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Human Development in Uttar Pradesh: A District Level Analysis

Nagendra Kumar Maurya[*], Sapana Singh[#] and Shagun Khare[$]

Abstract

The latest human development report of Uttar Pradesh (2008) estimated HDI for 2001 and 2005. No such attempt has been made by the state or any other entity for all the districts on the basis of recent data i.e. data of Census 2011. The present paper analyses the performance of districts of Uttar Pradesh in terms of human development based on latest available district-level data. Methodology adopted is same as that of UPHDR (2008) HDI computation. The paper does two separate exercises to calculate HDI scores of the districts. The first exercise takes IMR, literacy rate and PCI (PPP) as variables for HDI calculations whereas the second is more inclusive and considers IMR & institutional delivery, literacy rate & GER and PCI (PPP$) i.e. five indicators. The present study is an important contribution to policy making and research as it provides latest estimates of district-level human development for a range of indicators.

Key words: Human Development, HDI, Uttar Pradesh, Census 2011.

I. Introduction and background

The facets of development are multifarious. Whether economic development has to be pursued pari passu with human development or they share only a cause-effect (the former being the cause) relation has been an apple of discord. Somehow, it has remained a disputed concept in one or the other way. A great sense of clarity and shift in thought regarding development concerns was brought by the Human Development Approach of United Nations Development Programme (UNDP) in the year 1990 with the first human development report (HDR) boldly and simply stating that "People are the real wealth of a nation" (Haq, 1990).

Not that the idea of human development presupposes economic growth to be unimportant or of lesser substance. Economic growth certainly is essential and has a vital role to play in raising the standard of living but in our preoccupation with the quantitative rate of economic growth, we often lose sight of the elements that are the backbone for a sustainable and inclusive economic development of a country. It has also been emphasised that basic needs can be met successfully even at low income levels, without compromising economic growth (Anand & Ravallian, 1993; Srinivasan, 1994; Streeten, 1986). The UPHDR (2008) rightly noted that "The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives. The defining difference between economic growth and human development paradigms is that the first focuses exclusively on the expansion of only one choice (i.e. income), while the second emphasises the enlargement of all human choices– economic, social, cultural or political".

[*] Nagendra Kumar Maurya, Assistant Professor, Giri Institute of Development Studies, Sector O, Aliganj, Lucknow-226024, India. Email: nagendrainsearch@gmail.com

[#] Sapana Singh, ICSSR Doctoral Fellow, Giri Institute of Development Studies, Sector O, Aliganj, Lucknow-226024, India. Email: sapanasinghlko@gmail.com

[$] Shagun Khare, Research Associate, Giri Institute of Development Studies, Sector O, Aliganj, Lucknow-226024, India. Email: s_ha_gun@yahoo.co.in

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As well-known, the first global HDR was launched by Lord Meghnad Desai and Amartya Sen in the year 1990. Thereafter, the HDRs published regularly by UNDP with their comprehensive empirical analysis and focus on crucial aspects of people's lives, left profound impact on the nations around the world. Consequently, following the trend nations also started publishing their respective national HDRs. India too has been publishing its HDR on a regular basis over the years. Planning Commission of India brought out the first National Human Development Report in the year 2001. The best part of it, inter alia, is the decentralisation of these attempts which also led the states to follow suit and come up with the measurements of their relative human development dimensions at district level. Madhya Pradesh, in this regard, emerged as the pioneer state of India by spearheading the attempt of publishing State's HDR (First in 1995).

Again, looking at the socio-economic diversity of India, national estimates or sub-national aggregates cannot be simply taken as the basis for policy decisions at disaggregated level, especially, in the case of large states like Uttar Pradesh (UP)[1]. To ensure that human development indexes prove significant policy intervention tool, disaggregated human development index (HDI) is more suitable. Ivanov and Peleah (2011) argued that 'disaggregation is needed to present policy makers with a clearer picture of sub-national realties'. Disaggregated HDI allows inter-region comparisons which are more justifiable than sub-national or regional comparison with national estimates. Disaggregated HDI also helps to decide which districts or regions need more attention and for which indicators (Ivanov & Peleah, 2011; Katoch, 2003; de la Torre & Moreno, 2010).

However, HDRs to become an effective policy guide for identifying focus areas, their regular update is prerequisite. The regular update of human development estimates assumes greater importance in the case of district level planning. Notwithstanding, not a single sub-national entity in India is publishing their HDR regularly.

Human Development and Uttar Pradesh

Uttar Pradesh produced its first HDR in the year 2003 and second in 2008. Both the reports constructed its indices in pursuance of the UNDP methodology. These reports not only presented an inter-state comparison vis-à-vis UP but also brought out an analysis of the human development status of the districts of the state. The analysis was done for the years 1991, 2001 and 2005.

However, since then the state has been silent on HDR publication and a complete obscurity in this regard can be noticed during the last few years, although, there is demand from many corners for updated district wise HDI of the state. Maharashtra (2012), Mizoram (2013) and Delhi (2013) governments came up recently with their HDRs which posed a challenge to UP as well as other state governments to update their HDRs as per the latest data. In the case of UP, some researchers have tried to gauge district wise HDI but used old data. For instance, Mishra and Mujjoo (2013) computed the HDI of the districts of UP, however data of most of the indicators were mainly related to 2005 or 2006. Singh and Lall (2013) calculated Gender Development Index with latest data but at aggregate level.

Given the social and spatial disparities prevailing in the state it becomes all the more important to analyse the relative human development status among the districts which lie in different geographical regions. In addition, the frequent change in ruling governments/parties and their fondness for creating new districts and assigning new names etc. too have been a few political reasons that ask for a regular study of the districts' human development levels. With the increase in development level- in terms of economic growth, infrastructural expansion and structural changes- in the last decade, the level of peoples' entitlements and attainments too would have increased.

[1] "I had been to other countries – in Europe, Asia and the Middle East - but none of them had provided even half as much variety, or so much to see and experience and remember, as this one State in northern India……Uttar Pradesh is a world in itself". – Ruskin Bond (as quoted in Mishra, 2010)

It is in this background that the present paper has been conceptualised and written with an objective to make an inter-district analysis and comparison in terms of HDI indicators of Uttar Pradesh. It also makes an attempt to prepare the latest human development index for the districts of the state. With Census 2011 having taken place, data availability for the latest development scenario in the state offers a befitting opportunity for computation of human development indices. The paper in all, to the best of our knowledge, is the first attempt to measure the district-wise Human Development Index based on Census (2011) for UP.

II. Methods

Data

The basic data to estimate the district-wise HDI are taken from the Census 2011; Annual Health Survey Report, Uttar Pradesh 2011-12; District Elementary Education Report 2011-12; and Economic Activity 2011-12, Economic and Statistics Department, Government of Uttar Pradesh. As the study is an attempt to analyse and compare the Human Development status of the districts of Uttar Pradesh, data for all 75 districts of the state were searched thoroughly. Nonetheless, given the limitations of data availability at district level in India, we could only access and compile the data of 72 districts considering our intended year and indicators.

Choice of Indicators

The HDI approach believes that the ulterior motive behind all development is enlargement of people's choices. The social outcomes in respect of these choices are captured through indicators on health, educational attainment and standard of living (UPHDR 2008). The basic philosophy and touchstone behind the human development paradigm has remained intact even though the methodology has undergone many modifications over the years. In this paper, we have computed two sets of HDI for 72 districts -first on the basis of three indicators as were used in the UPHDR (2008) report (to make a true comparison between two points of time); and second, on the basis of five indicators. Sticking to the human development yardsticks, the indices have been constructed throughout for three dimensions, namely health, education and standard of living.

Table 1. Choice of indicators

Dimension	Variable	Definition	Goalposts	
			Min	Max
Health index	Infant Mortality Rate (IMR)	IMR is the number of deaths of infants below one year of age per 1000 live birth. The ratio is often used as an indicator of the level of health.	10	200
	Institutional delivery	Skilled birth attendance in hospitals.	0	100
Education index	Literacy rate	Total percentage of the population which can read and write with understanding. This rate is the major indicator for education.	0	100
	Gross enrollment ratio (GER)	GER is the number of students enrolled in school at several different grade levels. We have taken the primary level i.e. grade I to grade V.	0	200
Standard of Living	Per Capita Income (PPP) US $	Per capita income (At constant prices 2004-05) in rupees multiplied by the ratio of per capita GDP in (PPP) US $ in India and per capita GDP in rupees in India for the year 2011	100	40000

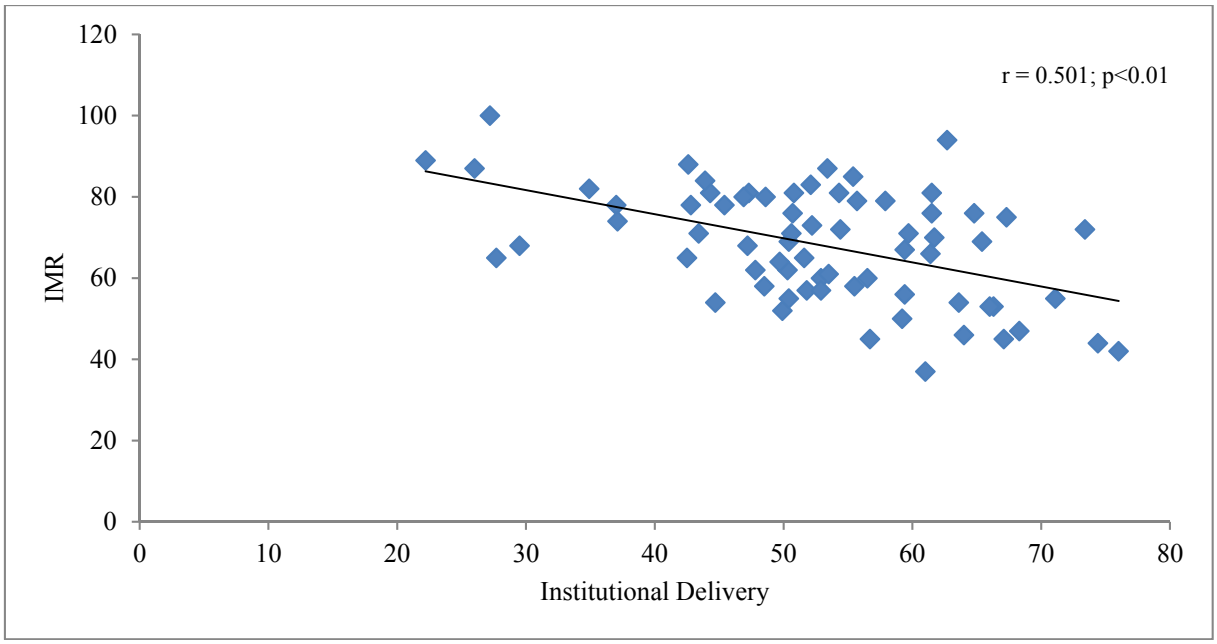
Source: UPHDR

The first exercise takes into account infant mortality rate (IMR), literacy rate and per capita income US$ (PPP) respectively as the variables for aforementioned dimensions. However, the

second exercise is a little more inclusive and dilated in the sense that it considers IMR and Institutional Delivery (for health), Literacy Rate and Gross Enrollment Ratio (for education) and Per Capita Income US$ (PPP) (for standard of living) i.e. five indicators in HDI calculation. The maximum and minimum values taken for each of the indicators i.e. the goalposts are identical to the goalposts of UPHDR (2008). Details of the dimensions and their respective indicators as considered in the study are presented in the Table 1.

Institutional delivery has been taken (in the second set of HDI) because of the following reasons. First, among indicators, which generally represent improvement in health, only institutional delivery is available at disaggregated level i.e., at district level. No other indicator, neither actual nor any projections are available. Second, IMR per se is bound and expected to decrease with improvements in health and medical sector but as far as institutional delivery is concerned, over-and-above the expansion in medical field, the latter is also subject to level of awareness and the equitable distribution of medical services. Moreover, mortality rates are not reported accurately in India which is the case with many such negative indicators (Abou Zahr, 2010; Montgomery et al., 2014; Timaeus, 1991). Thus, an additional positive indicator of health increases the representativeness of this dimension. Moreover, institutional deliveries not only lead to reduction in maternal death and neonatal deaths but also stimulate healthy practices like proper hygiene and sanitation, timely vaccination, and breastfeeding etc. (Ahiraj, 2009; Prasad, 2014; Randive et al., 2014). Properly vaccinated and adequately breastfed children are less likely to be malnourished and have better health, consequently, higher life expectancy. Additionally, poor childhood health can have an adverse effect on educational attainment as well as on adult work productivity, and can hence affect adult earnings (Bleakley, 2010). Thus, institutional deliveries have a significant role in human development process and are rather a critical investment to it.

Figure 1. Correlation between IMR and Institutional Delivery (2011-12)



Source: Authors' calculation

IMR and MMR are closely associated since the factors explaining these two indicators are the same and decline in one will definitely lead to a corresponding decline in the other (Goli & Jaleel, 2014). However, the studies, including Goli and Jaleel have found that institutional deliveries have a weak association with MMR and the same holds for IMR too. Interestingly, the weak association between 'increase in institutional deliveries' and 'decline in maternal mortality ratio' suggests that merely increasing deliveries alone will not help in ensuring maternal survival in India (Goli & Jaleel, 2014).

However, many studies have proved that the relationship between IMR and institutional delivery varies from state to state (Ahiraj, 2009; Goli & Jaleel, 2014; Prasad, 2014; Randive et al., 2014). In some states the relation is high while in others low or nil. To get an understanding of the scenario in Uttar Pradesh regarding this, we calculated the correlation between IMR and Institutional deliveries for the year 2011-12 which is a part of our second exercise. Evidently, there appears a statistically significant association ($r = 0.501$; $p<0.01$) between the two (Figure 1). The figure reflects the strong negative correlation (expected sign) for all the districts of the state. Hence, we included institutional delivery too as a health indicator in our study.

Universal Elementary Education (UEE) has been a prime focus of the nation since planning was initiated and the government has shown its commitment for the same through various programmes and schemes. Right to Education Act, which came into effect in April 2010 casting a legal obligation on central and state governments to provide free and compulsory education to all children, is yet another evidence of the dedication of the government towards the same. Thus, simple adult literacy rate, in essence, carrying the influence of many central and state government schemes, singularly may fail to show true picture of education of the state. Therefore, gross enrollment ratio which captures the enrollment in schools at primary level (As taken in our study) has also been included in the second set of calculations, basically, to increase the multidimensionality and coverage of dimension in terms of indicators.

The data for two districts formed recently viz. Chhatrapati Sahuji Maharaj Nagar and Kashiram Nagar is yet not available, so for these districts, estimates corresponding to their respective parent districts from which they have been carved out have been used.

The dimension index

The computation of final HDI includes two steps. First is the computation of individual dimension index for each indicator and second is the computation of composite index i.e., HDI for each district. Dimension index for each indicator is calculated using following formula:
The dimension indices have been calculated by the following formula:

$$\text{Dimension index} = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

For negative indicator like IMR, the following formula is used:

$$\text{Dimension index} = \frac{\text{Maximum Value} - \text{Actual Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

These goalposts (minimum and maximum values) act as the 'natural zeroes' and 'aspirational goals', respectively, from which component indicators are standardised (UNDP, 2014). The natural zero is the minimum value of the indicator and is the lowest demarcation point a district may acquire and the aspirational goal is the maximum possible value of the indicator which can be achieved by the district by formulating and implementing effective policies.

The justification for placing the natural zero and the aspirational goal for all the indicators is based on feasible evidence. Natural zero for Institutional Delivery is set at 0 and the maximum value is 100. In case of IMR, a negative indicator, the minimum value acts as an aspirational goal i.e. minimum of infant death incidences and has been placed at 10. Maximum for IMR is taken as 200. To compute the Educational Index, Literacy Rate has been allotted the minimum value of 0 and maximum value of 100 percent. Full empowerment of individuals lies at the heart of HDI approach and without achieving the aspirational goal of 100 percent literacy the former would only remain a distant dream. The maximum value projected for Gross Enrollment Ratio (GER) is 200 and the minimum 0. The Income indicator acts as the representative of standard of living dimension of Human Development. We have taken Per Capita Income at constant prices and

adjusted it to calculate Per Capita Income in US$ (PPP). The adjustment was done by multiplying district per capita income at constant prices in rupees with the ratio of per capita GDP in PPP US$ in India and per capita GDP in rupees in India for the year 2011-12. The minimum value of per capita income (PPP US$) is $100 and the maximum has been set at $40000. However, these goal posts except for GER and Institutional Delivery are taken same as in UPHDR (2008). Goal posts for GER and Institutional Delivery are decided on the same principle as for other indicators (See UPHDR 2008 for detail).

To find the indices of each dimension we have calculated the average mean of the indicators of the particular dimension. For computing the income index, after estimating the district per capita income in PPP US$, log values of income have been put in this formula:

$$\text{Per capita income (PPP\$)} = \frac{\text{Log per capita income (PPP\$)} - \text{Log } 100}{\text{Log } 40000 - \text{Log } 100}$$

After calculating the dimension-wise indices, the final Human Development Index (HDI) of each district is calculated by taking the arithmetic mean of the three dimension indices:

$$\text{HDI} = \frac{I_{\text{Health}} + I_{\text{Education}} + I_{\text{Income}}}{3}$$

The constructed Human Development Indices of 2011 have been then compared to the indices of Human Development Report 2005 of Uttar Pradesh. Furthermore, the study also presents an inter district and intra-regional analysis on the basis of 2011 data. Computations done with five indicators have also been compared with those done through three indicators.

III. Results and discussion

The computation of district level Human Development Indices by this study for the year 2011 involves the same methodology and dimensions as UPHDR (2008) viz. Health, Education and Livelihood status. The comprehensive analysis brings forth the development scenario in the districts of Uttar Pradesh in terms of human development attainments. The absolute HDI score for Uttar Pradesh has shown an improvement over the years. The HDI score moved from 0.5442 (2001) to 0.5709 (2005) which means an increase of 4.90 percent in five years (UPHDR, 2008). The HDI score for 2011 as calculated under this study is 0.6067 which exhibits an increment of 6.27 percent from 2005 HDI. Complying with the UPHDR (2008) categorisation, this score puts the state in 'High' HDI bracket but it can be pointed out that with this score, UP lies only on the lower margin of the bracket. On the other hand, HDI score of UP when calculated on the basis of five indicators was found to be 0.5684 which puts the state into the medium human development category.

The mean and standard deviations of the districts' HDI are presented separately for the years 2005 and 2011 in Table 2. In 2005, minimum HDI was 0.4132 as compared to the minimum HDI value of 0.4428 for the year 2011. The maximum HDI value which was 0.7017 for 2005 increased to 0.7568 in the year 2011. The mean of HDI scores calculated for 2005 is 0.5592 while for 2011 it is 0.6059. The minimum and maximum HDI values on the basis of five indicators are 0.3987 and 0.6540 for 2011. Mean and Standard deviation for the same are 0.5510 and 0.0474 respectively. The upshot of this analysis is that the HDI scores of all the districts have undergone an absolute increase during this time period.

Table 3 provides three indicators based district-wise HDI for 2005 and 2011 with relative gain/loss in ranking during the given period. The first inference which can be drawn, prima facie, from the results is that there is an increment in the HDI scores of all the districts over the period. If we look at the progress made by the districts of UP in terms of Human Development during 2005-2011, all of them have recorded an increase in their HDI values. Only Saharanpur with a negative

score difference of 0.0058 is an exception to this inference. However, this progress is not evenly distributed among the districts i.e., many of them have shown remarkable progress while others could manage only a small increase.

Table 2. Descriptive Statistics (N=72)

Indicator	Minimum	Maximum	Mean	Std. Deviation
GER	60.34	170.95	106.09	23.37
Literacy Rate	49.13	85	69.51	7.29
IMR	37	100	68.07	13.93
Institutional Delivery	22.2	76	52.98	11.48
PCI (PPP $)	643.41	6459.54	1413.47	752.70
LogPCI	6.47	8.77	7.17	0.3811
HDI (2005)	0.4132	0.7017	0.5592	.0552
HDI (2011)	0.4428	0.7568	0.6059	0.0551
5 Indicators HDI (2011)	0.3987	0.6540	0.5510	0.0474

Source: Authors' Calculation

The topmost district, Gautam Budha Nagar, has maintained its top position and with a greater score of 0.7568 in 2011. The top ten districts are from the central and the western region. Jhansi, as earlier has occupied a place among the top ten and is the only district of Bundelkhand region to do so. However, other six districts of Bundelkhand region fall in the 'high' category in 2011 which was not the pattern in 2005. This can be inferred as fast progress in human development in the region during this period.

Seven districts of Central region have fallen into the 'high' category in which Unnao and Rae Bareli are the new entrants. What is striking is the movement of these two districts from 'Low' to 'High' category in the period of 2005-2011 and most notably Rae Bareli's quantum leap by twenty-four ranks is remarkable. Shrawasti which attained the bottom position in 2005 has languished in 2011 as well, but with a comparatively higher index of 0.4428.

Following the pattern of the HDI ranking of 2005, the bottom ten districts have seven of them belonging to the Eastern region of the state. There are three new entrants in this category viz. Shahjahanpur, Sitapur and Kushinagar among which, a little shockingly, Sitapur is the district belonging to the so called developed Central region and it has descended by eight ranks as compared with the HDI of 2005. Shahjahanpur and Kushinagar too have followed the decrement and both have fallen below by six ranks. It is also noticeable that Budaun district which belongs to the relatively developed western region and to the fast evolving Bareilly circle continues to be a part of the bottom districts in 2011 as well with a rank lower than that of 2005. The other districts of the same circle viz. Pilibhit, Bareilly, Shahjahanpur show a better human development status with comparatively higher ranks. This only reflects that these districts failed to realise the gains of high economic progress which occurred to the state after 2005.

Classification of districts into high (above 0.60), medium (0.55 to 0.60), low (0.50 to below 0.55) and very low (below 0.50) on the basis of their HDI is presented in Table 4. The 'High' category districts have representatives from almost all the regions but what is noteworthy is that along with the districts which were there in 2005, 18 districts are the new entrants in this category. There is a visible contrast in the number of districts under various categories- from more to lesser number in 'very low' and from lesser to more number in 'high' category- in comparison to 2005 HDI.

Table 5 presents the breakup of HDI into education, health and standard of living for 2011. Jhansi, even though ranks among the top five districts, hasn't shown an outstanding performance in terms of education and stands at tenth position in the Educational Index. On analysing the break-up of HDI scores, except Kanpur Nagar, Lucknow and Ghaziabad no other top districts are seen

consistent in their performance. Gautam Buddha Nagar i.e., the topper in the HDI scores doesn't reflect a similar attainment in case of Education with its eighteenth position among the districts. Jyotiba Phule Nagar which is categorised as a 'High' ranker perhaps attributes it to its standard of living as in case of other two parameters it ranks significantly low. This also carries the implicit message that being monetarily 'rich' doesn't guarantee a paired level of human development. Similarly, districts like Auraiya, Bhagpat, Etawah and Hamirpur, although have attained relatively high HDI scores but this performance is not uniform across all the indicators. Some of them have stood efficient in education alone and others only in health or standard of living but none of them in all three. Surprisingly, Lucknow even after being the capital and enjoying the benefits of central location still ranks 6th in education index. Considering the fact that it is a hub of many educational centres and some of the best reputed educational institutes are located here and students from other districts/states frequently arrive here for better educational opportunities, one expects its education attainment to be quite high.

Shrawasti, however has maintained its consistency in terms of being a laggard not only on the scale of time i.e. between 2005 to 2011 but also across all the Human Development indicators whether it's education, health or standard of living. Bahraich and Balrampur are meagrely better with only poor performance in the index of education and standard of living. The common fact about these three districts is their territory i.e. Eastern region. As far as Standard of living is considered, after Shrawasti, Azamgarh and Pratapgarh are the worst performers.

On scrutinizing the trend in relative rankings i.e. between 2005 and 2011 we find that Sultanpur, Rae Bareli, Mahoba, Sant Kabir Nagar and Hamirpur are the major gainers and have experienced highest absolute increment in their HDIs during the period. On the contrary, districts like Saharanpur, Faizabad, Mau, Farrukhabad, Ghazipur and Chandauli are the ones with maximum downturn in their HDI ranks. Saharanpur, in fact is the district and the only district to have HDI score lower than 2005 i.e. a negative increment. This calls for serious attention as with overall economic betterment of the state in the given time an upturn, whether small or big, normally is envisaged, but certainly not a negative movement. The districts with lowest absolute increment are Faizabad, Chandauli, Ghazipur, Mau, Varanasi, Kannauj, Farrukhabad, Allahabad and Bhadohi respectively. Districts with maximum absolute increment are Sant Kabir Nagar, Sultanpur, Rae Bareli, Bahraich, Hamirpur, Fatehpur, Jhansi, Kanpur Nagar, Etah and Gonda. This improvement/movement matters also because it reflects that these districts are at least concomitant with the state's progress in terms of human development.

HDI on the basis of five indicators

Keeping in view the data availability status at the district level and the three dimensions of the HDI, the present paper chose to embrace some supplemental indicators in the analysis and hence HDI for 2011 was also calculated with this set of indicators. The HDI estimates on the basis of new set of indicators which are presented in Table 6 show somewhat different results. Incorporating additional indicators within the human development dimensions naturally increased the coverage area and hence with an increase in the number of indicators the HDI scores have gone down. This is why the value of computed indices is lower than those of 2011 and also than those calculated for 2005 with only three indicators. For expository purpose, it can be mentioned here, that as HDI approach propagates assessing development on the basis of multitudinous aspects, thus, inclusion of additional indicators has enhanced the multi dimensionality of the analysis.

On perusing the human development indices estimated on the basis of these five indicators the study finds that the number of districts categorised as 'High' has decreased (See Table 7). Number of districts in all other categories namely, Medium, Low and Very low has swelled up. Now only 11 districts of the state are High HDI districts whereas these were 37 in the previous results. The number of districts having a 'Low' HDI has increased hugely. Infact most of the districts of Uttar Pradesh fall into this category solely, from the perspective of these five indicators.

As it has been already mentioned that the HDI scores on this basis are relatively lower than the previous ones, switching of categories is anticipatory and can be easily apprehended.

As usual, it's the districts belonging to the western region which have attained the top ten positions in HDI. Not a single district of the Eastern region could qualify for the 'High' category. Districts corresponding to Bundelkhand and Central region, however, have found a representation in the same. The 'Very Low' category districts too have followed the pattern and most of them are a part of Eastern region with only Shahjahanpur and Budaun as exceptions where the latter belongs to the Western region.

Gautam Buddha Nagar is seen well enduring its position again. It has not only occupied the topmost rank in HDI but also in the standard of living index. Gautam Buddha Nagar, Ghaziabad, Lucknow and Kanpur Nagar seem to be reaping the benefits of high urbanisation and industrial economy which has induced these cities' top ranking. Moreover, Gautam Buddha Nagar and Ghaziabad also have a location advantage as they lie in the periphery of the national capital. If we examine the break-up of these indices, Hathras occupies first place in education, Jhansi in health and Gautam Buddha Nagar in Standard of Living.

These results educe top ten districts of which five are new i.e. they were absent from the top ten districts of previous results. Furthermore, the order of ranks has also changed completely except that of Gautam Buddha Nagar. Sequentially Jhansi, Hathras, Lucknow and Mahoba constitute the list of top five. Kanpur Nagar which ranked two in the previous results has gone down to the rank of seven which can be attributed to its poor performance in terms of educational and health attainments (i.e. the dimensions which have additional indicators). Apart from this, districts like Meerut, Baghpat, Auraiya and Etawah which were the members of the top ten group as per the previous results, have failed to make their place even in the 'High' category list.

Shrawasti too has adhered to its bottom most rank again and has done so in case of all three dimensions individually as well. The bottom ten districts, however, are the same with a very little change in their order and as anticipated most of them belong to the relatively less developed Eastern region, only Shahjahanpur and Budaun as exceptions to it. Backwardness in terms of education and health infrastructure, a characteristic which evolved during the previous analysis too, appears to be the contributory reason for the position of these two districts among the bottom ten.

Intra-regional variation

The analysis also reveals a considerable range of intra-regional variation in the state. The aforementioned results give a clear picture of the regional level differences and it can be deduced that regional influences are quite instrumental in determining the performance of the districts therein. On computing human development indices (three indicators) for all four regions of the state for 2011, we find that the Eastern region still continues to remain the most backward region of the state with an HDI of 0.574 i.e., quite below the state's score. Although this region records comparatively high scores in education and health dimensions but lags behind in terms of standard of living. But in comparison to the other regions, it faces a challenging situation in all three dimensions of human development. In fact, except Shrawasti, all the districts of this region are high in Education and Health attainment scorers, albeit the same does not stand true in the case of standard of living. Nonetheless, districts like Sultanpur, Amethi, Maharaj Ganj and Varanasi are among High HDI districts even though they belong to this region.

According to the Uttar Pradesh Human Development Report 2003, among the four regions, the incidence of poverty was the lowest in the western region, while it was the highest in the central region (UPHDR, 2008). The Central region exhibits a comparatively better performance with the HDI score of 0.625 (three indicators) but the pattern is similar to Eastern region i.e., high human development in terms of educational and health attainments but a discouraging living standard. Still seven districts of this region have found representation in the 'High' human

development bracket. It is noteworthy here that among all other regions Central region has recorded maximum education index score. In other words, it's the best performer in terms of educational attainments in comparison to the remaining three.

The benefits accrued from the green revolution boom have placed the Western region of Uttar Pradesh in quite a developed territory in the fashion same as of Haryana and Punjab. This is apparent from the place of highest number of districts of this region in the 'High' category of HDI. The Western region which is known to be the richest and most developed region of the state has stood second if we rank the regions on the basis of their HDI performance. Most of the state's industrial hubs are located in this region. With an HDI score of 0.630 (three indicators), logically, this region has maximum number of districts to its credit falling in the 'High' human development group. In addition, the region has done quite well in Education and Health dimensions and in terms of Standard of living it has accomplished the highest HDI score.

Going by the statistical analysis, the last, but the best performer among all regions is the Bundelkhand region with an HDI score of 0.639 (three indicators). All the districts of this region have an upper hand particularly in the dimension of Health. This dry, plateau topography of the region not only lacks on the front of vegetation but is also sparsely populated. Even our analysis based on five indicators yields the same results i.e. the region ranks comparatively higher than others in HDI. Interestingly, six out of seven districts of this region fall in the 'High' HDI group with only Lalitpur due to its backwardness in education, lying in the 'Medium' category. Jhansi, Mahoba and Chitrakoot persist with their place in 'High' HDI districts on the basis of five indicators as well.

The Central, Western and Bundelkhand regions have outpaced the state's HDI with their high scores which is a positive sign. Nonetheless, the Eastern region has still a long way to go beginning from improvement in the standard of living to other quality life attainments.

Limitations of the study

The study used traditional indicators to assess health (IMR and institutional deliveries) and education (literacy rate and gross enrollment ratio) dimensions in the second set of HDI calculations which is based on extended number of indicators. In UN-HDR, health dimension is measured by life expectancy at birth; and education dimension is measured by mean years of schooling and expected years of schooling. However, unavailability of data for given indicators at district level compelled us to use traditional indicators to construct our health and education dimensions. Nevertheless, use of traditional indicators has not impacted comparability (with other states' and national's HDI estimates) and representativeness of our HDI estimates. The only limitation it poses is international incomparability.

IV. Conclusion and policy implications

As UPHDR (2008) noted that - "Human development has two sides. One is the formation of human capabilities – such as improved health, knowledge and skills. The other use is the people make of their acquired capabilities – for employment, productive activities, political affairs or leisure." With the perspective to provide policy input to obtain these two objectives, the present paper attempted district wise calculation of HDI for the state with Census 2011 data. We have estimated two sets of HDI, one by taking three indicators same as UPHDR (2008) and second by taking five indicators adding Institutional Delivery and Gross Enrolment Ratio under health and education dimensions respectively. Further, we have adopted the same goal posts and methodology as of UPHDR (2008). First set of HDI allows us to make an absolute comparison of improvement made in HDI between 2005 and 2011 across the districts. Second set of exercise throws light on an important issue that what would happen if we increase the coverage in terms of indicators (in line with national and international human development reports). The results show that HDI estimates based on five indicators are lower than three indicators based for the all the districts. Many districts

earlier reflecting high human development slipped to medium human development category in the case of five indicators.

Three indicators based estimates are bound to provide exaggerated figures because state government as well as central government has been making all round efforts to increase literacy and reduce IMR. Several government sponsored schemes like Sarva Shikhsha Abhiyan, Mid-Day Meal, Adult Literacy Programme, and Schemes to promote literacy are running in the country. Similarly, National Health Mission, National Rural Health Mission, Integrated Child Development Services, Navjaat Shishu Suraksha Karyakram, Janani Suraksha Yojana, Janani Shishu Suraksha Karyakaram, Rashtriya Bal Swasthya Karyakram have been launched to bring down reduction in infant and maternal deaths. Recently launched 'The State Nutrition Mission' is an additional impetuous towards reducing IMR. Although, its efficacy will depend to a great extent on the spread of awareness and coverage at village and backward regions level but it is certainly expected to play a vital in reducing infant and maternal mortality. Thus, improvements in literacy rate and IMR spread all across, may fail to reflect real relative position regarding human development.

This fact is also supported from our results (three indicators) that major differences in HDI score are not mainly due to education or health but by income (standard of living). According to the UPHDR (2003), "Despite allocation of large funds for various poverty alleviation programmes such as the Integrated Rural Poverty Alleviation Programme, Swarnajayanti Gram Swarozgar Yojana, etc. there has been little impact on poverty alleviation in the state." This justifies our second set of exercise which includes GER in education and Institutional Delivery in health dimension for getting a bit deeper picture of human development. Thus, our HDI estimates based on five indicators give a more realistic picture of human development in the state.

Our findings suggest that the State along with health and education should also try to reduce income inequalities by positive income generating policy interventions. In this regard, strengthening of MGNREGA and skill development programmes will certainly prove beneficial. The present exercise is also an important contribution to policy making in the sense that it provides latest estimates of district-level human development, for a variety of indicators, which was in great demand by the policy makers, social activists and other stake holders.

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Table 3. Relative HDI ranking of districts in 2005 and 2011 (three indicators)

Rank	2005		2011		Rank	2005		2011	
	Districts	HDI	Districts	HDI		Districts	HDI	Districts	HDI
1	Gautam Buddha Nagar	0.702	Gautam Buddha Nagar (0)	0.757	37	Ambedkar Nagar	0.558	Ballia (-11)	0.602
2	Ghaziabad	0.657	Kanpur Nagar (+1)	0.728	38	Jaunpur	0.555	Mau (-19)	0.599
3	Kanpur Nagar	0.651	Lucknow (+1)	0.717	39	Faizabad	0.554	Kannauj (-14)	0.596
4	Lucknow	0.648	Ghaziabad (-2)	0.716	40	Mirzapur	0.553	Chandauli (-18)	0.594
5	Baghpat	0.639	Jhansi (+3)	0.702	41	Banda	0.546	Allahabad (-12)	0.590
6	Meerut	0.630	Meerut (0)	0.681	42	Kheri	0.543	Sant Kabir Nagar (+22)	0.590
7	Agra	0.622	Mathura (+3)	0.679	43	Deoria	0.542	Deoria (0)	0.589
8	Jhansi	0.621	Baghpat (-5)	0.675	44	Azamgarh	0.541	Bhadohi (-12)	0.588
9	Saharanpur	0.617	Auraiya (+5)	0.669	45	Unnao	0.540	Farrukhabad (-18)	0.588
10	Mathura	0.616	Etawah (+2)	0.663	46	Sultanpur	0.539	Lalitpur (+3)	0.586
11	Hathras	0.616	Mainpuri (+10)	0.656	47	Pilibhit	0.537	Pilibhit (0)	0.583
12	Etawah	0.609	Mahoba (+22)	0.656	48	Etah	0.536	Kashiram Nagar	0.582
13	Kanpur Dehat	0.608	Hathras (-2)	0.656	49	Lalitpur	0.535	Moradabad (+5)	0.579
14	Auraiya	0.607	Agra (-7)	0.652	50	Fatehpur	0.533	Jaunpur (-12)	0.578
15	Varanasi	0.607	Hamirpur (+20)	0.650	51	Bareilly	0.533	Ghazipur (-18)	0.577
16	Jalaun	0.606	Muzaffarnagar (+2)	0.647	52	Barabanki	0.530	Azamgarh (-8)	0.574
17	Bulandshahar	0.602	Sultanpur (+29)	0.642	53	Pratapgarh	0.528	Bareilly (-2)	0.573
18	Muzaffarnagar	0.594	Jalaun (-2)	0.635	54	Moradabad	0.527	Mirzapur (-14)	0.571
19	Mau	0.591	Kanpur Dehat (-6)	0.634	55	Raebareli	0.523	Hardoi (+4)	0.568
20	Chitrakoot	0.591	Bulandshahar (-3)	0.634	56	Kaushambi	0.521	Barabanki (-4)	0.567
21	Mainpuri	0.589	Bijnor (+3)	0.634	57	Sitapur	0.514	Kaushambi (-1)	0.566
22	Chandauli	0.588	Firozabad (+1)	0.633	58	Shahjahanpur	0.513	Kheri (-16)	0.563
23	Firozabad	0.588	Csmaharaj Nagar	0.624	59	Hardoi	0.510	Rampur (+3)	0.563
24	Bijnor	0.587	Banda(+17)	0.622	60	Kushinagar	0.505	Basti (+1)	0.561
25	Kannauj	0.586	Gorakhpur(+3)	0.621	61	Basti	0.492	Pratapgarh (-8)	0.559
26	Ballia	0.581	Unnao (+19)	0.620	62	Rampur	0.492	Faizabad (-23)	0.558
27	Farrukhabad	0.577	Varanasi (-12)	0.617	63	Mahrajganj	0.491	Gonda (+2)	0.555
28	Gorakhpur	0.576	Jyotiba Phule Nagar (+3)	0.616	64	Sant Kabir Nagar	0.480	Shahjahanpur (-6)	0.555
29	Allahabad	0.574	Chitrakoot (-9)	0.616	65	Gonda	0.478	Sitapur (-8)	0.554
30	Aligarh	0.574	Fatehpur (+20)	0.615	66	Siddharth Nagar	0.469	Kushinagar (-6)	0.550
31	Jyotiba Phule Nagar	0.572	Rae Bareli (+24)	0.615	67	Budaun	0.461	Maharajganj (-4)	0.533
32	Bhadohi	0.571	Etah (+16)	0.614	68	Balrampur	0.448	Bahraich (+1)	0.524
33	Ghazipur	0.570	Sonbhadra (+3)	0.612	69	Bahraich	0.440	Siddharth Nagar (-3)	0.519
34	Mahoba	0.569	Saharanpur (-25)	0.612	70	Shrawasti	0.413	Budaun (-3)	0.515
35	Hamirpur	0.568	Aligarh (-5)	0.611	71			Balrampur (-3)	0.498
36	Sonbhadra	0.562	Ambedkar Nagar (+1)	0.602	72			Shrawasti (-2)	0.443

Source: Authors' Calculation

Table 4. Classification of districts on the basis of HDI, 2011 (three indicators)

High (Above 0.60)			Medium (0.55 to 0.60)			Low (0.50 to below 0.55)			Very Low (Below 0.50)		
Rank	District	HDI	Rank	District	HDI	Rank	District	HDI	Rank	District	HDI
1	Gautam Buddha Nagar	0.7568	38	Mau	0.5990	67	Maharajganj	0.5325	71	Balrampur	0.4982
2	Kanpur Nagar	0.7281	39	Kannauj	0.5960	68	Bahraich	0.5241	72	Shrawasti	0.4428
3	Lucknow	0.7171	40	Chandauli	0.5943	69	Siddharthnagar	0.5192			
4	Ghaziabad	0.7163	41	Allahabad	0.5904	70	Budaun	0.5148			
5	Jhansi	0.7020	42	Sant Kabir Nagar	0.5903						
6	Meerut	0.6812	43	Deoria	0.5887						
7	Mathura	0.6792	44	Bhadohi	0.5884						
8	Baghpat	0.6749	45	Farrukhabad	0.5879						
9	Auraiya	0.6692	46	Lalitpur	0.5856						
10	Etawah	0.6632	47	Pilibhit	0.5825						
11	Mainpuri	0.6564	48	Kashiram Nagar	0.5823						
12	Mahoba	0.6559	49	Moradabad	0.5790						
13	Hathras	0.6555	50	Jaunpur	0.5781						
14	Agra	0.6524	51	Ghazipur	0.5774						
15	Hamirpur (U.P.)	0.6498	52	Azamgarh	0.5737						
16	Muzaffarnagar	0.6465	53	Bareilly	0.5727						
17	Sultanpur	0.6420	54	Mirzapur	0.5713						
18	Jalaun	0.6354	55	Hardoi	0.5676						
19	Kanpur Dehat	0.6342	56	Barabanki	0.5673						
20	Bulandshahar	0.6340	57	Kaushambi	0.5658						
21	Bijnor	0.6337	58	Kheri	0.5632						
22	Firozabad	0.6330	59	Rampur	0.5629						
23	Csmaharaj Nagar	0.6236	60	Basti	0.5606						
24	Banda	0.6216	61	Pratapgarh	0.5590						
25	Gorakhpur	0.6213	62	Faizabad	0.5581						
26	Unnao	0.6197	63	Gonda	0.5553						
27	Varanasi	0.6166	64	Shahjahanpur	0.5548						
28	Jyotiba Phule Nagar	0.6159	65	Sitapur	0.5543						
29	Chitrakoot	0.6158	66	Kushinagar	0.5500						
30	Fatehpur	0.6152									
31	Rae Bareli	0.6149									
32	Etah	0.6135									
33	Sonbhadra	0.6124									
34	Saharanpur	0.6115									
35	Aligarh	0.6113									
36	Ambedkar Nagar	0.6023									
37	Ballia	0.6017									

Source: Authors' Calculation

Table 5. Ranking, dimension scores and overall Human Development Index, 2011 (three indicators)

District	Education		Health		Standard		HDI		District	Education		Health		Standard		HDI	
	I	R	I	R	I	R	I	R		I	R	I	R	I	R	I	R
Agra	0.694	43	0.774	11	0.489	14	0.6524	14	Jalaun	0.751	11	0.705	31	0.449	23	0.635	18
Aligarh	0.696	42	0.674	41	0.464	19	0.6113	35	Jaunpur	0.737	21	0.653	47	0.345	66	0.578	50
Allahabad	0.744	15	0.595	67	0.432	28	0.5904	41	Jhansi	0.764	10	0.832	2	0.511	7	0.702	5
Ambd. Nagar	0.744	16	0.700	32	0.363	59	0.6023	36	J P Nagar	0.657	54	0.668	44	0.522	3	0.616	28
Auraiya	0.803	4	0.747	20	0.458	21	0.6692	9	Kannauj	0.740	18	0.626	57	0.422	38	0.596	39
Azamgarh	0.727	28	0.658	46	0.336	71	0.5737	52	Kanpur Dehat	0.775	8	0.711	28	0.417	42	0.634	19
Baghpat	0.735	22	0.768	13	0.521	4	0.6749	8	Kanpur Nagar	0.813	3	0.858	1	0.513	6	0.728	2
Bahraich	0.511	71	0.711	28	0.351	63	0.5241	68	Kashiram Nagar	0.623	62	0.674	41	0.450	22	0.582	48
Ballia	0.738	20	0.690	35	0.377	57	0.6017	37	Kaushambi	0.637	58	0.616	64	0.445	25	0.566	57
Balrampur	0.518	70	0.584	70	0.393	51	0.4982	71	Kheri	0.627	61	0.642	50	0.420	40	0.563	58
Banda	0.681	49	0.763	15	0.421	39	0.6216	24	Kushinagar	0.677	50	0.632	55	0.342	69	0.550	66
Barabanki	0.638	57	0.679	38	0.385	54	0.5673	56	Lalitpur	0.650	55	0.674	41	0.434	27	0.586	46
Bareilly	0.605	66	0.642	50	0.471	18	0.5727	53	Lucknow	0.793	6	0.821	3	0.537	2	0.717	3
Basti	0.697	41	0.626	57	0.359	61	0.561	60	Maharajganj	0.643	56	0.611	65	0.344	68	0.533	67
Bhadohi	0.711	33	0.626	57	0.428	33	0.588	44	Mahoba	0.669	51	0.805	8	0.493	12	0.656	12
Bijnor	0.704	36	0.737	22	0.460	20	0.634	21	Mainpuri	0.783	7	0.768	13	0.418	41	0.656	11
Budaun	0.529	69	0.590	69	0.426	36	0.515	70	Mathura	0.727	29	0.816	4	0.495	11	0.679	7
Bulandshahr	0.702	38	0.695	33	0.505	9	0.634	20	Mau	0.752	11	0.653	47	0.393	52	0.599	38
Chandauli	0.739	19	0.637	53	0.407	46	0.594	40	Meerut	0.748	13	0.779	10	0.517	5	0.681	6
Chitrakoot	0.665	52	0.690	35	0.493	13	0.616	29	Mirzapur	0.704	37	0.626	57	0.384	55	0.571	54
C S M Nagar	0.711	31	0.811	6	0.349	64	0.624	23	Moradabad	0.587	67	0.711	28	0.440	26	0.579	49
Deoria	0.735	23	0.684	37	0.347	65	0.589	43	Muzaffarnagar	0.701	40	0.763	15	0.475	17	0.647	16
Etah	0.733	24	0.679	38	0.429	31	0.614	32	Pilibhit	0.636	59	0.663	45	0.448	24	0.583	47
Etawah	0.800	5	0.758	17	0.432	30	0.663	10	Pratapgarh	0.731	26	0.605	66	0.341	70	0.559	61
Faizabad	0.706	34	0.558	71	0.410	45	0.558	62	Rae Bareli	0.690	44	0.774	11	0.381	56	0.615	31
Farrukhabad	0.706	35	0.642	50	0.416	44	0.588	45	Rampur	0.551	68	0.716	27	0.422	37	0.563	59
Fatehpur	0.688	47	0.753	18	0.405	47	0.615	30	Saharanpur	0.720	30	0.637	53	0.477	16	0.612	34
Firozabad	0.746	14	0.737	22	0.416	43	0.633	22	Sant Kabir Nagar	0.690	45	0.726	25	0.355	62	0.590	42
G B Nagar	0.822	2	0.753	18	0.696	1	0.757	1	Shahjahanpur	0.616	64	0.621	63	0.427	34	0.555	64
Ghaziabad	0.850	1	0.790	9	0.509	8	0.716	4	Shrawasti	0.491	72	0.526	72	0.311	72	0.443	72
Ghazipur	0.743	17	0.626	57	0.363	60	0.577	51	Siddharthnagar	0.618	63	0.595	67	0.345	67	0.519	69
Gonda	0.612	65	0.679	38	0.375	58	0.555	63	Sitapur	0.634	60	0.632	55	0.398	50	0.554	65
Gorakhpur	0.733	25	0.726	25	0.405	48	0.621	25	Sonbhadra	0.662	53	0.695	33	0.481	15	0.612	33
Hamirpur	0.702	39	0.816	4	0.432	29	0.650	15	Sultanpur	0.711	31	0.811	6	0.404	49	0.642	17
Hardoi	0.689	46	0.626	57	0.388	53	0.568	55	Unnao	0.683	48	0.747	20	0.429	32	0.620	26
Hathras	0.731	26	0.732	24	0.504	10	0.656	13	Varanasi	0.771	9	0.653	47	0.427	35	0.617	27

Note: I = Index; R = Rank. Source: Authors' Calculation

Table 6. Ranking, dimension scores and overall Human Development Index, 2011 (five indicators)

District	Education		Health		Std. of living		HDI		District	Education		Health		Std. of living		HDI	
	I	R	I	R	I	R	I	R		I	R	I	R	I	R	I	R
Agra	0.544	66	0.718	9	0.489	14	0.584	17	Jalaun	0.629	26	0.660	18	0.449	23	0.579	20
Aligarh	0.539	68	0.609	36	0.464	19	0.537	42	Jaunpur	0.631	25	0.580	50	0.345	66	0.519	59
Allahabad	0.580	49	0.564	55	0.432	28	0.526	55	Jhansi	0.637	22	0.796	1	0.511	7	0.648	2
Ambd. Nagar	0.693	6	0.647	23	0.363	59	0.568	23	J.P Nagar	0.756	2	0.595	44	0.522	3	0.625	6
Auraiya	0.673	10	0.616	33	0.458	21	0.582	18	Kannauj	0.674	9	0.567	54	0.422	38	0.554	30
Azamgarh	0.651	16	0.665	17	0.336	71	0.551	36	Kanpur Dehat	0.569	57	0.613	35	0.417	42	0.533	46
Baghpat	0.563	62	0.702	12	0.521	4	0.595	14	Kanpur Nagar	0.617	32	0.734	6	0.513	6	0.622	7
Bahraich	0.561	64	0.494	68	0.351	63	0.469	69	Kashiram Nagar	0.502	71	0.609	36	0.450	22	0.521	57
Ballia	0.610	38	0.597	43	0.377	57	0.528	51	Kaushambi	0.591	45	0.568	52	0.445	25	0.535	45
Balrampur	0.579	50	0.403	71	0.393	51	0.458	70	Kheri	0.649	17	0.548	60	0.420	40	0.539	41
Banda	0.638	21	0.737	5	0.421	39	0.599	13	Kushinagar	0.648	20	0.559	56	0.342	69	0.516	61
Barabanki	0.566	60	0.638	26	0.385	54	0.530	49	Lalitpur	0.659	12	0.704	11	0.434	27	0.599	12
Bareilly	0.574	54	0.535	61	0.471	18	0.527	52	Lucknow	0.595	44	0.783	2	0.537	2	0.638	4
Basti	0.601	42	0.585	47	0.359	61	0.515	63	Maharajganj	0.618	31	0.525	63	0.344	68	0.496	67
Bhadohi	0.539	67	0.583	49	0.428	33	0.517	60	Mahoba	0.664	11	0.744	3	0.493	12	0.634	5
Bijnor	0.722	3	0.633	31	0.460	20	0.605	9	Mainpuri	0.697	5	0.608	39	0.418	41	0.574	21
Budaun	0.517	70	0.508	65	0.426	36	0.483	68	Mathura	0.617	33	0.691	13	0.495	11	0.601	10
Bulandshahr	0.573	55	0.583	48	0.505	9	0.554	32	Mau	0.635	23	0.634	28	0.393	52	0.554	31
Chandauli	0.657	14	0.608	38	0.407	46	0.557	28	Meerut	0.555	65	0.639	25	0.517	5	0.570	22
Chitrakoot	0.683	8	0.672	16	0.493	13	0.616	8	Mirzapur	0.633	24	0.550	59	0.384	55	0.522	56
CSM Nagar	0.612	36	0.725	7	0.349	64	0.562	25	Moradabad	0.615	34	0.568	53	0.440	26	0.541	39
Deoria	0.598	43	0.651	21	0.347	65	0.532	48	Muzaffarnagar	0.569	58	0.634	29	0.475	17	0.559	27
Etah	0.517	69	0.557	57	0.429	31	0.501	65	Pilibhit	0.562	63	0.517	64	0.448	24	0.509	64
Etawah	0.649	18	0.676	15	0.432	30	0.586	16	Pratapgarh	0.659	13	0.580	51	0.341	70	0.526	53
Faizabad	0.609	39	0.592	46	0.410	45	0.537	43	Rae Bareli	0.574	53	0.717	10	0.381	56	0.557	29
Farrukhabad	0.625	29	0.506	66	0.416	44	0.516	62	Rampur	0.653	15	0.606	40	0.422	37	0.561	26
Fatehpur	0.579	51	0.635	27	0.405	47	0.540	40	Saharanpur	0.585	48	0.597	42	0.477	16	0.553	34
Firozabad	0.629	27	0.651	20	0.416	43	0.565	24	Sant Kabir Nagar	0.620	30	0.602	41	0.354	62	0.526	54
G B nagar	0.626	28	0.641	24	0.696	1	0.654	1	Shahjahanpur	0.587	47	0.485	69	0.427	34	0.500	66
Ghaziabad	0.602	41	0.691	14	0.509	8	0.601	11	Shrawasti	0.486	72	0.399	72	0.311	72	0.399	72
Ghazipur	0.612	35	0.621	32	0.363	60	0.532	47	Siddharthnagar	0.565	61	0.427	70	0.345	67	0.446	71
Gonda	0.589	46	0.593	45	0.375	58	0.519	58	Sitapur	0.712	4	0.550	58	0.398	50	0.553	33
Gorakhpur	0.566	59	0.615	34	0.405	48	0.529	50	Sonbhadra	0.649	19	0.495	67	0.481	15	0.542	38
Hamirpur	0.609	40	0.743	4	0.432	29	0.595	15	Sultanpur	0.612	36	0.725	7	0.404	49	0.580	19
Hardoi	0.684	7	0.535	62	0.388	53	0.535	44	Unnao	0.576	52	0.651	19	0.429	32	0.552	35
Hathras	0.787	1	0.633	30	0.504	10	0.642	3	Varanasi	0.569	56	0.650	22	0.427	35	0.549	37

Source: Authors' Calculation

Table 7. Districts arranged according to the value of HDI, 2011 (five indicators)

High (above 0.60)			Medium (0.55 to 0.59)			Low (0.54 to 0.50)			Very low (below 0.50)		
Rank	District	HDI	Rank	District	HDI	Rank	District	HDI	Rank	District	HDI
1	Gautam Buddha Nagar	0.654	12	Lalitpur	0.599	37	Varanasi	0.549	66	Shahjahanpur	0.500
2	Jhansi	0.648	13	Banda	0.599	38	Sonbhadra	0.542	67	Maharajganj	0.496
3	Hathras	0.642	14	Baghpat	0.595	39	Moradabad	0.541	68	Budaun	0.483
4	Lucknow	0.638	15	Hamirpur	0.595	40	Fatehpur	0.540	69	Bahraich	0.469
5	Mahoba	0.634	16	Etawah	0.586	41	Kheri	0.539	70	Balrampur	0.458
6	Jyotiba Phule Nagar	0.625	17	Agra	0.584	42	Aligarh	0.537	71	Siddharthnagar	0.446
7	Kanpur Nagar	0.622	18	Auraiya	0.582	43	Faizabad	0.537	72	Shrawasti	0.399
8	Chitrakoot	0.616	19	Sultanpur	0.580	44	Hardoi	0.535			
9	Bijnor	0.605	20	Jalaun	0.579	45	Kaushambi	0.535			
10	Mathura	0.601	21	Mainpuri	0.574	46	Kanpur Dehat	0.533			
11	Ghaziabad	0.601	22	Meerut	0.570	47	Ghazipur	0.532			
			23	Ambedkar Nagar	0.568	48	Deoria	0.532			
			24	Firozabad	0.565	49	Barabanki	0.530			
			25	Csmaharaj Nagar	0.562	50	Gorakhpur	0.529			
			26	Rampur	0.561	51	Ballia	0.528			
			27	Muzaffarnagar	0.559	52	Bareilly	0.527			
			28	Chandauli	0.557	53	Pratapgarh	0.526			
			29	Rae bareli	0.557	54	Sant kabir Nagar	0.526			
			30	Kannauj	0.554	55	Allahabad	0.526			
			31	Mau	0.554	56	Mirzapur	0.522			
			32	Bulandshahr	0.554	57	Kashiram Nagar	0.521			
			33	Sitapur	0.553	58	Gonda	0.519			
			34	Saharanpur	0.553	59	Jaunpur	0.519			
			35	Unnao	0.552	60	Bhadohi	0.517			
			36	Azamgarh	0.551	61	Kushinagar	0.516			
						62	Farrukhabad	0.516			
						63	Basti	0.515			
						64	Pilibhit	0.509			
						65	Etah	0.501			

Source: Authors' Calculation