge and education	4.	Effective literacy rate. (E)

The rationale for using availability of households assets and use of banking facilities as indicators of the household standard of living has been discussed at length elsewhere (Chaurasia, 2010; 2013). It is argued that household assets are related to household income in the sense that household income reflects the assets that the household commands and the returns that it is able to earn on these assets.

It is also argued that household assets reflect the accumulation of income and represent wealth and status, economic and social security, and easier access to credit, etc.

Deprivation of household assets is a better measure of the persistence of 'ill-being' than the contemporary income or consumption-based measures of the standard of living. Lack of household assets and inadequate housing conditions is more likely to be associated with the deficiency of resources over a prolonged period of time than with the current income or consumption expenditure. In this context, deprivation indicators allow a broader look at exclusion because of the lack of either resources or opportunities or specific preferences or choices. On the other hand, it is also argued that use of banking facilities by the members of the household is related to the access to resources and the higher is the use of banking facilities the greater is the access to resources and hence better is the standard of living.

The primary census abstract 2011 does not provide any data related to the health of the population. However, it is possible to estimate the proportion of the population aged 0-6 years which can be taken as an indicator reflecting the health of the population. The logic of using the proportion of population aged 0-6 years to reflect as an indicator reflecting the health status of the population lies in the empirical relation between the expectation of life at birth and the proportion of population aged 0-6 years. Based on the data on the expectation of life at birth and the proportion of population aged 0-6 years for 146 countries of the world for the period 2005-10, we found that the expectation of life at birth is directly related to the proportion of population 0-6 years - the increase in the expectation of life at birth results in a decrease in the proportion of population aged 0-6 years. Finally, the effective literacy rate or the proportion of population aged 7 years and above who can read and write with understanding has been taken as the indicator reflecting the level of education of the population simply because estimates of adult literacy rate are not available at the local level.

Using the 4 indicators described above, we have follow the approach adopted by the United Nations (United Nations, 2010) to estimate HDI for Madhya Pradesh and for its constituent districts and sub-districts. First, all the variables were normalised. The goal posts used for normalisation were 0 and 1 for all indicators except the proportion of population 0-6 years of age for which minimum and maximum values were taken to be 0.30 years and 0.05 years respectively. The HDI has been calculated as the product of the index of health (ih), index of education (ie) and index of household standard of living (is). In other words

$$HDI = ih * ie * is$$

where

$$ih = h^{1/3}$$
$$ie = e^{1/3}$$
$$is = s^{1/3} \text{ and } s = (a*b)^{1/2}$$

and a, b, e, h, and s are the normalised values of indicators A, B, E, H and S respectively.

We have calculated HDI for the combined population and for rural and urban areas separately for the state as a whole and for its 50 constituent districts and 342 sub-districts. We have also decomposed the urban-rural difference in HDI into the urban-rural

difference in the three components of HDI as follows:

$$\nabla_{UR} = HDI_U - HDI_R$$
$$= [ih_U * ie_U * is_U] - [ih_R * ie_R * is_R]$$
$$= (ih_U - ih_R) *ie_R*is_R+(ie_U-ie_R)*ih_R*is_R+(is_U-is_R)*ih_R*ie_R+$$
$$+ (ih_U-ih_R)*(ie_U-ie_R)*is_R+(ih_U-ih_R)*ie_R*(is_U-is_R)+ih_R(ie_U-ie_R)*(is-is_R)+$$
$$+ (ie_U-ie_R)*(ih_U-ih_R)*(is_U-is_R)*(im_U-im_R).$$

or

$$\nabla_{UR} = h_{UR}+e_{UR}+s_{UR}+he_{UR}+hs_{UR}+es_{UR}+hes_{UR}$$

where

$$h_{UR} = (ih_U - ih_R) *ie_R*is_R$$
$$he_{UR} = (ih_U-ih_R)*(ie_U-ie_R)*is_R$$
$$hes_{UR} = (ih_U-ih_R)*(ie_U-ie_R)$$

Following the Goldberg's rule, the contribution of the urban-rural difference in the health index to the urban-rural difference in HDI, ∇_{UR}, can be estimated as

$$\nabla h_{UR} = h_{UR}+(he_{UR}+hs_{UR})/2 + ehs_{UR}/3.$$

In the same manner, contribution of the urban-rural difference in e, and s to the urban-rural difference ∇_{UR} can be calculated.

According to the United Nations, the level of human development is termed as low if HDI is less than 0.5. Similarly, the level of human development is termed as medium if HDI ranges between 0.5-0.7; high if HDI ranges between 0.7-0.8; and very high if HDI is at least 0.8. We follow the same classification and add another category of very low level of human development when HDI is less than 0.3.

Results

Level of human development. Estimates of HDI for Madhya Pradesh and for its constituent districts are given in appendix table 1 separately for rural, urban and combined population whereas estimates of HDI for the sub-districts of the state are given in appendix table 2. The data available through the 2011 population census suggests that the level of human development in Madhya Pradesh may be classified as medium with an HDI of 0.617 circa 2011 - 0.563 in the rural areas and 0.761 in the urban areas. Using the data available through the 2001 population census, Chaurasia (2013) has estimated an HDI of 0.502 for the state around 2001 - 0.444 in the rural areas and 0.660 in the urban areas. The estimates of HDI obtained in the present paper are not strictly comparable to estimates of HDI obtained by Chaurasia (2013) because the two estimates are based on different set of indicators. Still, it appears that there has been some improvement in the human development situation in the state and the improvement appears to have been relatively faster in the rural population of the state as compared to its urban population as the increase in HDI has been relatively faster in rural than in urban population.

Summary measures of the variation of HDI across the districts and sub-districts are given in table 1. Across the districts of the state, HDI varies from 0.748 in district Indore to 0.380 in district Alirajpur. In the rural population, HDI is the highest in district Balaghat (0.639) and the lowest in district Alirajpur (0.349). However, in the urban population, district Balaghat has the highest HDI (0.809) while district Sheopur (0.679) has the lowest HDI in the state. In all, in 43 (86 per cent) districts of the state, the level of human development may be termed as medium as HDI ranges between 0.5 through 0.7 in these districts. On the other hand, in 3 districts, the level of human development may be termed as low (HDI ranges between 0.3 through 0.5). These districts are Jhabua, Alirajpur and Barwani. All the three districts are located in the south-west corner of the state and are geographically contiguous. A important feature that is common to all the three districts is that a very high proportion of population in these districts is Scheduled Tribes population. Moreover, there are 4 districts where the level of human development may be termed as high (HDI ranges between 0.7 through 0.8). These districts are Indore, Bhopal, Jabalpur and Gwalior. There is no district in the state where the level of human development is very high (HDI is at least 0.8). Similarly, there is no district in the state where the level of human development is very low (HDI less than 0.3).

The human development scenario in rural and urban population of different districts is contrastingly different. HDI in the rural population is the highest in district Balaghat (0.639) but the lowest in district Alirajpur (0.349). There is no district in the state where the level of human development in the rural population is high or very high (HDI is at least 0.7). On the other hand, in 7 districts, the level of human development in the rural population is low (HDI ranges between 0.5-0.7). These seven districts are Alirajpur, Ashoknagar, Barwani, Burhanpur, Jhabua, Sheopur and Singrauli. Out of these 7 districts, 4 - Alirajpur, Barwani, Burhanpur, Jhabua - are geographically contiguous and are located in the south-west corner of the state.

The human development scenario in the urban population of the districts is different. There are 2 districts - Betul and Jabalpur - where the human development appears to be very high (HDI is more than 0.8). In addition, in 42 districts, the level of human development appears to be high as HDI in the urban population, in these districts, ranges between 0.7-0.8. This leaves only 6 districts where the level of human development in the urban population is medium (HDI ranges between 0.5-0.7). These districts are Ashoknagar, Barwani, Burhanpur, Guna, Rajgarh and Sheopur. There is not district where the level of human development in the urban population is either low or very low (HDI less than 0.5). There are thus 4 districts in the state - Ashoknagar, Barwani, Burhanpur, and Sheopur - where the level of human development is low in the rural population and medium in the urban population.

The inter-district inequality in human development in the combined population is wider than that in the rural population and in the urban population. The coefficient of variation in HDI across the districts is estimated to be 0.122 in the combined population but 0.115 in the rural population and only 0.048 in the urban population.

Across the sub-districts of the state, HDI is estimated to be the highest in sub-district Jabalpur in district Jabalpur (0.790) but the lowest in sub-district Pati in district Barwani (0.275). In the rural population, HDI is the highest in Kurai sub-district of district Seoni (0.694) but the lowest in sub-district Pati of district Barwani (0.275). In the urban population, on the other hand, HDI has been estimated to be the highest in sub-district Dolariya of district Hoshangabad (0.894) but the lowest in sub-district Rahatgarh of district Sagar. The level of human development is medium in around 280 (81.67 per cent) sub-districts of the state. There are only 26 sub-districts where the level of human development in the combined population is high (HDI ranges between 07-0.8) but there is no sub-district where the level of human development is very high. By contrast, there are 2 sub-districts where the level of human development is very low. These sub-districts are Pati in district Barwani and Bajna in district Ratlam. Moreover, in 34 (9.94 per cent) the level of human development is low. There is no sub-district where the level of human development is very high.

The urban-rural contrast in human development at the sub-district level is also very clear. There is sub-district in the state where the level of human development is either high or very high. At the same time, there is no sub-district in the state where the level of human development in the urban population is low or very low. In 21 (6.14 per cent) sub-districts, the level of human development in the urban population is very high (HDI at least 0.8) and in 162 (47.37 per cent) sub-districts, the level of human development in the urban population is high (HDI ranges between 0.7-0.8).

Urban-Rural difference in HDI. The HDI in the urban population is higher than that in the rural population in the state, in all districts and in all but one sub-districts of the state. At the state level, HDI in the urban population is higher than that in the rural population by 0.198 absolute points which reflects the disparity in human development in urban and rural population in the state. At the district level, the urban-rural difference in human development appears to be the widest in district Alirajpur as the difference between urban and rural HDI is 0.368. By contrast, the urban-rural difference in human development appears to be the narrowest in district datia as the difference between urban and rural HDI is 0.128. In almost three-fourth districts of the state, the urban-rural difference in human development does not appear to be very large as urban-rural difference in HDI is less than 0.2. There are however 11 districts where the disparity in human development in urban and rural population appears to be quite substantial. In these districts urban-rural difference in HDI ranges between 0.2-0.3. Finally, the urban-rural disparity in human development is very wide in two districts - Alirajpur and Jhabua.

At the sub-district level, the urban-rural difference in HDI is found to be positive in all but one sub-district of the state. In the sub-district Lalbarra of district Balaghat, HDI in the rural population is found to be higher than the HDI in the urban population suggesting the human development in the rural population is relatively better than that in the urban population of the sub-district. Among the remaining sub-districts of the state, the urban-rural difference in HDI has been found to be the lowest in sub-district Rahatgarh of district

Sagar but the highest in sub-district Jhabua of district Jhabua. There are 46 sub-districts in the state where the urban-rural disparity in human development is quite narrow as the urban-rural difference in HDI, although positive, is less than 0.1. On the other hand, in 188 (55 per cent) sub-districts, the disparity in human development may be termed as narrow as the urban-rural difference in HDI ranges between 0.1-0.2. However, in 47 sub-districts (13.75 per cent) of the state, the urban-rural disparity in human development appears to be wide and in 10 sub-districts, it appears to be very wide. There are 3 sub-districts in the state - Jhabua in district Jhabua, Sailana in district Ratlam and Jobat in district Alirajpur - where the urban-rural disparity in human development appears to be extremely wide. In sub-district Jhabua of district Jhabua, the HDI in the rural population is only 0.322 compared to an HDI of 0.782 in the urban population reflecting extreme disparity in human development situation in rural and urban population of the sub-district.

Decomposition of urban-rural difference in HDI. The observed difference in HDI is the result of the urban-rural difference in the three components that constitute HDI. It is possible to decompose the urban-rural difference in HDI into the urban-rural difference in the three components of HDI. Appendix table 3 presents results of the decomposition exercise for the state and for its constituent districts whereas appendix table 4 presents decomposition results for those sub-districts which have both urban and rural population at the time of 2011 population census. There were 60 sub-districts in the state where there was no urban population at the 2011 population census and so these sub-districts were not included in the decomposition analysis.

The decomposition analysis suggests that, for the state as a whole, the urban rural difference in HDI is around 0.198 absolute points. Almost 47 per cent of this difference is accounted by the difference in the index of household assets comprising of the availability of selected household assets and the use of banking facilities in urban as compared to the rural population whereas around 29 per cent of the difference in HDI is accounted by the difference in urban and rural literacy rate. Finally, the difference in the health status of urban and rural population, measured in terms of the urban-rural difference proportion of population aged 0-6 years, accounts for less than one fourth of the difference between the HDI in urban and rural population.

The contribution of the urban-rural difference in the three components of HDI to the urban-rural difference in HDI varies widely across districts and sub-districts. For example, urban-rural difference in asset index accounts for more than 76 per cent of the urban-rural difference in HDI in district Bhind but only about 28 per cent of the difference in district Mandla. Similarly, urban-rural difference in the health index accounts for 39 per cent of the urban-rural difference in HDI in district Umaria but only 9 per cent of the difference in district Rajgarh. In district Alirajpur, urban-rural difference in literacy accounts for more than 42 per cent of the urban-rural difference in HDI but only 10 per cent in district Bhind.

Like the districts, the contribution of the urban-rural difference in different component of HDI to the urban-rural difference in HDI varies widely across sub-districts. An

interesting observation of sub-district level decomposition analysis is that in 14 sub-districts, urban-rural difference in at least one component of HDI is negative which implies relatively better situation in rural than in urban population. For example, the asset index is higher in rural than in urban population in two sub-districts - Majholi in district Jabalpur and Lalbarra in district Balaghat. Similarly, the education index in the rural population is higher than that in the urban population in 5 sub-districts - Rahatgarh in district Sagar, Kotar in district Satna, Gohad and Gormi in district Bhind and Lalbarra in district Balaghat. On the other hand, the health index is higher in the rural population than that in the urban population in 11 sub-districts - Rahatgarh of district Sagar; Gogaon in district Khargone; Lalbarra in district Balaghat; Gormi in district Bhind; Daloda in district Mandsaur; Nalkhera in district Shajapur, Tonk-Khurd in district Dewas, Mangawan in district Rewa; Sawer in district Indore; Patan in district Jabalpur; and Pachchor in district Rajgarh.

In order to analyse further the pattern of contribution of the urban-rural difference in the four components of HDI to the urban-rural difference in HDI at the sub-district level, we have used two-step cluster analysis procedure to group sub-districts with similar pattern of contribution of urban-rural difference in the four components of HDI to the urban-rural difference in HDI. The analysis was limited to only those sub-districts where the urban-rural difference was positive in all the four components of HDI. The cluster analysis reveals that the 268 sub-districts of the state can be grouped into three clusters as far as the urban-rural difference in HDI is concerned. The first cluster comprises of 164 (48.0 per cent) sub-districts whereas cluster two comprises of 91 (26.6 per cent) sub-districts. Cluster three, on the other hand, is a small cluster comprising of only 13 (3.8 per cent) sub-districts. Finally, there are 14 (4.1 per cent) sub-districts where the urban-rural difference is negative in at least one component of HDI while there was no urban population in 60 (17.5 per cent) sub-districts at the 2011 population census. In sub-district Lalbarra in district Balaghat, urban-rural difference is negative in all the three components of HDI whereas in sub-district Rahatgarh in district Sagar, the urban-rural difference is negative in two of the three components of HDI. In the remaining sub-districts, the urban-rural difference is negative in one component only.

The centroids of the three components of HDI in the three clusters are given in table 5. The table suggests that the urban-rural difference in HDI is the narrowest in cluster one but the widest in cluster three. The urban-rural difference in HDI in cluster three is almost two times the urban-rural difference in cluster one. Sub-districts included in this cluster include all the five sub-districts of district Jhabua and two of the three sub-districts of district Alirajpur. Other sub-districts where urban-rural disparity in human development is found to be exceptionally high are sub-district Jamai in district Chhindwara; sub-districts Barwani and Sendhwa in district Barwani; sub-districts Chitrangi in district Singrauli; sub-district Nepanagar in district Burhanpur; and sub-district Sailana in district Ratlam. Little is currently known about very strong urban-rural difference in HDI. In any case, an investigation of very wide urban-rural inequality in HDI in these sub-districts is the need of the time.

Conclusions

Main conclusions of the present analysis may be summarised as under:

1. The level of human development in Madhya Pradesh may at best be termed as medium in the total and rural population but high in the urban population.
2. There are only 4 districts in the state where the level of human development is high. In majority of the districts (43), the level of human development is medium but there are 3 districts where the level of human development is low.
3. In the rural population, the level of human development is low in 7 districts but medium in 43 districts. There is no district where the level of human development in the rural population is either high or very high.
4. In the urban population, the level of human development is very high in 2 districts, high in 42 districts and medium in 6 districts. There is no district where the level of human development in the urban population is either low or very low.
5. The level of human development is very low in 2 sub-districts of the state; low in 34 sub-districts; medium in 280 sub-districts; and high in 26 sub-districts. There is no sub-district where the level of human development is very high. This indicates that disparity in human development across the sub-districts of the state is very wide.
6. In the rural population, the level of human development is found to be very low in 2 sub-districts; low in 52 sub-districts and medium in 288 sub-districts. There is no sub-district in the state where the level of human development in the rural population is high or very high.
7. In the urban population, the level of human development is very high in 21 sub-districts; high in 162 sub-districts; and medium in 99 sub-districts. There is no sub-district in the state where the level of human development in the urban population is either low or very low.
8. The urban-rural disparity in human development is quite substantial in 13 districts of the state. This disparity is at its extreme in Jhabua and Alirajpur districts of the state.
9. The urban-rural disparity in human development is very low in 46 sub-districts of the state; low in 188 sub-districts and medium in 37 sub-districts. The urban-rural disparity in human development is high in 7 sub-districts and very high in three sub-districts. In 60 sub-districts, there was no urban population at the time of 2011 population census. There is one sub-district, sub-district Lalbarra in district Balaghat where human development situation in the rural population is relatively better than that in the urban population.
10. The relative contribution of the disparity in different components of human development to the disparity in human development as a whole varies widely across districts and across sub-districts. At the state level, the contribution of the urban-rural disparity in the availability of basic household amenities - safe drinking water, electricity and improved sanitation - is the highest followed by the urban rural disparity in the availability of selected household assets and use of banking facilities. On the other hand, the contribution of the urban-rural disparity in the health status

of the population and the level of literacy is relatively small. At district and sub-district level, the relative contribution of urban-rural difference in different components of HDI to urban-rural difference in HDI varies widely.

10. There are 14 sub-districts where the human development situation appears to be comparatively better in rural than in the urban population in at least one component of HDI.

References

Anand S, Sen AK (1994) *Human Development Index: Methodology and Measurement*. New York, United Nations Development Programme. Human Development Office.

Chakraborty A (2000) Issues in social indicators, composite indices and inequality. *Economic and Political Weekly* 37(13):1199-1202.

Chaurasia AR (2010) Madhya Pradesh: A tale of poverty versus growth. In Shovan Ray (Ed) *Backwaters of Development: Six Deprived States of India*. New Delhi, Oxford University Press.

Chaurasia AR (2013)Social class and residential disparities in human development in Madhya Pradesh. *Indian Journal of Human Development* 7(2):275-299.

Davis A, Quinlivan G (2006) A panel data analysis of the impact of trade on human development. *The Journal of Socio-Economics* 35(5):868-876.

Government of Madhya Pradesh (1995) *Madhya Pradesh Human Development Report 1995*. Bhopal, Department of Institutional Finance.

Government of Madhya Pradesh (1998) *Madhya Pradesh Human Development Report 1998*. Bhopal, Department of Institutional Finance.

Government of Madhya Pradesh (2002) *Madhya Pradesh Human Development Report 2002*. Bhopal, Department of Institutional Finance.

Government of Madhya Pradesh (2007) *Madhya Pradesh Human Development Report 2007*. Bhopal, Department of Institutional Finance.

Haq M (1995) *Reflections on Human Development*. New York, Oxford University Press.

Jahan S (nd) Measuring human development: Evolution of HDI. Available at http://hdr.undp.org/en/media/Jahan-HDI.pdf.

Kelly (1991) The human development index: 'Handle with care'. *Population and Development Review* 17(2):315-324.

Kovacevic M (2010) Review of HDI critiques and potential improvements. *Human Development Research Paper-2010/33*. New York, United Nations Development Programme. Human Development Report Office.

Sen AK (1985) *Commodities and Capabilities*. Oxford, Elsevier Science Publishers.

Sen AK (1990) Development as capability expansion. In K Griffin and J Knight (Eds) *Human Development and the International Development Strategy for the 1990s*. London, Macmillan.

United Nations (1990) *Human Development Report 1990*. Oxford, Oxford University Press.

Table 1
Distribution of districts and sub-districts by level of human development

Districts/Sub-districts	Rural	Urban	Total
Districts			
Very low	0	0	0
Low	7	0	3
Medium	43	6	43
High	0	42	4
Very high	0	2	0
Minimum	0.349	0.675	0.380
Mean	0.557	0.745	0.601
Median	0.572	0.746	0.609
Maximum	0.639	0.809	0.748
SD	0.064	0.036	0.073
IQR	0.086	0.063	0.085
Skewness	-1.342	-0.111	-0.703
Kurtosis	2.291	-1.092	1.609
Coefficient of variation	0.115	0.048	0.122
Sub-districts			
Very low	2	0	2
Low	52	0	34
Medium	288	99	280
High	0	162	26
Very high	0	21	0
Minimum	0.275	0.571	0.275
Mean	0.559	0.720	0.587
Median	0.567	0.722	0.593
Maximum	0.694	0.894	0.790
SD	0.074	0.054	0.082
IQR	0.086	0.081	0.090
Skewness	-1.092	0.020	-0.641
Kurtosis	1.766	-0.311	1.368
Coefficient of variation	0.132	0.074	0.139

Source: Author's calculations
Remarks: There was no urban population in 60 sub-districts at the 2011 population census

Table 2
Summary measures of variation in HDI, urban-rural in HDI and urban-rural difference in different components of HDI

Summary measure	HDI	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Cluster 1 (164 sub-districts)				
Centroid	0.622	0.126	0.026	0.039	0.061
Minimum	0.496	0.047	0.002	0.002	0.006
Maximum	0.776	0.186	0.075	0.080	0.098
SD	0.060	0.031	0.015	0.016	0.020
	Cluster 2 (91 Sub-districts)				
Centroid	0.575	0.195	0.038	0.052	0.010
Minimum	0.419	0.138	0.003	0.014	0.062
Maximum	0.790	0.267	0.081	0.101	0.153
SD	0.069	0.029	0.017	0.019	0.018
	Cluster 3 (13 Sub-districts)				
Centroid	0.431	0.362	0.105	0.021	0.130
Minimum	0.369	0.241	0.077	0.085	0.056
Maximum	0.604	0.460	0.146	0.168	0.197
SD	0.071	0.066	0.021	0.026	0.037

Source: Author's calculations

Remarks: There is no urban population in 60 sub-districts. In 14 sub-districts, urban-rural difference is negative in at least one component of HDI. These sub-districts are not included in decomposition analysis.

Appendix Table 1
HDI in Madhya Pradesh and constituent districts, 2011

State/District	Rural		Urban		Total	
	HDI	Rank	HDI	Rank	HDI	Rank
Madhya Pradesh	0.563		0.761		0.617	
Sheopur	0.497	44	0.675	50	0.524	47
Morena	0.555	27	0.719	36	0.595	29
Bhind	0.587	21	0.720	35	0.623	23
Gwalior	0.578	25	0.792	4	0.713	4
Datia	0.609	12	0.736	30	0.637	15
Shivpuri	0.510	40	0.714	38	0.544	41
Tikamgarh	0.539	34	0.702	44	0.566	35
Chhatarpur	0.540	33	0.731	32	0.582	32
Panna	0.551	30	0.736	29	0.572	34
Sagar	0.554	28	0.750	23	0.610	25
Damoh	0.518	39	0.733	31	0.560	38
Satna	0.617	6	0.766	17	0.647	13
Rewa	0.596	17	0.765	18	0.622	24
Umaria	0.579	24	0.749	24	0.608	26
Neemuch	0.607	13	0.759	21	0.650	12
Mandsaur	0.605	14	0.764	19	0.639	14
Ratlam	0.530	36	0.773	16	0.602	28
Ujjain	0.588	18	0.775	14	0.662	7
Shajapur	0.581	22	0.713	39	0.607	27
Dewas	0.581	23	0.747	25	0.629	20
Dhar	0.504	43	0.705	42	0.543	42
Indore	0.637	3	0.785	9	0.748	1
Khargone	0.506	42	0.726	34	0.541	44
Barwani	0.401	48	0.695	47	0.446	48
Rajgarh	0.525	37	0.695	46	0.554	39
Vidisha	0.537	35	0.712	41	0.578	33
Bhopal	0.567	26	0.779	12	0.740	2
Sehore	0.610	11	0.754	22	0.637	16
Raisen	0.547	31	0.704	43	0.584	30
Betul	0.612	9	0.809	1	0.652	10
Harda	0.588	19	0.779	13	0.629	19
Hoshangabad	0.616	7	0.800	3	0.675	5
Katni	0.588	20	0.781	11	0.626	22
Jabalpur	0.639	2	0.802	2	0.732	3
Narsimhapur	0.597	16	0.763	20	0.628	21
Dindori	0.553	29	0.728	33	0.562	36

State/District	Rural		Urban		Total	
	HDI	Rank	HDI	Rank	HDI	Rank
Mandla	0.613	8	0.787	7	0.636	18
Chhindwara	0.610	10	0.788	5	0.654	9
Seoni	0.633	4	0.788	6	0.652	11
Balaghat	0.639	1	0.774	15	0.659	8
Guna	0.493	47	0.696	45	0.545	40
Ashoknagar	0.507	41	0.684	49	0.540	45
Shahdol	0.599	15	0.786	8	0.636	17
Anuppur	0.619	5	0.783	10	0.664	6
Sidhi	0.519	38	0.713	40	0.535	46
Singrauli	0.493	46	0.745	26	0.542	43
Jhabua	0.371	49	0.739	28	0.405	49
Alirajpur	0.349	50	0.718	37	0.380	50
Khandwa	0.543	32	0.744	27	0.583	31
Burhanpur	0.495	45	0.688	48	0.562	37

Source: Author's calculations

Appendix Table 2
HDI in sub-districts of Madhya Pradesh, 2011

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
Sheopur	Vijaypur	0.463	313	0.663	235	0.486	314
	Beerpur	0.491	301	na	na	0.491	313
	Sheopur	0.536	232	0.686	204	0.579	195
	Badoda	0.550	205	0.638	266	0.567	219
	Karahal	0.430	323	na	na	0.430	325
Morena	Ambah	0.578	150	0.745	94	0.609	134
	Porsa	0.599	112	0.725	132	0.623	107
	Morena	0.556	191	0.718	147	0.627	95
	Joura	0.535	235	0.672	221	0.548	251
	Kailaras	0.542	219	0.725	131	0.568	218
	Sabalgarh	0.531	245	0.724	133	0.574	199
Bhind	Ater	0.605	99	na	na	0.605	146
	Bhind	0.605	98	0.758	74	0.673	41
	Mehgaon	0.564	174	0.675	217	0.577	197
	Gormi	0.593	121	0.639	265	0.600	157
	Gohad	0.572	162	0.645	262	0.592	175
	Ron	0.589	125	na	na	0.589	181
	Mihona	0.562	181	0.727	124	0.596	167
	Lahar	0.585	135	0.721	145	0.628	93
Gwalior	Gwalior	0.583	139	0.804	17	0.748	6
	Dabra	0.576	151	0.716	151	0.636	84
	Bhitarwar	0.549	207	0.662	239	0.569	213
	Chinour	0.586	133	0.692	193	0.596	168
Datia	Seondha	0.590	124	0.679	213	0.608	139
	Indergarh	0.615	80	0.721	143	0.632	88
	Datia	0.588	130	0.751	84	0.636	85
	Bhander	0.654	20	0.733	113	0.665	52
Shivpuri	Pohri	0.526	256	na	na	0.526	283
	Shivpuri	0.513	275	0.726	126	0.624	104
	Narwar	0.517	270	0.692	192	0.535	270
	Karera	0.571	163	0.760	70	0.598	165
	Kolaras	0.478	306	0.636	269	0.496	308
	Badarwas	0.499	289	0.663	236	0.511	298
	Pichhore	0.488	302	0.722	141	0.505	303
	Khaniyadhana	0.477	307	0.645	261	0.491	312
Tikamgarh	Niwari	0.603	108	0.715	154	0.623	105
	Orchha	0.569	169	0.702	179	0.606	144

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Prithvipur	0.543	215	0.651	260	0.563	227
	Jatara	0.532	243	0.665	231	0.551	245
	Mohangarh	0.527	254	na	na	0.527	281
	Palera	0.534	237	0.626	274	0.541	262
	Baldeogarh	0.495	296	0.659	243	0.506	301
	Khargapur	0.508	281	0.654	258	0.527	280
	Tikamgarh	0.540	222	0.751	86	0.608	138
Chhatarpur	Gaurihar	0.518	267	0.654	256	0.525	284
	Laundi	0.550	206	0.712	159	0.586	185
	Chandla	0.535	233	0.662	238	0.551	247
	Nowgong	0.610	90	0.793	25	0.668	47
	Maharajpur	0.578	149	0.704	171	0.622	108
	Chhatarpur	0.550	204	0.766	63	0.638	82
	Rajnagar	0.543	216	0.702	176	0.566	221
	Bada Malhera	0.512	276	0.681	209	0.538	268
	Ghuwara	0.494	297	0.616	278	0.510	299
	Bijawar	0.519	265	0.672	222	0.545	256
	Buxwaha	0.508	282	0.682	208	0.527	279
Panna	Ajaigarh	0.539	226	0.707	167	0.555	240
	Panna	0.531	248	0.788	33	0.626	98
	Devendranagar	0.562	180	0.666	228	0.586	186
	Gunnor	0.604	102	na	na	0.604	147
	Amanganj	0.534	240	0.696	188	0.552	242
	Pawai	0.552	198	0.697	186	0.564	225
	Shahnagar	0.514	273	na	na	0.514	295
	Raipura	0.557	190	na	na	0.557	237
Sagar	Bina	0.588	131	0.781	43	0.663	55
	Khurai	0.604	103	0.737	108	0.638	80
	Malthon	0.520	264	na	na	0.520	289
	Banda	0.514	274	0.685	205	0.539	266
	Shahgarh	0.518	268	0.721	144	0.542	259
	Rahatgarh	0.569	170	0.571	282	0.570	210
	Sagar	0.584	138	0.769	59	0.675	40
	Garhakota	0.538	228	0.705	170	0.583	191
	Rehli	0.554	194	0.724	134	0.590	178
	Kesli	0.504	287	na	na	0.504	304
	Deori	0.539	225	0.768	60	0.574	201
Damoh	Hatta	0.520	263	0.738	107	0.564	224
	Patera	0.539	224	na	na	0.539	265

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Batiyagarh	0.505	285	na	na	0.505	302
	Patharia	0.534	238	0.718	146	0.563	228
	Damoh	0.531	246	0.743	95	0.629	92
	Jabera	0.495	295	0.669	225	0.503	305
	Tendukheda	0.492	299	0.661	241	0.508	300
Satna	Raghurajnagar	0.648	27	0.797	24	0.733	10
	Majhgawan	0.537	230	0.642	263	0.559	235
	Birsinghpur	0.613	83	0.696	189	0.628	94
	Nagod	0.640	36	0.790	30	0.654	63
	Unchahara	0.624	64	0.703	173	0.632	89
	Rampur Baghelan	0.615	79	0.697	187	0.621	112
	Kotar	0.656	15	0.726	128	0.661	56
	Amarpatan	0.603	107	0.709	163	0.611	128
	Ramnagar	0.615	81	na	na	0.615	123
	Maihar	0.598	114	0.748	91	0.615	124
Rewa	Teonthar	0.584	137	0.663	237	0.593	173
	Jawa	0.572	161	na	na	0.572	203
	Sirmour	0.612	85	0.722	139	0.623	106
	Mangawan	0.611	87	0.700	182	0.616	120
	Semaria	0.605	97	0.698	185	0.612	127
	Hanumana	0.538	227	0.655	254	0.545	255
	Mauganj	0.592	122	0.658	247	0.601	156
	Naigarhi	0.603	106	0.655	252	0.606	143
	Huzur	0.651	24	0.813	8	0.733	9
	Raipur-Karchuliyan	0.620	72	na	na	0.620	117
	Gurh	0.581	144	0.690	194	0.593	172
Umaria	Bandhogarh	0.562	179	0.779	45	0.620	116
	Chandia	0.557	189	0.605	280	0.565	223
	Manpur	0.580	145	na	na	0.580	192
	Pali	0.619	73	0.780	44	0.672	42
	Nowrozabad	0.576	155	0.751	85	0.637	83
Neemuch	Jawad	0.634	45	0.759	72	0.661	57
	Singoli	0.616	76	0.723	138	0.634	86
	Neemuch	0.656	17	0.777	46	0.719	15
	Jiran	0.617	74	0.751	82	0.639	79
	Manasa	0.552	200	0.732	116	0.589	182
Mandsaur	Bhanpura	0.574	157	0.739	102	0.606	145
	Malhargarh	0.621	67	0.746	93	0.641	76
	Garoth	0.604	101	0.726	125	0.618	118

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Shamgarh	0.553	197	0.738	106	0.590	177
	Mandsaur	0.645	31	0.792	27	0.707	24
	Daloda	0.639	38	0.695	191	0.643	75
	Sitamau	0.589	127	0.742	97	0.601	155
	Suwasara	0.568	171	0.714	156	0.590	179
Ratlam	Piploda	0.616	78	0.706	169	0.622	110
	Jaora	0.605	100	0.716	149	0.641	77
	A lot	0.562	178	0.700	183	0.591	176
	Tal	0.595	120	0.684	206	0.607	142
	Sailana	0.371	331	0.821	6	0.410	329
	Bajna	0.294	341	na	na	0.294	341
	Rawti	0.399	326	na	na	0.399	330
	Ratlam	0.576	152	0.799	22	0.695	29
Ujjain	Khacharod	0.586	134	0.752	80	0.621	114
	Nagda	0.544	214	0.774	51	0.657	59
	Mahidpur	0.537	231	0.674	219	0.559	234
	Ghatiya	0.601	109	na	na	0.601	154
	Tarana	0.576	156	0.663	233	0.588	183
	Ujjain	0.628	54	0.792	26	0.755	5
	Badnagar	0.639	39	0.771	56	0.656	60
Shajapur	Susner	0.545	211	0.666	229	0.571	205
	Nalkheda	0.570	168	0.658	245	0.587	184
	Badod	0.520	262	0.670	223	0.535	269
	Agar	0.544	213	0.696	190	0.585	187
	Shajapur	0.596	118	0.748	90	0.650	71
	Gulana	0.609	91	na	na	0.609	136
	Moman Badodiya	0.548	209	na	na	0.548	250
	Shujalpur	0.625	62	0.727	123	0.658	58
	Kalapipal	0.621	70	0.711	160	0.626	97
Dewas	Tonk Khurd	0.637	43	0.681	210	0.640	78
	Sonkatch	0.606	96	0.679	212	0.622	109
	Dewas	0.633	49	0.783	38	0.720	14
	Kannod	0.523	258	0.709	164	0.552	244
	Satwas	0.518	266	0.629	272	0.544	257
	Bagli	0.525	257	0.660	242	0.540	263
	Hatpiplya	0.579	147	0.701	181	0.599	160
	Khategaon	0.579	148	0.727	122	0.599	161
Dhar	Badnawar	0.597	117	0.739	103	0.610	132
	Sardarpur	0.469	311	0.722	140	0.493	310

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Dhar	0.534	236	0.704	172	0.607	140
	Gandhwani	0.417	325	na	na	0.417	328
	Kukshi	0.452	317	0.703	174	0.482	315
	Dahi	0.444	320	0.636	270	0.460	322
	Manawar	0.532	244	0.684	207	0.547	252
	Dharampuri	0.520	261	0.703	175	0.568	216
Indore	Depalpur	0.635	44	0.723	136	0.654	64
	Hatod	0.634	46	0.699	184	0.652	67
	Sawer	0.645	29	0.702	177	0.653	66
	Indore	0.641	34	0.787	34	0.776	2
	Mhow	0.629	53	0.801	20	0.690	33
Khargone	Barwaha	0.570	166	0.765	65	0.613	125
	Maheshwar	0.544	212	0.739	104	0.575	198
	Kasrawad	0.566	172	0.652	259	0.574	200
	Segaon	0.512	277	na	na	0.512	297
	Bhikangaon	0.510	280	0.716	150	0.528	276
	Khargone	0.616	77	0.726	129	0.676	39
	Gogaon	0.495	294	0.572	281	0.502	306
	Bhagwanpura	0.342	336	na	na	0.342	339
	Jhiranya	0.372	330	na	na	0.372	337
Barwani	Barwani	0.422	324	0.760	71	0.515	294
	Pati	0.275	342	na	na	0.275	342
	Thikri	0.531	247	0.668	227	0.544	258
	Anjad	0.561	183	0.625	275	0.579	193
	Rajpur	0.434	322	0.658	246	0.467	319
	Pansemal	0.450	319	0.687	201	0.495	309
	Niwali	0.373	329	na	na	0.373	335
	Sendhwa	0.334	338	0.688	199	0.426	326
	Varla	0.324	339	na	na	0.324	340
Rajgarh	Jirapur	0.487	303	0.668	226	0.516	293
	Khilchipur	0.507	284	0.679	211	0.531	273
	Rajgarh	0.511	278	0.747	92	0.551	246
	Biaora	0.517	269	0.707	165	0.558	236
	Sarangpur	0.548	208	0.655	255	0.567	220
	Narsinghgarh	0.515	271	0.717	148	0.546	254
	Pachore	0.582	142	0.663	234	0.599	159
Vidisha	Lateri	0.439	321	0.637	268	0.464	320
	Sironj	0.481	304	0.635	271	0.516	292
	Kurwai	0.596	119	0.687	202	0.604	148

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Basoda	0.564	175	0.711	161	0.622	111
	Tyonda	0.526	255	na	na	0.526	282
	Nateran	0.534	239	na	na	0.534	271
	Shamshabad	0.452	318	0.641	264	0.473	316
	Gyaraspur	0.560	184	na	na	0.560	232
	Gulabganj	0.626	61	na	na	0.626	100
	Vidisha	0.607	94	0.753	78	0.678	38
Bhopal	Berasia	0.511	279	0.655	253	0.529	275
	Huzur	0.622	66	0.781	42	0.765	4
Sehore	Sehore	0.626	59	0.789	32	0.690	35
	Shyampur	0.608	92	na	na	0.608	137
	Ashta	0.652	23	0.712	158	0.667	49
	Jawar	0.633	48	0.688	200	0.638	81
	Ichhawar	0.554	195	0.723	137	0.570	211
	Nasrullaganj	0.559	187	0.742	98	0.585	188
	Budni	0.640	35	0.764	66	0.663	54
	Rehti	0.582	143	0.740	100	0.602	153
Raisen	Raisen	0.540	220	0.729	120	0.584	189
	Gairatganj	0.556	192	0.637	267	0.568	215
	Begamganj	0.522	259	0.687	203	0.562	230
	Goharganj	0.574	159	0.715	153	0.633	87
	Baraily	0.574	158	0.713	157	0.607	141
	Badi	0.551	203	0.664	232	0.570	208
	Silwani	0.497	291	0.662	240	0.517	291
	Udaipura	0.559	186	0.724	135	0.579	194
Betul	Bhainsdehi	0.529	249	0.738	105	0.539	267
	Athner	0.608	93	0.742	99	0.624	102
	Betul	0.652	21	0.812	9	0.719	17
	Chicholi	0.540	221	0.750	87	0.565	222
	Ghoda Dongri	0.640	37	0.826	5	0.719	18
	Shahpur	0.589	128	0.751	83	0.598	163
	Multai	0.669	9	0.798	23	0.683	36
	Amla	0.628	56	0.831	2	0.664	53
Harda	Khirkiya	0.576	154	0.732	117	0.615	122
	Sirali	0.533	241	na	na	0.533	272
	Harda	0.658	14	0.784	36	0.719	16
	Handiya	0.570	167	na	na	0.570	209
	Timarni	0.679	6	0.809	13	0.717	19
	Rehatgaon	0.542	218	na	na	0.542	260

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
Hoshangabad	Seoni-Malwa	0.630	52	0.782	40	0.654	62
	Itarsi	0.638	41	0.830	3	0.734	8
	Hoshangabad	0.667	10	0.810	12	0.770	3
	Dolariya	0.685	4	0.894	1	0.722	13
	Babai	0.576	153	0.707	166	0.593	171
	Sohagpur	0.621	69	0.769	57	0.646	72
	Pipariya	0.612	84	0.758	75	0.671	45
	Bankhedi	0.555	193	na	na	0.555	239
Katni	Murwara	0.628	55	0.789	31	0.725	12
	Rithi	0.598	115	na	na	0.598	164
	Barhi	0.527	253	0.673	220	0.546	253
	Badwara	0.560	185	na	na	0.560	233
	Vijayraghavgarh	0.570	165	0.767	61	0.597	166
	Bahoriband	0.604	104	na	na	0.604	149
	Dhimarkheda	0.584	136	na	na	0.584	190
Jabalpur	Sihora	0.648	26	0.734	111	0.668	48
	Majholi	0.649	25	0.665	230	0.651	68
	Patan	0.645	32	0.688	198	0.653	65
	Shahpura	0.601	110	0.771	55	0.613	126
	Jabalpur	0.634	47	0.812	10	0.790	1
	Panagar	0.678	7	0.783	39	0.725	11
	Kundam	0.589	126	0.733	112	0.596	169
Narsimhapur	Gotegaon	0.627	58	0.758	73	0.645	73
	Gadarwara	0.579	146	0.752	81	0.603	152
	Narsimhapur	0.588	129	0.807	16	0.655	61
	Kareli	0.623	65	0.740	101	0.650	70
	Tendukheda	0.582	140	0.657	249	0.592	174
Dindori	Shahpura	0.529	250	0.714	155	0.542	261
	Dindori	0.561	182	0.734	110	0.569	212
Mandla	Niwas	0.600	111	0.725	130	0.609	135
	Narayanganj	0.611	86	na	na	0.611	129
	Mandla	0.655	19	0.803	18	0.708	22
	Ghughari	0.552	199	na	na	0.552	243
	Bichhiya	0.610	89	0.730	118	0.616	121
	Nainpur	0.645	30	0.776	47	0.672	43
Chhindwara	Tamia	0.571	164	na	na	0.571	207
	Amarwara	0.604	105	0.758	76	0.618	119
	Harrai	0.538	229	0.734	109	0.556	238
	Chaurai	0.597	116	0.774	50	0.610	131

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Jamai	0.542	217	0.783	37	0.604	150
	Parasia	0.606	95	0.767	62	0.699	27
	Umreth	0.621	71	na	na	0.621	115
	Chhindwara	0.656	16	0.813	7	0.746	7
	Mohkhed	0.631	51	na	na	0.631	90
	Sausar	0.664	11	0.765	64	0.701	26
	Bichhua	0.621	68	na	na	0.621	113
	Pandhurna	0.624	63	0.800	21	0.669	46
Seoni	Lakhnadon	0.615	82	0.771	54	0.629	91
	Chhapara	0.592	123	0.726	127	0.610	133
	Ghansaur	0.504	286	0.760	69	0.518	290
	Dhanora	0.574	160	na	na	0.574	202
	Keolari	0.677	8	0.732	115	0.681	37
	Seoni	0.652	22	0.808	14	0.699	28
	Barghat	0.664	12	0.774	52	0.671	44
	Kurai	0.694	1	na	na	0.694	30
Balaghat	Katangi	0.646	28	0.775	49	0.667	50
	Tirodi	0.683	5	0.754	77	0.691	31
	Waraseoni	0.687	3	0.790	29	0.703	25
	Khairlanji	0.626	60	na	na	0.626	99
	Lalbarra	0.692	2	0.676	215	0.691	32
	Balaghat	0.638	40	0.811	11	0.710	21
	Kirnapur	0.661	13	0.808	15	0.666	51
	Baihar	0.551	202	0.706	168	0.579	196
	Paraswada	0.641	33	0.787	35	0.651	69
	Lanji	0.617	75	0.710	162	0.625	101
Guna	Guna	0.480	305	0.721	142	0.589	180
	Bamori	0.497	290	na	na	0.497	307
	Raghogarh	0.507	283	0.658	244	0.568	217
	Maksoodangarh	0.456	315	na	na	0.456	323
	Kumbhraj	0.493	298	0.657	250	0.521	287
	Aron	0.545	210	0.626	273	0.561	231
	Chachaura	0.469	312	0.716	152	0.514	296
Ashoknagar	Isagarh	0.520	260	0.656	251	0.530	274
	Chanderi	0.473	308	0.701	180	0.520	288
	Ashoknagar	0.501	288	0.675	218	0.569	214
	Shadhora	0.563	177	na	na	0.563	229
	Mungaoli	0.495	293	0.702	178	0.522	286
Shahdol	Beohari	0.532	242	0.732	114	0.564	226

District	Sub-district	Rural		Urban		Total	
		HDI	Rank	HDI	Rank	HDI	Rank
	Jaisinghnagar	0.599	113	0.690	195	0.603	151
	Sohagpur	0.628	57	0.801	19	0.690	34
	Jaitpur	0.611	88	na	na	0.611	130
Anuppur	Kotma	0.638	42	0.776	48	0.707	23
	Anuppur	0.655	18	0.791	28	0.710	20
	Jaithari	0.633	50	0.752	79	0.644	74
	Pushparajgarh	0.565	173	0.728	121	0.572	204
Sidhi	Rampur Naikin	0.514	272	0.654	257	0.523	285
	Churhat	0.558	188	0.669	224	0.571	206
	Gopadbanas	0.496	292	0.763	68	0.548	248
	Sihawal	0.540	223	na	na	0.540	264
	Majhauli	0.457	314	0.605	279	0.468	318
	Kusmi	0.553	196	na	na	0.553	241
Singrauli	Chitrangi	0.455	316	0.828	4	0.463	321
	Deosar	0.527	252	na	na	0.527	278
	Singrauli	0.491	300	0.743	96	0.598	162
Jhabua	Thandla	0.350	334	0.750	88	0.387	331
	Petlawad	0.472	309	0.769	58	0.493	311
	Meghnagar	0.351	333	0.624	276	0.372	336
	Jhabua	0.322	340	0.782	41	0.373	334
	Ranapur	0.342	335	0.675	216	0.376	333
Alirajpur	Bhavra	0.393	327	0.617	277	0.419	327
	Jobat	0.353	332	0.773	53	0.381	332
	Alirajpur	0.336	337	0.730	119	0.369	338
Khandwa	Harsud	0.582	141	0.688	197	0.600	158
	Khalwa	0.470	310	na	na	0.470	317
	Khandwa	0.551	201	0.763	67	0.627	96
	Punasa	0.586	132	0.657	248	0.593	170
	Pandhana	0.535	234	0.689	196	0.548	249
Burhanpur	Burhanpur	0.563	176	0.678	214	0.624	103
	Khaknar	0.528	251	na	na	0.528	277
	Nepanagar	0.374	328	0.749	89	0.437	324

Source: Author's calculations

Appendix Table 3
Decomposition of the urban-rural difference in HDI in Madhya Pradesh, 2011

State/District	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
Madhya Pradesh	0.198	0.048	0.057	0.093
Sheopur	0.178	0.042	0.056	0.079
Morena	0.164	0.028	0.025	0.111
Bhind	0.133	0.018	0.014	0.101
Gwalior	0.215	0.050	0.055	0.109
Datia	0.128	0.020	0.026	0.081
Shivpuri	0.204	0.051	0.053	0.100
Tikamgarh	0.163	0.033	0.050	0.080
Chhatarpur	0.191	0.046	0.060	0.085
Panna	0.185	0.054	0.051	0.080
Sagar	0.196	0.042	0.039	0.114
Damoh	0.214	0.040	0.050	0.125
Satna	0.149	0.043	0.040	0.066
Rewa	0.169	0.045	0.037	0.086
Umaria	0.170	0.066	0.051	0.052
Neemuch	0.153	0.020	0.051	0.081
Mandsaur	0.159	0.024	0.045	0.090
Ratlam	0.244	0.059	0.072	0.112
Ujjain	0.187	0.041	0.054	0.092
Shajapur	0.132	0.018	0.041	0.073
Dewas	0.166	0.035	0.053	0.079
Dhar	0.201	0.034	0.077	0.090
Indore	0.148	0.036	0.049	0.063
Khargone	0.221	0.050	0.067	0.103
Barwani	0.294	0.088	0.102	0.103
Rajgarh	0.170	0.016	0.060	0.095
Vidisha	0.175	0.045	0.040	0.090
Bhopal	0.212	0.057	0.049	0.107
Sehore	0.144	0.037	0.044	0.063
Raisen	0.157	0.025	0.031	0.102
Betul	0.197	0.046	0.070	0.081
Harda	0.191	0.044	0.055	0.092
Hoshangabad	0.184	0.040	0.051	0.093
Katni	0.193	0.054	0.050	0.089
Jabalpur	0.164	0.042	0.044	0.078
Narsimhapur	0.167	0.028	0.039	0.100
Dindori	0.175	0.045	0.063	0.067
Mandla	0.174	0.053	0.072	0.049

State/District	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
Chhindwara	0.178	0.038	0.059	0.080
Seoni	0.155	0.034	0.057	0.064
Balaghat	0.135	0.027	0.030	0.078
Guna	0.203	0.045	0.055	0.103
Ashoknagar	0.177	0.036	0.040	0.101
Shahdol	0.186	0.060	0.067	0.059
Anuppur	0.163	0.050	0.056	0.057
Sidhi	0.194	0.051	0.045	0.098
Singrauli	0.252	0.078	0.059	0.115
Jhabua	0.368	0.106	0.135	0.126
Alirajpur	0.368	0.086	0.155	0.127
Khandwa	0.201	0.054	0.066	0.081
Burhanpur	0.193	0.058	0.069	0.066

Source: Author's calculations

Appendix Table 4
Decomposition of the urban-rural difference in HDI in sub-districts of Madhya Pradesh, 2011

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
Sheopur	Vijaypur	0.200	0.043	0.057	0.100
	Beerpur	na	na	na	na
	Sheopur	0.150	0.022	0.053	0.076
	Badoda	0.088	0.020	0.054	0.014
	Karahal	na	na	na	na
Morena	Ambah	0.145	0.015	0.013	0.117
	Porsa	0.126	0.016	0.011	0.098
	Morena	0.162	0.033	0.031	0.098
	Joura	0.138	0.016	0.018	0.104
	Kailaras	0.183	0.023	0.038	0.122
	Sabalgarh	0.193	0.025	0.033	0.135
Bhind	Ater	na	na	na	na
	Bhind	0.153	0.028	0.018	0.107
	Mehgaon	0.111	0.005	0.011	0.095
	Gormi	0.045	-0.008	-0.003	0.056
	Gohad	0.073	0.009	-0.003	0.067
	Ron	na	na	na	na
	Mihona	0.165	0.012	0.021	0.132
	Lahar	0.136	0.016	0.022	0.098
Gwalior	Gwalior	0.222	0.055	0.058	0.109
	Dabra	0.140	0.027	0.038	0.074
	Bhitarwar	0.113	0.020	0.025	0.069
	Chinour	0.106	0.025	0.021	0.061
Datia	Seondha	0.088	0.005	0.020	0.064
	Indergarh	0.106	0.007	0.029	0.069
	Datia	0.163	0.034	0.032	0.097
	Bhander	0.079	0.008	0.017	0.055
Shivpuri	Pohri	na	na	na	na
	Shivpuri	0.213	0.062	0.057	0.094
	Narwar	0.175	0.018	0.039	0.119
	Karera	0.190	0.051	0.061	0.078
	Kolaras	0.158	0.035	0.044	0.079
	Badarwas	0.164	0.023	0.043	0.098
	Pichhore	0.234	0.045	0.062	0.127
	Khaniyadhana	0.168	0.040	0.042	0.086
Tikamgarh	Niwari	0.112	0.023	0.032	0.057
	Orchha	0.132	0.021	0.029	0.082

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Prithvipur	0.107	0.011	0.024	0.072
	Jatara	0.133	0.015	0.047	0.071
	Mohangarh	na	na	na	na
	Palera	0.092	0.017	0.026	0.049
	Baldeogarh	0.165	0.016	0.057	0.091
	Khargapur	0.145	0.030	0.051	0.064
	Tikamgarh	0.211	0.061	0.067	0.083
Chhatarpur	Gaurihar	0.136	0.025	0.019	0.091
	Laundi	0.162	0.039	0.045	0.079
	Chandla	0.127	0.038	0.046	0.043
	Nowgong	0.183	0.048	0.077	0.059
	Maharajpur	0.126	0.041	0.043	0.042
	Chhatarpur	0.216	0.058	0.082	0.076
	Rajnagar	0.159	0.033	0.047	0.078
	Bada Malhera	0.169	0.043	0.060	0.066
	Ghuwara	0.122	0.016	0.034	0.071
	Bijawar	0.153	0.033	0.049	0.071
	Buxwaha	0.174	0.045	0.043	0.086
Panna	Ajaigarh	0.168	0.047	0.046	0.075
	Panna	0.257	0.080	0.063	0.114
	Devendranagar	0.104	0.024	0.036	0.045
	Gunnor	na	na	na	na
	Amanganj	0.163	0.026	0.047	0.089
	Pawai	0.145	0.040	0.046	0.059
	Shahnagar	na	na	na	na
	Raipura	na	na	na	na
Sagar	Bina	0.193	0.051	0.042	0.100
	Khurai	0.133	0.032	0.026	0.075
	Malthon	na	na	na	na
	Banda	0.172	0.029	0.037	0.105
	Shahgarh	0.203	0.048	0.050	0.105
	Rahatgarh	0.002	-0.033	-0.013	0.048
	Sagar	0.185	0.051	0.033	0.101
	Garhakota	0.167	0.021	0.036	0.109
	Rehli	0.170	0.023	0.039	0.108
	Kesli	na	na	na	na
	Deori	0.229	0.040	0.041	0.148
Damoh	Hatta	0.218	0.048	0.066	0.104
	Patera	na	na	na	na
	Batiyagarh	na	na	na	na

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Patharia	0.184	0.026	0.025	0.133
	Damoh	0.211	0.047	0.048	0.116
	Jabera	0.174	0.026	0.034	0.114
	Tendukheda	0.169	0.024	0.041	0.105
Satna	Raghurajnagar	0.149	0.036	0.041	0.072
	Majhgawan	0.105	0.041	0.032	0.032
	Birsinghpur	0.082	0.012	0.023	0.047
	Nagod	0.150	0.043	0.046	0.061
	Unchahara	0.080	0.028	0.033	0.019
	Rampur Baghelan	0.082	0.004	0.019	0.059
	Kotar	0.069	0.004	-0.004	0.070
	Amarpatan	0.106	0.021	0.032	0.054
	Ramnagar	na	na	na	na
	Maihar	0.149	0.049	0.039	0.061
Rewa	Teonthar	0.079	0.022	0.018	0.038
	Jawa	na	na	na	na
	Sirmour	0.111	0.021	0.020	0.069
	Mangawan	0.089	-0.004	0.015	0.078
	Semaria	0.093	0.017	0.022	0.054
	Hanumana	0.116	0.030	0.031	0.055
	Mauganj	0.065	0.007	0.011	0.048
	Naigarhi	0.052	0.009	0.002	0.042
	Huzur	0.163	0.046	0.037	0.080
	Raipur-Karchuliyan	na	na	na	na
	Gurh	0.109	0.020	0.027	0.062
Umaria	Bandhogarh	0.217	0.080	0.075	0.062
	Chandia	0.047	0.027	0.014	0.006
	Manpur	na	na	na	na
	Pali	0.161	0.058	0.072	0.031
	Nowrozabad	0.175	0.075	0.052	0.048
Neemuch	Jawad	0.125	0.027	0.036	0.062
	Singoli	0.107	0.022	0.063	0.022
	Neemuch	0.121	0.004	0.042	0.075
	Jiran	0.134	0.021	0.025	0.088
	Manasa	0.180	0.022	0.054	0.103
Mandsaur	Bhanpura	0.165	0.040	0.049	0.076
	Malhargarh	0.125	0.013	0.031	0.082
	Garoth	0.122	0.025	0.037	0.060
	Shamgarh	0.186	0.024	0.064	0.097

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Mandsaur	0.147	0.027	0.045	0.076
	Daloda	0.055	-0.007	0.005	0.058
	Sitamau	0.153	0.017	0.039	0.097
	Suwasara	0.146	0.020	0.056	0.069
Ratlam	Piploda	0.090	0.007	0.006	0.077
	Jaora	0.112	0.009	0.024	0.078
	A lot	0.138	0.016	0.056	0.066
	Tal	0.089	0.006	0.042	0.041
	Sailana	0.450	0.131	0.122	0.197
	Bajna	na	na	na	na
	Rawti	na	na	na	na
	Ratlam	0.223	0.056	0.067	0.101
Ujjain	Khacharod	0.167	0.035	0.045	0.087
	Nagda	0.230	0.050	0.064	0.117
	Mahidpur	0.137	0.008	0.060	0.069
	Ghatiya	na	na	na	na
	Tarana	0.087	0.016	0.035	0.037
	Ujjain	0.164	0.044	0.046	0.074
	Badnagar	0.132	0.029	0.037	0.066
Shajapur	Susner	0.121	0.009	0.053	0.058
	Nalkheda	0.088	-0.004	0.032	0.061
	Badod	0.150	0.007	0.063	0.079
	Agar	0.151	0.025	0.054	0.073
	Shajapur	0.153	0.018	0.044	0.091
	Gulana	na	na	na	na
	Moman Badodiya	na	na	na	na
	Shujalpur	0.102	0.023	0.021	0.058
	Kalapipal	0.090	0.035	0.034	0.021
Dewas	Tonk Khurd	0.044	-0.004	0.026	0.022
	Sonkatch	0.073	0.011	0.032	0.029
	Dewas	0.150	0.026	0.042	0.083
	Kannod	0.186	0.038	0.059	0.089
	Satwas	0.111	0.021	0.040	0.050
	Bagli	0.135	0.045	0.048	0.043
	Hatpiplya	0.122	0.007	0.036	0.079
	Khategaon	0.148	0.042	0.048	0.058
Dhar	Badnawar	0.142	0.027	0.051	0.064
	Sardarpur	0.253	0.056	0.084	0.113
	Dhar	0.170	0.037	0.065	0.068
	Gandhwani	na	na	na	na

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Kukshi	0.251	0.050	0.092	0.108
	Dahi	0.192	0.037	0.091	0.064
	Manawar	0.152	0.019	0.049	0.084
	Dharampuri	0.183	0.029	0.054	0.099
Indore	Depalpur	0.088	0.008	0.039	0.041
	Hatod	0.065	0.008	0.023	0.034
	Sawer	0.057	-0.002	0.031	0.028
	Indore	0.146	0.040	0.045	0.062
	Mhow	0.172	0.048	0.051	0.073
Khargone	Barwaha	0.194	0.033	0.057	0.105
	Maheshwar	0.195	0.018	0.048	0.128
	Kasrawad	0.086	0.026	0.021	0.038
	Segaon	na	na	na	na
	Bhikangaon	0.206	0.039	0.059	0.108
	Khargone	0.110	0.002	0.040	0.068
	Gogaon	0.077	-0.027	0.037	0.068
	Bhagwanpura	na	na	na	na
	Jhiranya	na	na	na	na
Barwani	Barwani	0.337	0.107	0.109	0.121
	Pati	na	na	na	na
	Thikri	0.137	0.003	0.046	0.088
	Anjad	0.064	0.002	0.029	0.033
	Rajpur	0.224	0.054	0.065	0.105
	Pansemal	0.238	0.072	0.075	0.090
	Niwali	na	na	na	na
	Sendhwa	0.354	0.107	0.135	0.111
	Varla	na	na	na	na
Rajgarh	Jirapur	0.181	0.003	0.058	0.120
	Khilchipur	0.172	0.011	0.081	0.081
	Rajgarh	0.236	0.037	0.101	0.098
	Biaora	0.189	0.014	0.064	0.111
	Sarangpur	0.106	0.004	0.030	0.072
	Narsinghgarh	0.202	0.034	0.045	0.123
	Pachore	0.081	0.000	0.032	0.049
Vidisha	Lateri	0.198	0.033	0.045	0.120
	Sironj	0.154	0.041	0.035	0.078
	Kurwai	0.092	0.020	0.015	0.057
	Basoda	0.147	0.040	0.036	0.071
	Tyonda	na	na	na	na
	Nateran	na	na	na	na

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Shamshabad	0.190	0.043	0.046	0.101
	Gyaraspur	na	na	na	na
	Gulabganj	na	na	na	na
	Vidisha	0.146	0.039	0.030	0.078
Bhopal	Berasia	0.144	0.026	0.034	0.083
	Huzur	0.159	0.048	0.042	0.069
Sehore	Sehore	0.163	0.047	0.048	0.068
	Shyampur	na	na	na	na
	Ashta	0.061	0.008	0.034	0.019
	Jawar	0.054	0.012	0.027	0.015
	Ichhawar	0.169	0.047	0.039	0.083
	Nasrullaganj	0.183	0.044	0.046	0.092
	Budni	0.124	0.016	0.036	0.072
	Rehti	0.158	0.040	0.033	0.085
Raisen	Raisen	0.188	0.047	0.033	0.109
	Gairatganj	0.081	0.014	0.003	0.064
	Begamganj	0.165	0.031	0.028	0.106
	Goharganj	0.142	0.022	0.039	0.080
	Baraily	0.139	0.018	0.034	0.087
	Badi	0.113	0.020	0.020	0.074
	Silwani	0.165	0.022	0.037	0.106
	Udaipura	0.164	0.020	0.035	0.110
Betul	Bhainsdehi	0.209	0.056	0.080	0.073
	Athner	0.134	0.014	0.064	0.056
	Betul	0.160	0.031	0.065	0.064
	Chicholi	0.210	0.046	0.093	0.072
	Ghoda Dongri	0.186	0.069	0.080	0.037
	Shahpur	0.162	0.043	0.078	0.042
	Multai	0.129	0.009	0.043	0.077
	Amla	0.203	0.044	0.064	0.095
Harda	Khirkiya	0.155	0.029	0.044	0.083
	Sirali	na	na	na	na
	Harda	0.126	0.022	0.042	0.062
	Handiya	na	na	na	na
	Timarni	0.130	0.028	0.033	0.069
	Rehatgaon	na	na	na	na
Hoshangabad	Seoni-Malwa	0.152	0.031	0.044	0.077
	Itarsi	0.192	0.049	0.051	0.092
	Hoshangabad	0.142	0.027	0.034	0.081
	Dolariya	0.209	0.050	0.042	0.117

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Babai	0.130	0.020	0.034	0.076
	Sohagpur	0.148	0.037	0.055	0.057
	Pipariya	0.146	0.035	0.057	0.055
	Bankhedi	na	na	na	na
Katni	Murwara	0.161	0.064	0.050	0.047
	Rithi	na	na	na	na
	Barhi	0.146	0.022	0.039	0.086
	Badwara	na	na	na	na
	Vijayraghavgarh	0.197	0.050	0.041	0.106
	Bahoriband	na	na	na	na
	Dhimarkheda	na	na	na	na
Jabalpur	Sihora	0.085	0.012	0.024	0.049
	Majholi	0.016	0.015	0.021	-0.020
	Patan	0.044	-0.002	0.015	0.031
	Shahpura	0.170	0.019	0.048	0.103
	Jabalpur	0.178	0.041	0.047	0.090
	Panagar	0.105	0.018	0.026	0.062
	Kundam	0.144	0.044	0.070	0.030
Narsimhapur	Gotegaon	0.132	0.018	0.031	0.083
	Gadarwara	0.173	0.027	0.040	0.105
	Narsimhapur	0.219	0.044	0.042	0.133
	Kareli	0.117	0.020	0.029	0.068
	Tendukheda	0.075	0.005	0.031	0.039
Dindori	Shahpura	0.185	0.039	0.073	0.073
	Dindori	0.173	0.047	0.059	0.067
Mandla	Niwas	0.126	0.036	0.056	0.034
	Narayanganj	na	na	na	na
	Mandla	0.148	0.044	0.056	0.048
	Ghughari	na	na	na	na
	Bichhiya	0.120	0.045	0.068	0.008
	Nainpur	0.131	0.043	0.056	0.033
Chhindwara	Tamia	na	na	na	na
	Amarwara	0.154	0.028	0.063	0.063
	Harrai	0.197	0.038	0.078	0.081
	Chaurai	0.177	0.017	0.046	0.115
	Jamai	0.241	0.089	0.096	0.056
	Parasia	0.161	0.027	0.045	0.088
	Umreth	na	na	na	na
	Chhindwara	0.157	0.030	0.051	0.077
	Mohkhed	na	na	na	na

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Sausar	0.100	0.004	0.022	0.075
	Bichhua	na	na	na	na
	Pandhurna	0.176	0.010	0.041	0.125
Seoni	Lakhnadon	0.157	0.042	0.064	0.051
	Chhapara	0.134	0.028	0.069	0.037
	Ghansaur	0.256	0.050	0.055	0.152
	Dhanora	na	na	na	na
	Keolari	0.054	0.009	0.033	0.012
	Seoni	0.156	0.035	0.057	0.064
	Barghat	0.109	0.013	0.034	0.062
	Kurai	na	na	na	na
Balaghat	Katangi	0.129	0.017	0.026	0.086
	Tirodi	0.071	0.020	0.014	0.036
	Waraseoni	0.103	0.019	0.028	0.056
	Khairlanji	na	na	na	na
	Lalbarra	-0.015	-0.014	0.000	-0.001
	Balaghat	0.173	0.035	0.036	0.102
	Kirnapur	0.147	0.029	0.030	0.088
	Baihar	0.155	0.039	0.038	0.079
	Paraswada	0.146	0.056	0.031	0.059
	Lanji	0.093	0.006	0.014	0.074
Guna	Guna	0.241	0.069	0.062	0.110
	Bamori	na	na	na	na
	Raghogarh	0.151	0.028	0.035	0.087
	Maksoodangarh	na	na	na	na
	Kumbhraj	0.164	0.008	0.046	0.110
	Aron	0.081	0.022	0.021	0.038
	Chachaura	0.246	0.024	0.069	0.153
Ashoknagar	Isagarh	0.135	0.009	0.038	0.088
	Chanderi	0.229	0.063	0.059	0.106
	Ashoknagar	0.174	0.029	0.039	0.105
	Shadhora	na	na	na	na
	Mungaoli	0.206	0.043	0.037	0.127
Shahdol	Beohari	0.200	0.052	0.046	0.102
	Jaisinghnagar	0.091	0.040	0.034	0.017
	Sohagpur	0.173	0.057	0.073	0.044
	Jaitpur	na	na	na	na
Anuppur	Kotma	0.138	0.045	0.048	0.045
	Anuppur	0.135	0.045	0.046	0.045
	Jaithari	0.119	0.026	0.056	0.038

District	Sub-district	HDI_U-HDI_R	H_U-H_R	E_U-E_R	S_U-S_R
	Pushparajgarh	0.163	0.067	0.062	0.034
Sidhi	Rampur Naikin	0.139	0.022	0.022	0.096
	Churhat	0.111	0.025	0.022	0.064
	Gopadbanas	0.267	0.072	0.058	0.137
	Sihawal	na	na	na	na
	Majhauli	0.148	0.035	0.021	0.092
	Kusmi	na	na	na	na
Singrauli	Chitrangi	0.373	0.121	0.085	0.168
	Deosar	na	na	na	na
	Singrauli	0.251	0.073	0.058	0.121
Jhabua	Thandla	0.399	0.106	0.150	0.143
	Petlawad	0.297	0.087	0.123	0.088
	Meghnagar	0.274	0.077	0.104	0.093
	Jhabua	0.460	0.146	0.152	0.162
	Ranapur	0.333	0.080	0.128	0.126
Alirajpur	Bhavra	0.224	0.059	0.099	0.066
	Jobat	0.419	0.107	0.165	0.147
	Alirajpur	0.394	0.087	0.168	0.140
Khandwa	Harsud	0.106	0.025	0.037	0.044
	Khalwa	na	na	na	na
	Khandwa	0.212	0.044	0.065	0.103
	Punasa	0.071	0.019	0.030	0.022
	Pandhana	0.154	0.044	0.054	0.056
Burhanpur	Burhanpur	0.115	0.027	0.041	0.047
	Khaknar	na	na	na	na
	Nepanagar	0.375	0.123	0.115	0.138

Source: Author's calculations