

References:

1. Cobham, A. & Jansky, P. (2015). Measuring Misalignment: The location of US Multinationals' Economic Activity Versus the Location of their Profits. Working paper 4
2. International Centre for Tax & Development.
3. EY Tax Insights (2017). Tax Administration Goes Digital-2.
4. Gashi, J. (2015). Promoting Economic Growth: Global Financial Integrity
5. Government of India, Ministry of Statistics and Program Implementation, Statistical year book 2017–Direct & Indirect Taxes.
7. Institute of Chartered Accountants of England & Wales (ICAEW) (2016). Digitization of Tax–International Perspectives. Working paper of Information Technology Faculty, ICAEW.
8. Irish M(2018). What's next for tax? Understanding the trends on the path towards digitization. Thomson Reuters working paper.
9. Jerkoviæ E(2018). Decentralization of Financing of Self-Government Units in the Republic of Croatia. European Scientific Journal. Special edition. pp 105-118
11. Oguttu A.W. (2016). Tax Base Erosion and Profit Shifting in Africa – Part 1. Africa's Response to the OECD BEPS Action Plan – ICDC working paper No. 54
12. OECD publication (2016). Advanced analytics for better tax administration
13. Organization for Economic Co-operation and Development.
14. Price Water Coopers and Microsoft (2017) Digital Transformation of Taxation.
15. Price Water Coopers (2017): Tax Technology - The Next Wave in Business Transformation. PP 1-36.
16. Reserve Bank of India.
17. Wolfgang S. (2017). Ten Questions about Why and How to Tax the Digitalized Economy.
18. Working paper No. 11. Max Planck Institute for Tax Law and Public Finance.
19. Zhu N., Mbroh N., Monney A., Bonsu A (2019).

Social Well-being and Land-use parameters in Bihar

Dr. Sanjeev Kumar*

Abstract

Social well-being is an amalgamation of several concepts including level of living, quality of life, social satisfaction, social welfare and standard of living, sometimes used interchangeably but has fine differences. The present study attempts to evaluate the level of social well-being in terms of land-use. Quantitative methodology was implemented with tools of investigation being Z-score to investigate and get the required findings. Results reflected mixed scenario with existing inter-district disparities regarding land-use dynamics. The present study is timely and important since it would attract government and policy makers to formulate initiatives for the compromised districts in order to establish social equity.

Introduction - The contemporary issues of well-being, welfare and human development gained a little more prominence in India after the 90s and a number of studies were carried out regarding various issues related to the basic concept of social well-being. The concept of level of living is clearly established as the factual circumstances of well-being (the actual degree of satisfaction of the needs and wants of a community), whereas standard of living is related to the circumstances aspired to by that community (Knox, 1975). Jaishree Chandra (1993) made study regarding the rural development in context of women and child welfare. Z. Qasi (1993) tried to associate the scientific aspects with the quality of life.

The notion of the quality of life is a broad expression of the well-being, but generally suggests an emphasis on the amount of distribution of public goods such as health care, education and welfare services, protections against crime, the regulation of pollution, and the preservation of fine landscape and historic townscape (Hall, 1972).

Broadly speaking the word land use refers to the use of land however, the term may be defined as the putting of a parcel of land for any purpose. To Nanavati, (1957) "Land utilization is the conversion of land from one major use to other general use". Land is a resource and it

is vital for the well-being and substance of the people (Singh, 1997; 3-4). The pioneering work of Prof. L.D. Stamp (1950) on land use has been reflected in his well-known book 'The land of Britain, its use and misuse'. According to Prof. Stamp, land use is almost entirely the result of the work of few generations or centuries and may be regarded as the fruits of a process of trial and error. The existing land use pattern has developed through natural evolutions in which part error in land use are eliminated to some extent. In spite of such elimination of error, there may be still considerable misuse of land. (either wrongly used or not to the desired scale and or not contributing to the national well-being which need to be eliminated through planning.

It is for this reason the study of land use is an urgent need for resource planning, cultural advancement as well as overall economic development

As assessment of land use pattern of Bihar State can be done from the land utilization statistics, prepared by the Directorate of statistics evaluation, Government of Bihar. Although certain limitations how been absorbed such as changes in coverage (reported area) and concept (basis of classification). Which do affect the process estimating the overall pattern, certain broad conclusions can be drawn from there statistics particularly about the pattern and trends of land utilization in districts of Bihar.

The reported of the state is distributed over a nine-fold land use classification such as:-

1. Net area sown.
2. Area under non-agricultural use.
3. Forest Area.
4. Land under miscellaneous trees, groves, not included in net shown area.
5. Current fallow.
6. Fallow land other than current follow.
7. Barren and unculturable and.
8. Culturable waste land.
9. Permanent pastures and other grazing land.

But for simplification, this nine-fold land use classification has been transformed into the five categories for the study of well-being in terms of landuse pattern, viz:-

- (i) Net sown area.
- (ii) Area under non-agricultural tree covered area.
- (iii) Forest and miscellaneous tree covered area.

(iv) Fallow land.

(v) Area used for other purposes.

Methodology and selection of variables-The present research work is basically a descriptive and diagnostic one as it seeks to gain familiarity with new sets of spatial phenomena, concerning the social well-being of the state of Bihar, and at the same time it attempts to gain new insights into the problem concerning the theme of the research. Since it is not geographically credible or tenable or even reliable to go for the sampling survey for the whole State, so the researcher is bound to depend on the government and other published data. It heavily relied on the secondary sources of data, which were collected from the local and regional offices, health centres, government offices and other such directorates. Quantitative methodology is broadly implemented with different tools of investigation being Z-score, standard deviation and other measures of association and dispersion.

Land is a resource and it is vital for the well-being and sustenance for the people (Singh, 1997 :3-4). In general the word land use simply means the use of land under various categories. It shows the pattern of land utilization and at the same time expresses whether it is used or not in a desire scale, and other it is contributing to the welfare of the people or not on the basis of the availability of the data, five variables have been chosen for measuring the level of well-being in terms of land use condition. The variables are as follows:-

1. Net sown area to total area (%).
2. Area under non-agri. Use to total area (%).
3. Forest area to total area (%).
4. Fallow land to total land (%).
5. Land use in other purposes (% to total area).

Area under net sown reflect the utility of land for agricultural productivity. Area under the non-agricultural use includes the build-up area for residential, industrial and commercial purposes; land sued for road and railway connectivity etc. The percentage of follow land has got much significance in this analysis because it is related with the optimum utilization of land. The areas where percentage of follow land becomes lower it indicates their advancement towards optimum utilization of the land. Therefore, the low percentage of follow land is indicative of a positive sign in this analysis. Forest area to total land (%) reveals about the area of district under the natural vegetation. Barren and unclturable

land, culturable waste land, permanent pastures and other grazing land are included under a broad – head of area used for its inclusive as a variable for the analysis is same as that of the inclusion of the follow land. The area where there types of land constitute lower share are considered to be good because of effectiveness of the optimum use of the total land area.

Study area - The study area of the current work includes the state of Bihar. The land locked State of Bihar is situated between 24^o 20² N and 27^o 31² N latitude and 83^o 19² E and 88^o 17² E longitudes. The State of Bihar is regionally located is the east-central part of India with Nepal lying on its North, Jharkhand to the South, West Bengal to the East and Uttar Pradesh to the West. Spreading over an area of 94,163 Sq.Km., Bihar is the 12th largest State of India, with a population of 8, 28, 78, 796 (2001) Bihar is the 3rd most populous state in the country.

Level of Social Well-Being in terms of Demographic Characteristics:

The derived Z-Score to show the levels of demographic conditions in Bihar reveal that as many as 12 districts have come out with very good level, here the Z score value is above 0.30 (Table 1). The districts of this category are Purnea, Nawada, Jamui, Madhepura, Jehanabd, Saharsa, Sheohar, Arwal, Sitamarhi, Katihar, Darbhanga, Supaul. In recent years the many works related to demographic suitability have been done in these districts, the physical as well as social condition are favorable in these districts, employment opportunities are more, conditions are suitable for human habitation resulting in high density and well sex ratio.

Table 1: Calculation for Composite Z Score of Demographic parameters

SL.NO.	NAME OF DISRICT	Net sown area	Area under non agriculture use	Forest area	Fallow land	Other area	Composite Z Score
1	PATNA	-0.10	1.22	-1.02	-0.20	-0.97	-0.21
2	NALANDA	-1.25	0.05	-0.65	0.96	-1.81	-0.54
3	BHOJPUR	-1.42	-0.79	-1.05	0.81	-1.07	-0.71
4	BUXAR	-1.28	-1.58	-1.05	-0.25	-1.54	-1.14
5	ROHTAS	-0.27	-1.21	2.42	0.97	-0.71	0.24
6	KAIMUR	0.77	-1.66	5.67	1.11	-0.42	1.09
7	GAYA	1.95	-0.68	2.16	-2.70	-0.15	0.12
8	JEHANABAD	-1.35	-0.51	-0.92	1.04	-0.93	-0.53
9	ARWAL	-0.47	-0.39	-1.05	-0.51	-0.72	-0.63
10	NAWADA	1.38	-0.78	4.17	-0.59	-0.64	0.71
11	AURANGABAD	-0.54	-0.31	0.10	0.57	-0.56	-0.15
12	SARN	-0.65	-1.10	-1.05	0.03	0.55	-0.44

13	SIWAN	-1.05	-0.79	-1.05	0.70	0.02	-0.44
14	GOPALGANJ	-0.91	-0.40	-1.05	0.58	-0.23	-0.40
15	MUZAFFARPUR	-0.46	0.36	-1.05	0.26	-0.21	-0.22
16	EAST CHAMPARAN	-0.77	-0.07	-1.05	0.70	0.07	-0.22
17	WEST CHAMPARAN	0.22	0.27	2.80	0.93	-1.47	0.55
18	SITAMARHI	-0.06	2.06	-1.05	0.77	-0.08	0.33
19	SHEOHAR	0.62	2.25	-1.05	-0.17	0.33	0.39
20	VAISHALI	-0.11	0.03	-1.05	0.77	2.37	0.40
21	DARBHANGA	-0.45	1.13	-1.05	0.53	-0.68	-0.10
22	MADHUBANI	-0.27	1.27	-1.05	0.85	0.36	0.23
23	SAMASTIPUR	-0.67	1.21	-1.05	0.87	-0.90	-0.11
24	BEGUSARAI	0.04	0.80	-1.05	0.24	0.92	0.19
25	MUNGER	1.76	0.86	3.10	-0.35	0.36	1.15
26	SHEKHPURA	-0.92	-0.31	-1.05	0.71	-0.11	-0.34
27	LAKHISARAI	0.91	-1.47	1.08	-2.22	-0.46	-0.43
28	JAMUI	3.27	-1.02	5.14	-2.44	1.56	1.30
29	KHAGARIA	-0.16	0.51	-1.05	0.43	0.96	0.14
30	BHAGALPUR	0.44	1.96	-1.05	0.35	1.03	0.55
31	BANKA	1.36	-0.90	2.03	-0.16	2.99	1.06
32	SAHARSA	-0.06	-0.16	-1.05	-0.43	0.56	-0.23
33	SUPAUL	0.76	0.67	-1.05	-1.35	0.65	-0.06
34	MADHEPURA	0.27	-0.20	-1.05	-1.64	-0.49	-0.62
35	PURNIA	-0.13	-0.74	-1.05	-1.11	-0.24	-0.65
36	KISHANGANJ	-0.19	0.02	-1.02	-0.13	0.38	-0.19
37	ARARIA	-0.59	0.14	-0.99	0.67	0.29	-0.10
38	KATIHAR	0.38	0.30	-0.93	-0.64	0.95	0.01

Source: Calculated by author from Census (2001)

Categories	Composit Z score values	Districts
Very Good	Above 0.80	Jamui, Munger, Kaimur, Banka (4)
Good	0.80 to 0.30	Nawada, West Champaran, Bhagalpur, Vaishali, Sheohar, Sitamarhi (6)
Moderate	0.30 to -0.20	Rohtas, Madhubani, Begusarai, Khagaria, Gaya, Katihar, Supaul, Araria, Darbhanga, Samastipur, Aurangabad, Kishanganj (12)
Poor	-0.20 to -0.70	Patna, Muzaffarpur, East Champaran, Saharsa, Seikhpura, Gopalganj, Lakhisarai, Siwan, Saran, Nalanda, Jehanabad, Arwal, Madhepura, Purnia (14)
Very Poor	Below -0.70	Bhojpur, Buxar (2)

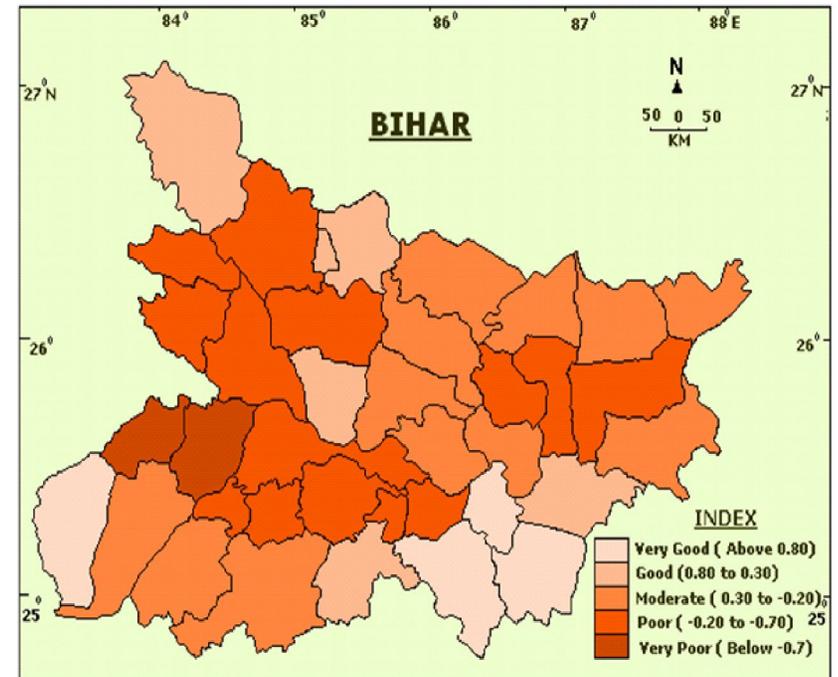
The derived Z – Score suggest that only four districts have shown very good level of land use condition, here the composite Z – score

value is above 0.80. Jamui, Munger, Kaimur and Banka come under this category. All of them have large share of land under non-agricultural use therefore the population pressure on land is comparatively less in these districts.

While six other districts, namely Nawada, West Champaran, Bhagalpur, Vaishali, levels regarding the status of land use. Here the composite Z – score value varies between 0.80 and 0.30. All of these districts are situated in the fertile plains of north and i.e. on the sides of the Ganga South. Intensive farming is in practice and as a result of ever growing population and increasing pressure on land, the share of net sown area is on constant rise.

The districts having composite Z & score value varying between 0.30 and – 0.20 are considered as having moderate land use conditions. The 12 districts come under this category, these districts are Rohtas, Madhubani, Begusarai, Khagaria, Gaya, Katihar, Supaul, Araria, Darbhanga, Samastipur, Aurangabad and Kishanganj. The main causes of the moderate land use condition of these districts are high percentage of fallow land, large share of barren and uncultivated land particularly in Aurangabad and Rohtas.

In terms of overall land use conditions the 14 districts of Bihar have shown poor condition and only two have revealed very poor condition. Poor category bears the Z score value varying from - 0.20 to 0.70, while the very poor level bears the value below – 0.70. Poor category includes 14 districts such as Patna, Muzaffarpur, East Champaran, Saharsa, Seikhpura, Gopalganj, Lakhisarai, Siwan, Saran, Nalanda, Jehanabad, Arwal, Madhepura and Purnia. The industrial development and urbanization of these districts is relatively very high, so the large percentage of non-agricultural land occurs in these districts and the distribution rate of vested land is also very low. Bhojpur and Buxar belong to very low level of land use conditions because of the pressure on barren and uncultivated land are the main cause of that. Map 1 shows the spatial distribution of well-being in terms of land-use.



Map 1: Social Well-being in terms of Land-use

Conclusion -With the help of the index values the district is divided into five categories. Very high level of land use characteristics has been found in four districts namely Jamui, Munger, Kaimur, and Banka. Six districts namely Nawada, West Champaran, Bhagalpur, Vaishali, Sheohar, Sitamarhi have good land use characteristics. Moderate land use characteristics has been found in twelve districts such as Rohtas, Madhubani, Begusarai, Khagaria, Gaya, Katihar, Supaul, Araria, Darbhanga, Samastipur, Aurangabad, and Kishanganj. Maximum districts (14) fall in the area of poor land use characteristic category. The districts are Patna, Muzaffarpur, East Champaran, Saharsa, Seikhpura, Gopalganj, Lakhisarai, Siwan, Saran, Nalanda, Jehanabad, Arwal, Madhepura, and Purnia. Very poor land use characteristic has been found in two districts namely Bhojpur and Buxar. Land use parameters are the reflections of level of development of the region. To improve the situation of the districts effective plans should be formulated that could reduce the number of districts falling in the poor level of land use dimensions and ultimately enhance the overall condition of the state.

References

- Census of India, 2011.
- Census of India, 2001.
- Chandra, J. (1993): Women and Child-A paradigm for rural development, Rawat Publications, Jaipur
- Dutta and Sunharam (2003) : Indian Economy, (47th ed). S. Chand and company limited, New Delhi.
- Kendall, M.G (1939): 'The Geographical Distribution of crop productivity in England'. Journal of Royal statistics society, 162.
- Knox, P.L. (1975): Social well-being: spatial perspective, University press, Oxford.
- Nanavati, M.B., (1957) : Reading in land utilization : In Indian Agricultural Economics, Mumbai.
Qasi, S.Z. (1993): Science and Quality of life, Presidential Address, 80th Indian Science Congress, Goa: 1-13.
- Rafiullah, S.M. (1956) : ' A New Approach to Functional classification of Towns'. The Geographer, Vol. 8.
- Sahai, V.N. (2004) : Fundamentals of Social, Kalyani Publishers, New Delhi.
- Shukla, T.N. (2004) : The West Bengal land reform Act, 1955, Kamala Law Hosue, Kolkata.
- Stamp, L.D (1962) : The land of Britain, Its use and Misuse, (2nd ed). Longmans, Green and Co. Limited, London.

