



SPATIAL PATTERN AND DIFFERENTIAL IN LITERACY: A DISTRICT LEVEL ANALYSIS OF HARYANA, 2011

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INTRODUCTION:

Literacy is one of the main components of socio-economic development of an area or country. It is also one of the main components of Human Development Index (HDI) with life expectancy and per capita income. There is a strong empirical correlation between literacy and life expectancy (Khan, 2004). In international usage, literacy is defined as the ability to read and write at least a simple message in any language (Hassan, 2005). There is no common definition of literacy in world; it varies from country to country on their historical background and social development. UNESCO defined literacy as the “ability to identify, understand, interpret, create, compute and use printed, use printed and written material associate with varying contracts. Literacy involves a continuum of learning in enableity individual to achieve their goal, to developed their knowledge and potential and to participate fully in their community and wider society”. There is also change in the definition of literacy over time. But at present time, census of India defined literacy as “a person age above six year who can both read and write with understanding in any language is called literate”. Children up to six year age are treated as illiterate in the country.

Although there is significant improvement in literacy since independence in India, but there are regional disparity in the level of literacy. Literacy in India differs from 93.9percent in Kerala to 63.8 percent in Bihar. There is regional disparity in the district level also. In Haryana literacy differ from 84.4 percent in Gurgaon to 56.1 percent in neighboring district Mewat which is curved out from Gurgaon. This shows that there is not only difference in level of literacy in state level but it also differs within state. There is also differential in literacy in various groups like, male-female, rural-urban.

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STUDY AREA:

Haryana state is one of the developed states of India which lies between 27°37' north to 30°53' northern latitude and 74°28' east to 77°36' eastern longitude. Haryana state is bounded by Punjab and Himachal Pradesh from north, Rajasthan from west and south, U.P. and Delhi from east. Haryana state is one of the smallest states of India with 44212sq.km. Haryana state has total population of 2,53,53,081 persons in 2011, out of which 1,35,05,130 are male and 1,18,47,951 female. The density of population recorded as 573 persons per sq. kilometer which is fifth highest in Indian states. The sex ratio recorded 877 females per thousand males, which is lowest in India. Haryana state has 76.64 percent literacy rate with differential of 85.38 percent male literacy and 66.77 percent female literacy. State has 1,69,04,324 literate person out of which 99,91,838 are males and 69,12,486 are females. Haryana state has 34.79 percent urbanization which differs from 79.44 percent in Faridabad to 11.36 percent in Mewat. There are 21 districts with an increase of two districts compare to 2001 Census.

OBJECTIVES:

The present paper has following objectives;

1. To analysis the spatial pattern of literacy in 2011 in Haryana.
2. To analysis the differential in literacy in 2011 in Haryana.

DATA BASE AND METHODOLOGY:

Present paper is based on secondary data which obtained by census of India 2011. Data obtained from census has been analyzed and presented by applying differential index which is as follows:

Differential Index:

$$1. \text{MFDI} = (\text{MLR} - \text{FLR}) / \text{TLR}$$

Where

MFDI=Male-female differential index.

MLR= Male literacy rate.

FLR= Female literacy rate.

TLR= Total literacy rate.

$$2. \text{URDI} = (\text{ULR} - \text{RLR}) / \text{TLR}$$

Where

URDI=Urban-rural differential index.

ULR= Urban literacy rate.

RLR= Rural literacy rate.

TLR= Total literacy rate.



After using this technique, the result is divided into four categories, which are high, moderate, low and very low. GIS software (Arc GIS 9.3) used for preparing the map of above categories and to show the spatial pattern and differential of literacy in Haryana.

A. Spatial pattern of Literacy:

Present paper has been discussed the spatial pattern of literacy in Haryana. Paper divided literacy into five categories of pattern viz. general literacy, urban literacy, rural literacy, male literacy and female literacy. After this each category divided into four categories which are (i) high, (ii) moderate, (iii) low and (iv) very low.

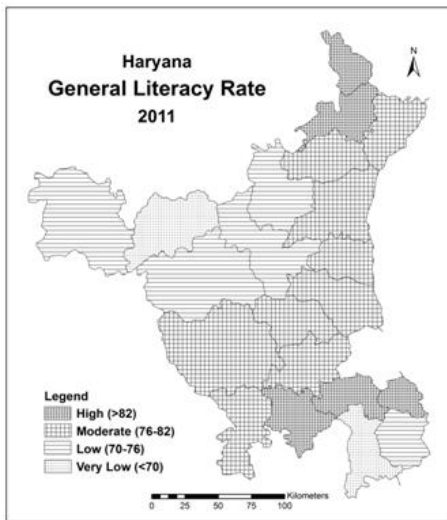
1. Spatial Pattern of General Literacy Rate:

Haryana state has 76.64 % literacy rate which ranks 15th in India. General literacy rate in Haryana varies from 84.44 % in Gurgaon to 56.14 % in Mewat. 13 districts have high literacy in compare to state average while 8 districts are below state average in Haryana.

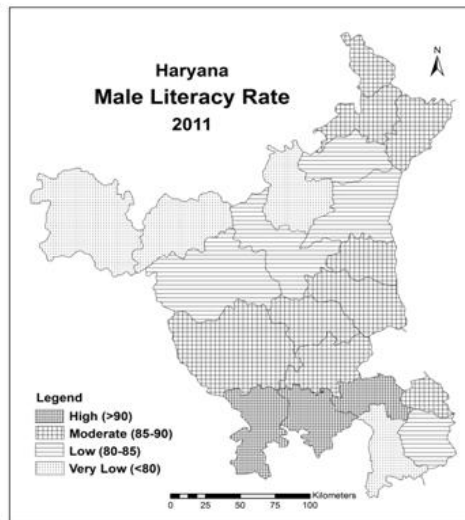
Table 1: Various Dimensions of Literacy in Haryana, 2011

Sr. No.	Districts	General Literacy	Male Literacy	Female Literacy	Rural Literacy	Urban Literacy
1	Panchkula	83.44	88.65	77.48	77.45	88.25
2	Ambala	82.89	88.47	76.64	78.64	88.15
3	Yamunanagar	78.93	85.06	71.99	74.96	85.04
4	Kurukshetra	76.7	83.46	69.18	73.3	84.87
5	Kaithal	70.56	79.33	60.69	68.29	78.52
6	Karnal	76.44	83.73	68.29	73.1	83.94
7	Panipat	77.46	85.45	68.23	74.09	81.37
8	Sonipat	80.83	89.4	70.88	78.53	86.02
9	Jind	72.73	82.49	61.58	70.16	81.37
10	Fatehabad	69.13	78.1	59.29	66.73	79.22
11	Sirsa	70.35	78.64	61.16	66.9	80.77
12	Hisar	73.24	82.79	62.31	70.02	80.08
13	Bhiwani	76.74	87.39	64.4	75.2	82.91
14	Rohtak	80.37	88.42	71.19	78.03	83.56
15	Jhajjar	80.83	89.44	70.96	78.92	86.42
16	Mahendragarh	78.87	91.28	65.25	78.04	83.8
17	Rewari	82.23	92.92	70.54	80.87	86.13
18	Gurgaon	84.44	90.27	77.64	81.1	85.94
19	Mewat	56.14	72.98	37.58	54.01	71.78
20	Faridabad	83.04	89.94	75.17	75.72	84.87
21	Palwal	70.32	82.6	56.4	67.87	78.3

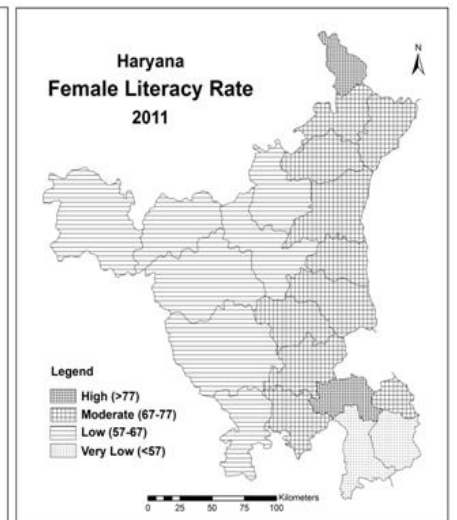
Sources: Provisional Census of India, 2011



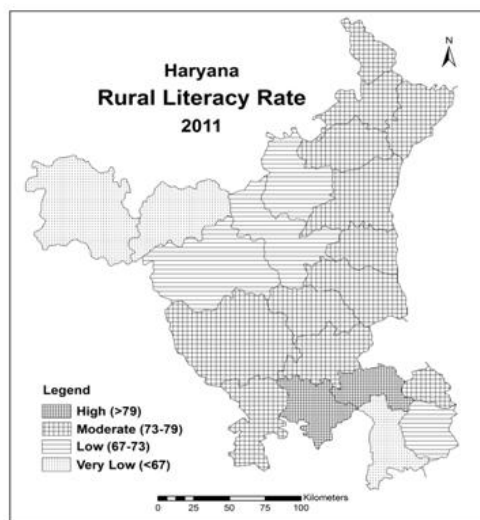
Map-1



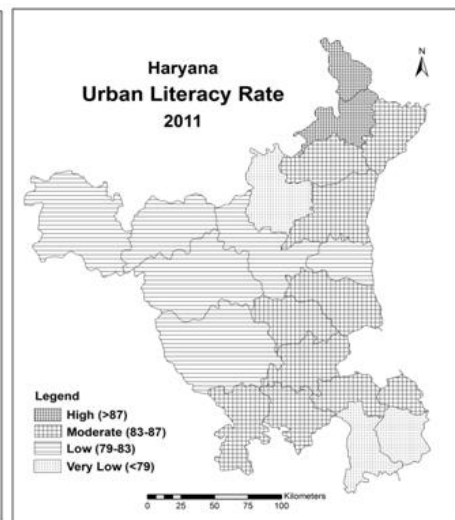
Map-2



Map-3



Map-4



Map-5

General literacy rate are divided into four category i.e. high (above 82%), moderate (76-82%), low (70-76%) and very low (below 70%).

2. Spatial Pattern of Male Literacy Rate:

Haryana has 85.38 % male literacy rate and at district's level in Rewari (92.92 %) occupied first place while Mewat (72.98 %) occupied last position in male literacy rate.

3. Spatial Pattern of Female Literacy Rate:

Haryana has 66.67 per cent female literacy rate which varies from highest in Gurgaon (77.64%) to lowest in Mewat (37.58%). Map 3 shows that there is clear cut border between



high and moderate level of female literacy. It shows that western Haryana comes under moderate category of female literacy, while eastern Haryana shows high female literacy rate.

4. Spatial Pattern of Rural Literacy Rate:

Haryana state has 72.74 percent rural literacy which varies from highest in Gurgaon (81.10) to the lowest in Mewat (54.01). 14 districts of the state have more rural literacy than the state average while 7 districts have low rural literacy than the state average. Map 4 shows the north- eastern and Southern (except Mewat) districts have relatively high rural literacy then north western districts.

5. Spatial Pattern of Urban Literacy Rate:

Haryana state has 83.83 percent urban literacy which varies from the highest in Panchkula (88.25) to the lowest in Mewat (71.78). Ten districts of state have more urban literacy than the state average while eleven have low urban literacy than the state average.

B. Spatial Pattern of Literacy Differential:

Present paper has been analyzed the spatial pattern of literacy differential in various groups in Haryana. Paper found that the literacy differential in various group like male-female differential in literacy, male-female differential in rural literacy, male-female differential urban literacy, rural urban differential in literacy, rural-urban differential in male literacy, rural-urban differential in female literacy. Above group of literacy differential further divided into four categories which are as follow (i) high, (ii) moderate, (iii) low (iv) very low.

1. Spatial Pattern of General Male-Female Literacy Differential:

General male-female literacy differential index varies in Haryana from one district to other. The value of differential index varies from 0.13 in Panchkula to 0.63 in Mewat district, while state average is 0.24. The value of differential index of ten districts is more than state average while rests are below state average. The value of differential index is divided into four category viz. (i) low (< 0.15) (ii) low ($0.15-0.25$) (iii) moderate ($0.25-0.35$) (iv) high (> 0.35). Map 6 shows that the entire districts under low category are in the eastern side of state, while all western districts fall under the moderate category. Districts are under very low category lies in the northern side of Haryana.



2. Spatial Pattern of Rural Male-Female Literacy Differential:

Rural male-female literacy differential index varies between 0.20 in Ambala and Panchkula to 0.68 in Mewat. Like former category this is also divided four categories viz. (i) very low (<0.20), (ii) Low (0.20-0.30), (iii) moderate (0.30-0.40), (iv) high (>0.40). Map 7 shows district under very low category lies in north while district under high category lies in the south-eastern part of state. Moderate category districts are in western side (except Faridabad).

3. Spatial Pattern of Urban Male-Female Literacy Differential:

Urban male female literacy differential index value varies from 0.08 minimum in Ambala to 0.33 maximum in Mewat. State average of differential index is 0.14 of this category, which is more than 7 districts and equal to Faridabad while 13 districts are above state average. Four category of differential index as follows: (i) very low (<0.10) (ii) low (0.10-0.15) (ii) moderate (0.15-0.20) (iv) high (>0.20). Map no. 8 shows very low differential index districts lies in northern part while high differential district are mostly lies in the western part of state.

4. Spatial Pattern of General Rural-Urban Literacy Differential:

General rural-urban literacy differential index varies from 0.06 in Gurgaon to 0.32 in Mewat. Haryana state average in this category is 0.14. This category of differential is divided into four categories viz. (i) very low (<0.07) (ii) low (0.07-0.12) (iii) moderate (0.12-0.17) and (iv) high (>0.17). Map no.9 shows that there is no regular pattern of general rural-urban differential. This differential is distributed in irregular pattern.

5. Spatial Pattern of Male Rural-Urban Literacy Differential:

Differential index of this category varies between -0.02 in Gurgaon to 0.16 in Mewat which is neighbor district of former. This category is also divided into following four category; (i) very low (<0.02) (ii) low (0.02-0.06) (iii) moderate (0.06-0.10), (iv) high (>0.10). Map no.10 shows that high category district lies in north-western belt (except Mewat which is situated in south) while districts under other category have no regular pattern.

Table 2: Literacy differential Index in Haryana, 2011

Literacy differential Index in Haryana							
Sr. No.	Districts	A	B	C	D	E	F
1	Panchkula	0.13	0.08	0.19	0.13	0.20	0.09
2	Ambala	0.11	0.06	0.18	0.14	0.20	0.08
3	Yamunanagar	0.13	0.08	0.19	0.17	0.21	0.10
4	Kurukshetra	0.15	0.10	0.22	0.19	0.22	0.11
5	Kaithal	0.14	0.10	0.21	0.26	0.29	0.19



6	Karnal	0.14	0.09	0.22	0.20	0.24	0.12
7	Panipat	0.09	0.04	0.17	0.22	0.28	0.16
8	Sonipat	0.09	0.05	0.16	0.23	0.26	0.16
9	Jind	0.15	0.10	0.24	0.29	0.32	0.19
10	Fatehabad	0.18	0.11	0.29	0.27	0.31	0.15
11	Sirsa	0.20	0.14	0.29	0.25	0.29	0.15
12	Hisar	0.14	0.06	0.25	0.28	0.34	0.17
13	Bhiwani	0.10	0.03	0.20	0.30	0.33	0.18
14	Rohtak	0.07	0.01	0.16	0.21	0.28	0.13
15	Jhajjar	0.09	0.05	0.24	0.23	0.33	0.16
16	Mahendragarh	0.07	0.01	0.17	0.33	0.35	0.21
17	Rewari	0.06	0.00	0.15	0.27	0.31	0.17
18	Gurgaon	0.06	-0.02	0.15	0.15	0.27	0.10
19	Mewat	0.32	0.16	0.66	0.63	0.68	0.33
20	Faridabad	0.11	0.03	0.22	0.18	0.34	0.14
21	Palwal	0.15	0.06	0.29	0.37	0.42	0.23

Source: Based on table 1 and calculated by researchers

A= General Rural-Urban Literacy Differential

B= Male Rural-Urban Literacy Differential

C= Female Rural-Urban Literacy Differential

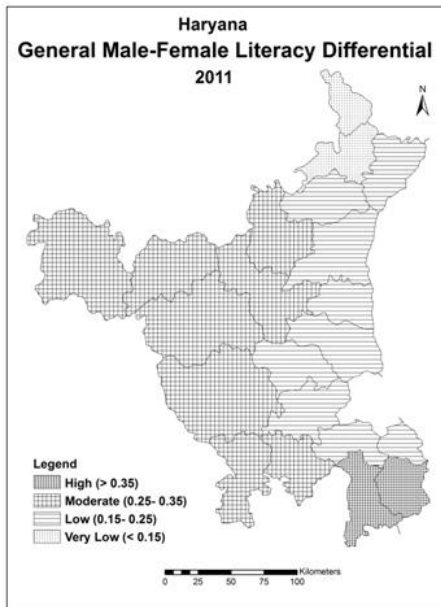
D= General Male-Female Literacy Differentials

E= Rural Male-Female Literacy Differential

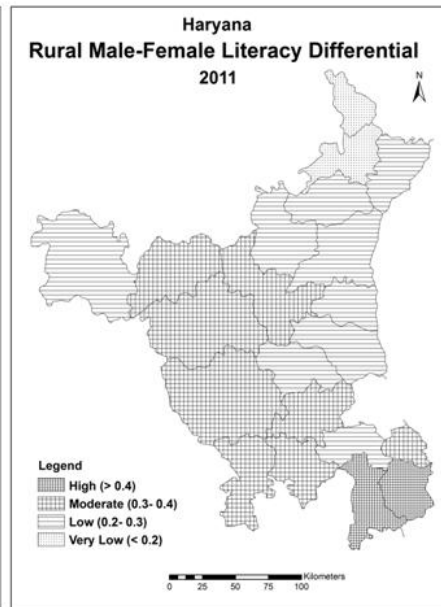
F= Urban Male-Female Literacy Differential

6. Spatial Pattern of Female Rural-Urban Literacy Differential:

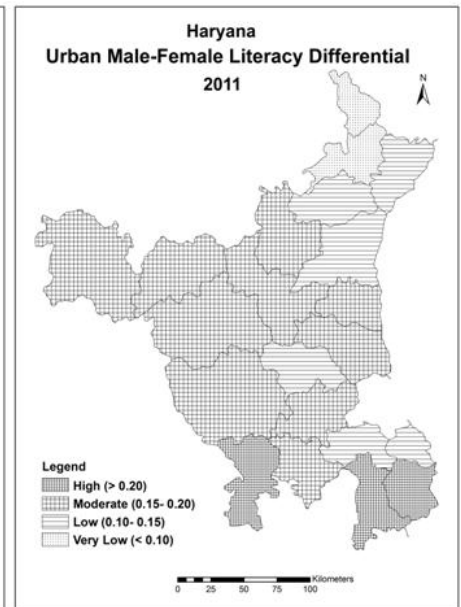
Female rural-urban literacy differential index varies from 0.15 in Rewari and Gurgaon to 0.66 in Mewat. Haryana state average in this category is 0.25. There are only four district which are high than state average. A like other category this category is also divided into four categories viz. (i) very low (<0.18) (ii) low (0.18-0.23) (iii) moderate (0.23-0.28), (iv) high (>0.28). Map no.11 shows that districts under high category lie in north-western and south-eastern part of state while low category district lies in northern part of state.



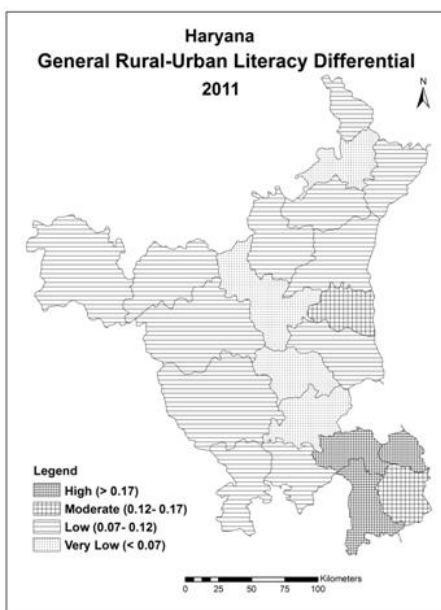
Map-6



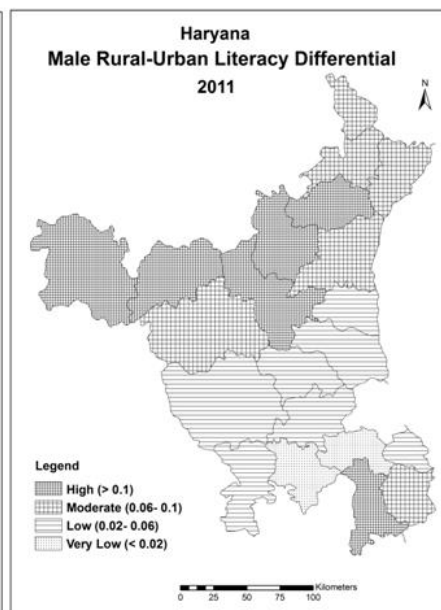
Map-7



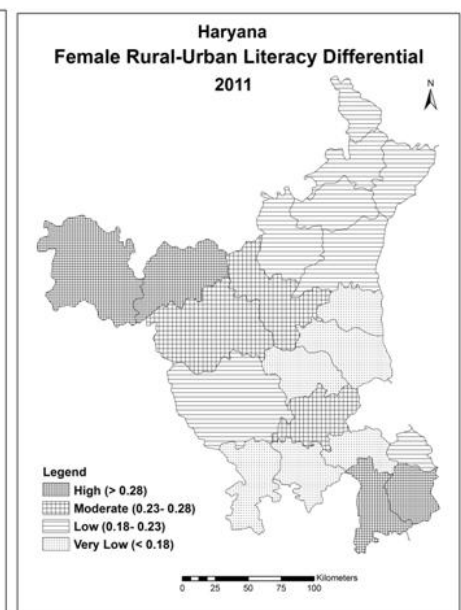
Map-8



Map-9



Map-10



Map-11

CONCLUSION:

Paper found that there are regional disparities in distribution of the literacy. It is noticed that literacy rate is high in Panchkula, Ambala, Rewari, Gurgaon and Faridabad due to nearness of Chandigarh and Delhi or due to industrial development in these districts. Mewat, Palwal, Fatehabad, Sirsa, Jind, Kaithal and Hisar have low literacy. Rural-urban literacy difference is high in Sirsa, Fatehabad and Mewat districts while it is very low in Gurgaon and Rewari districts. It is also found that male-female literacy gap is high in



western and southern Haryana, while it is comparatively low in the eastern Haryana. In the last, paper concluded there should be improvement in the level of literacy in the district like Mewat, Palwal, Fatehabad, Sirsa, Jind and Kaithal, because these district have low literacy and high literacy difference between rural-urban and male-female.

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