

LEVEL OF EDUCATIONAL DEVELOPMENT IN HARYANA: A SPATIAL ANALYSIS

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ABSTRACT

Education plays a vital role in human life. It is considered one of the most important factors of development. Therefore, in the present paper, an attempt has been made to find out the spatial variation in the level of educational development in Haryana. It is a secondary data based study that utilizes the data pertaining to the year 2011. The composite index of educational development has been computed based on 13 indicators such as overall literacy, female literacy, gender disparity in literacy, schools/colleges population ratio, schools/colleges density and teacher-pupil ratio in schools (primary, middle, high and senior secondary). The results reveal that the level of educational development is not uniform in Haryana. The districts of north-eastern, surrounding national capital (except Gurugram) and Mahendragarh districts in the south are highly developed in terms of educational development than rest of the districts of the state. The Mewat, Kaithal and north-western districts have a low level of educational development. Faridabad district is highly developed whereas least developed is Mewat district in terms of educational development in the state.

KEYWORDS: Educational Development, Literacy, Gender Disparity, Teacher-Pupil Ratio, Haryana

INTRODUCTION

Education is one of the main sources of human resource development. It is considered an important and powerful instrument of economic development and social transformation (Schulz, 1988; Tilak, 2003). Socio-economic conditions of any society largely depend upon the educational facilities. Education increases human capital and, in turn, innovation and economic growth (Mankiw et al., 1992; Krueger and Lindahl, 2001). It is the most important element in the development of any community or country. Improvement in education level indicates the improvement in the quality of human resources (Chandna and Sindhu, 1980). It not only fosters the acquisition of skills and knowledge but also sustains liberalization values in the form of autonomy and personal freedom (Ryan and Niemiec, 2009). Moreover, education is critical to strengthening people capabilities (Sen, 1989, 1999) which is considered as one of the human development indicators (Haq, 1995). Only education can break through the social barriers and prejudices and can bring social change as well as cultural advancement by enhancing potentialities through achieving knowledge, skill and information for better job opportunities through which follows social and economic development.

At the national level, the National Policy for Education also recognizes education as a vital tool in the empowerment of women. Education was declared a fundamental right but socio-economic status and location continue to influence the provision of educational opportunity and its outcomes in terms of literacy and elementary education in India. It acts as a medium for social upliftment enhancing the returns on investments made in almost every aspect of development effort, be it population control, health, hygiene, environmental degradation control, empowerment of women and weaker

section of the society. Education not only yields a huge set of benefits to the individual concerned as well as to the society in the form of a larger set of externalities but it also regarded as a great equalizer in income distribution and reducing poverty and disparities.

Recently, several scholars have focused in the field of education for different states of the country and identified a huge regional, caste wise, rural-urban and gender disparity in literacy and all the levels of education (Ramachandran et al., 2003; Vaid, 2004; Roy, 2010; Kundu, 2012; Khan, 2013; Samanta and Patra, 2015; Samanta and Bajpai, 2015; Roy and Mondal, 2015). A comprehensive study is also required to examine the level of educational development in the state. Therefore, the present study is a true effort in this regard. It is believed that the present study will fill the existing knowledge gap and will be beneficial for academicians and planners.

OBJECTIVE

The main objective of the present study is:

To examine the spatial pattern of educational development in Haryana.

STUDY AREA

The present study pertains to the Haryana state, covering an area of 44,212 km² in the north-western part of India. It is located between 27°39' N and 30°55'N latitudes and 74°27'E and 77°36' longitudes. According to the census 2011, the population of the state is 25,353,081 with a density of 573 persons per km². It is bordered by Punjab and Chandigarh in the north, Delhi and Uttar Pradesh in the east, Himachal Pradesh in the northeast and Rajasthan in the south and west (Figure.1). There are 22 districts at present in the state. In terms of sex ratio, the state has 879 females per 1000 males. In case of literacy, the state has 75.36 percent whereas female literacy is 65.70 percent as per the Census, 2011.

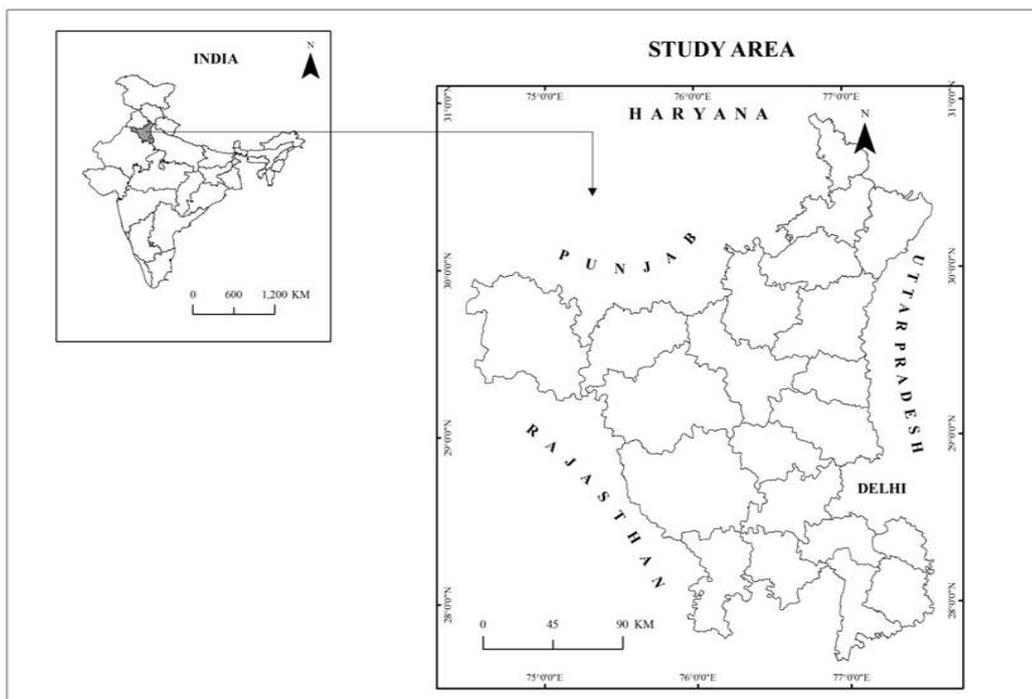


Figure 1

DATA AND METHODOLOGY

The present study is based on secondary data. The data related to literacy has been collected from the Census of India, Office of the Registrar General of India. The data related to a number of schools and colleges have been obtained from Statistical Abstracts, Department of Economic and Statistical Analysis, Haryana. The data used in the study pertains to the year 2011.

In the present study, fourteen important indicators have been selected to measure educational development such as

- Pattern of overall literacy rate
- Pattern of female literacy rate
- Gender disparity in literacy
- Number of primary school per lakh population
- Number of middle school per lakh population
- Number of high/ higher secondary schools per lakh population
- Number of colleges per 10 lakh population
- Number of primary school per 100 km² area
- Number of middle school per 100 km² area
- Number of high/higher school per 100 km² area
- Number of colleges per 1000 km² area
- Teacher-Pupil Ratio in Primary Schools
- Teacher-Pupil Ratio in Middle Schools
- Teacher-Pupil Ratio in High/higher Schools

To examine the spatial pattern of educational development in Haryana, a composite index has been computed on the basis of the combination of above thirteen (except gender disparity) educational indicators. The z-score is computed by using the following formula:

$$Z\text{-score } (Z_i) = \frac{X - \bar{X}}{SD}$$

where,

Z_i = standard score for the i^{th} observation

X = original value of the observation

\bar{X} = mean for all the values of X

SD = standard Deviation of X

Sopher's disparity index modified by Kundu and Rao (1985) has been used to assess the gender disparity in the level of literacy with the help of under mentioned formula:

$$DS = \text{Log} (X2/X1) + \text{Log} (200-X1)/(200-X2)$$

where, DS is gender disparity index.

X1 is a percentage of literate females to the total female population.

X2 is a percentage of literate males to the total male population

RESULTS AND DISCUSSION

Literacy Rate

Literacy is one of the most vital indicators of socio-economic development of any area. The high literacy rate is one of the very significantly qualitative indicators of social development associated with the economic development. Figure 2 shows the spatial pattern of literacy rate in Haryana. It has been observed that the northwestern, central and southeastern parts of the state having a high level of literacy (more than 80 percent) whereas northeastern and southwestern districts having a moderate level of literacy but these districts have recorded high literacy rate than the state average. The western and southern (mainly Mewat district) parts having a low level of literacy (below 69 percent) than rest of the parts. Gurugram district (84 percent) has recorded the highest literacy rate closely followed by Faridabad district (81 percent). Whereas lowest literacy rate found in Mewat district (54 percent) followed by Fatehabad district (67 percent).

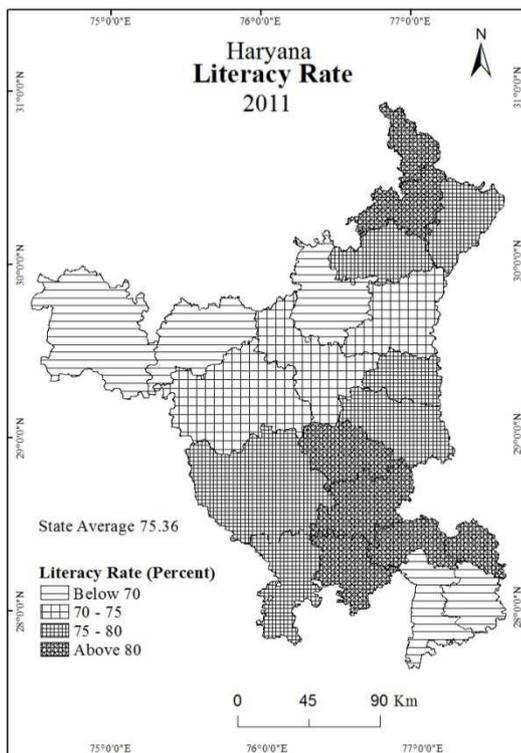


Figure 2

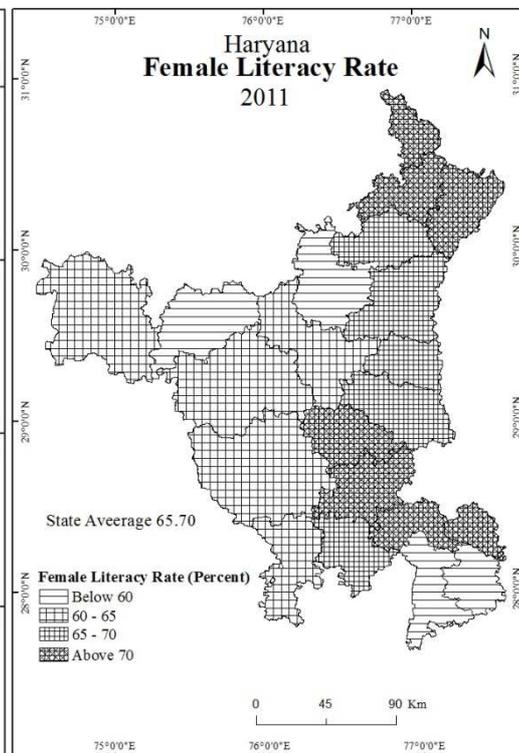


Figure 3

Only Gurugram (78 percent), Panchkula (76 percent) and Ambala districts (76 percent) having literacy rate more than 75 percent. The northeastern, central and some districts of the southern part of the state are lying between 68 to 75 percent. As like overall literacy rate, female literacy also very low in the western, south and southwestern districts of the state. Gurugram district (78 percent) has high female literacy whereas low in Mewat district (Figure. 3). The female literacy rate is only 37 percent in Mewat district, which is less than the half of Gurugram district.

Gender Disparity Rate

Figure 4 exhibits a large variation in the gender disparity in the literacy rate in Haryana. Gender disparity is very high in the southern and south-western parts, whereas it is very low in the north-eastern, eastern and south-eastern parts of the state. The highest disparity has been observed in the Mewat district (0.38) followed by the Mahendragarh (0.23), Bhiwani and Jind districts (0.21 each). Gender disparity rate is very low in the Panchkula district (0.10) followed by Ambala, Yamunanagar and Gurugram (0.11 each) districts.

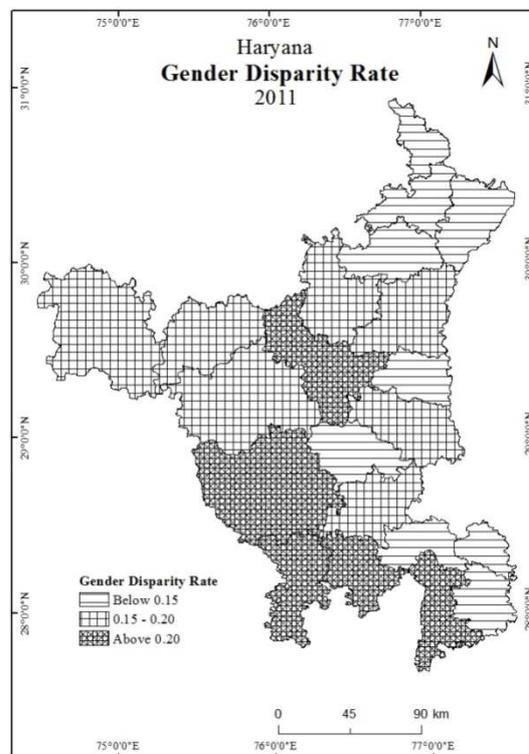


Figure 4

Schools/Colleges Population Ratio

Figure 5 depicts that the number of primary schools per lakh persons in the state is 40 in 2011. However, the large spatial variations are visible in the primary schools in the state. The study brings out that Mahendragarh district (58) has recorded the highest number of primary schools whereas lowest in Faridabad district (17). The northern, western and south-western districts of the state have more number of primary schools per lakh persons. Almost all the central districts are lying between 30-45 number of schools. However, Faridabad (17), Panipat (23), Rohtak (27) and Gurugram districts having less number of schools as compared to other districts of the state.

The number of middle schools in the state is 16 per lakh persons in 2011 (Figure. 5). The figure reveals that the south-western districts have a high number of middle schools. Surprisingly, Mewat (29), Palwal (27) districts have also a higher number of middle schools. The lowest number of middle schools have been found in Rohtak (9) followed by Panipat (11) districts. Some districts of central and eastern parts have a low number of schools as compared to the other parts of the state. High and senior secondary schools are 29 per lakh persons in the state in 2011 (Figure. 5). A maximum number of schools per lakh persons are in Bhiwani (42) followed by Jhajjar (39) districts. Only 14 schools per lakh persons found in Mewat district that is very less than other districts of the state.

The number of colleges per 10 lakh persons in the state is 35 (Figure. 6). The highest number of colleges found in Mahendragarh district (69) closely followed by Rohtak (68) and Jhajjar district (55). On the other hand, only 9 colleges per 10 lakh persons found in Mewat that is very less as compare to other districts of the state.

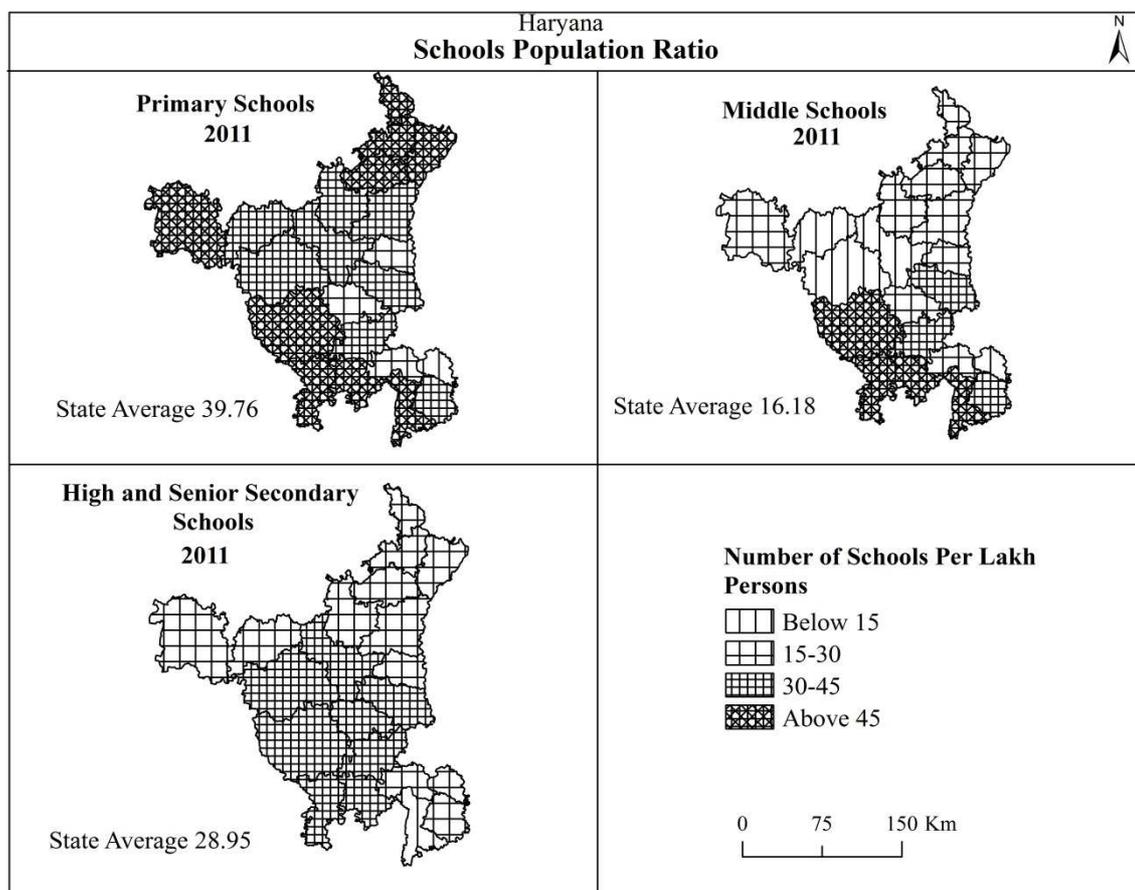


Figure 5

Density of Schools/Colleges

Figure 7 exhibits that the number of primary schools per 100 km² in the state is 23. The northern and southern districts of the state have a high density of primary schools. The highest density is recorded in Mewat district (37) closely followed by Yamunanagar district (36) whereas lowest found in Sirsa district (14) and Bhiwani district (16). Only 9 number of middle schools per 100 km² in the state of Haryana (Figure. 7). Like primary schools, the density of middle schools is

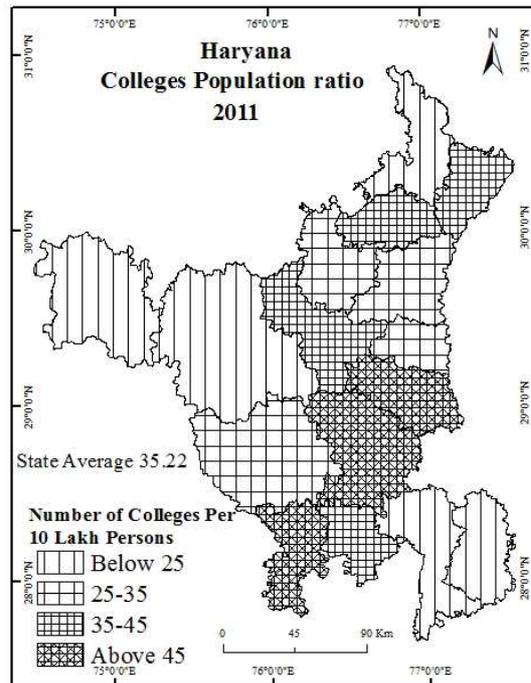


Figure 6

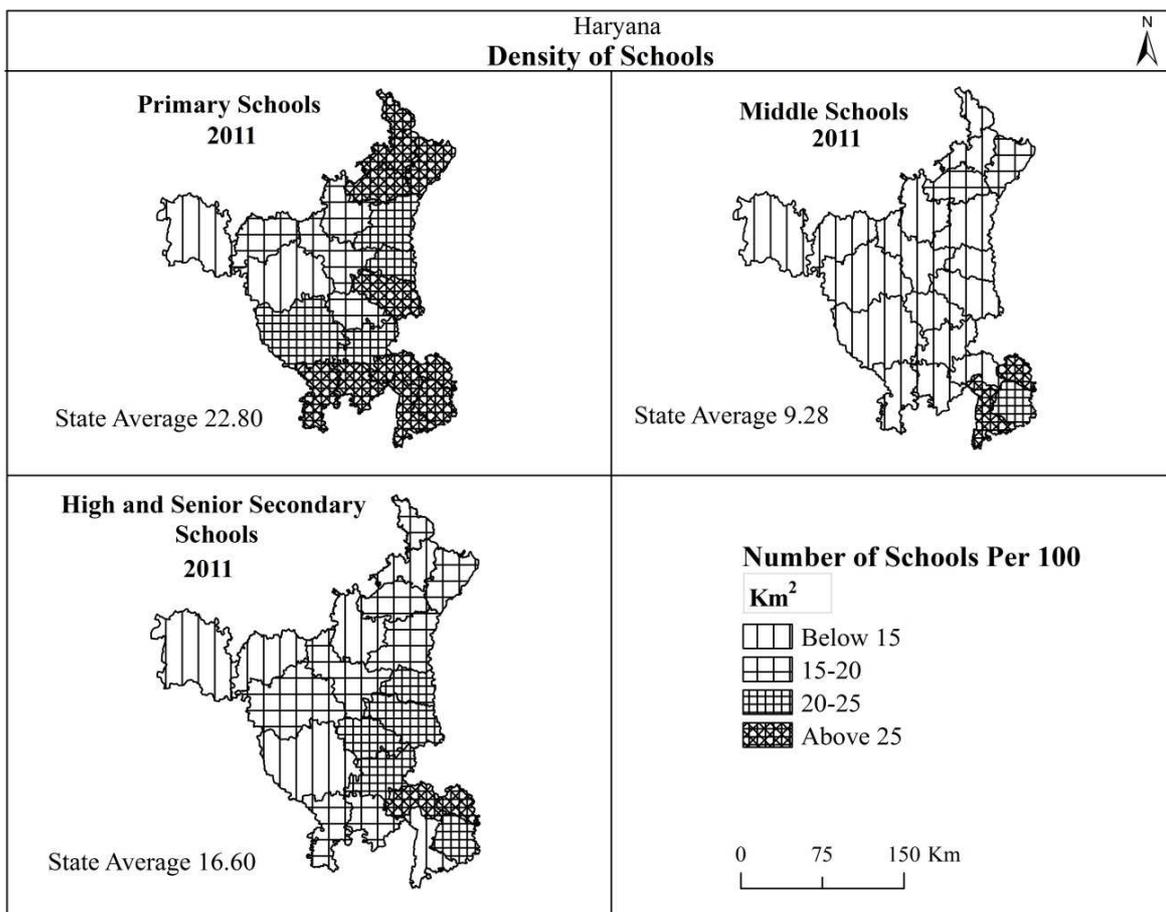


Figure 7

also highest in Mewat district (21) and lowest in Sirsa district (5). The figure also illustrates that the number of high and senior secondary schools per 100 km² in Haryana state is 17 (Figure. 7). Faridabad district (57) has recorded highest density of high and senior secondary schools whereas only 8 schools found in Sirsa district.

Figure 8 shows that the density of colleges per 1000 km² in the state is 20 in the year 2011. However, a large spatial variation has been witnessed in the density of colleges. Gurugram district (44) has the highest density of colleges whereas only 7 colleges found in Mewat district that is the lowest density of colleges than the other districts of the state.

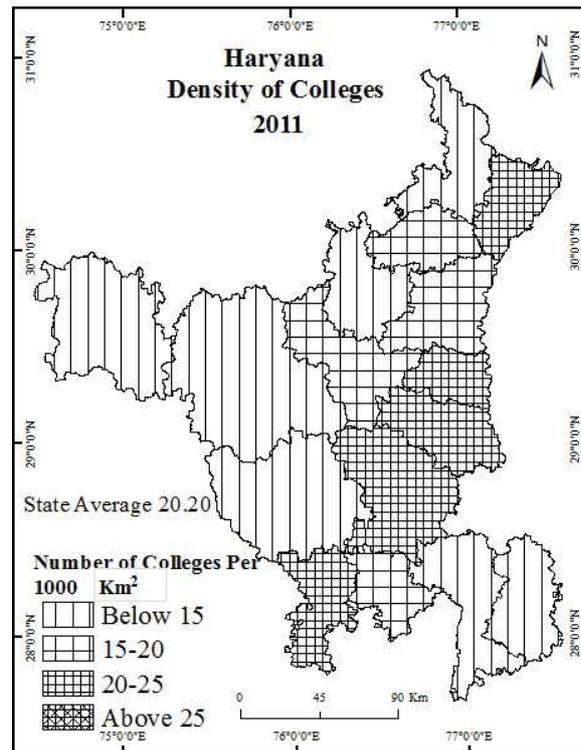


Figure 8

Teacher-Pupil Ratio (TPR)

Figure 9 depicts that the TPR at primary schools is 18 in Haryana during 2011. It has been observed that Yamunanagar and Kaithal (25 each) districts have the highest TPR. Surprisingly, Gurugram (13) and Jhajjar (14) districts have very low TPR at primary schools. Overall, the northern and south-eastern districts have low TPR as compared to the state average. Figure 10 reveals that TPR at middle schools is 30 in the state. It is evident that of south-western, surrounding national capital (except Gurugram districts) and northern districts have relatively higher TPR. Jhajjar (40) district has very high TPR at middle schools closely followed by Rewari (39) and Bhiwani (38), whereas TPR is only 17 in Mewat and Palwal districts that is lowest than the other districts of the state. The TPR in high and senior secondary schools is 48 in Haryana state (Figure. 11). It is evident that the higher TPR is found in three parts of the state i.e. north-east, north-west and surrounding the national capital. Jhajjar (103) has registered highest TPR in high and senior secondary schools followed by Ambala (83) and Sonapat (74). Surprisingly, the lowest TPR in high and senior secondary schools is found in Kaithal and Faridabad districts (17 each).

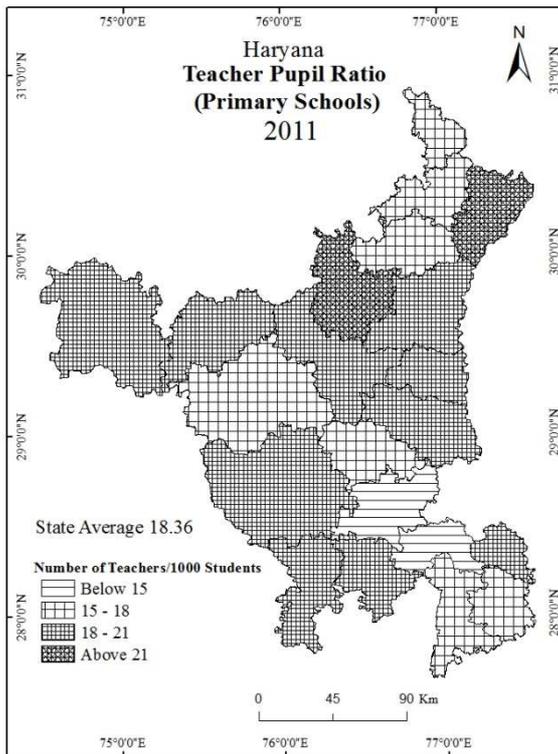


Figure 9

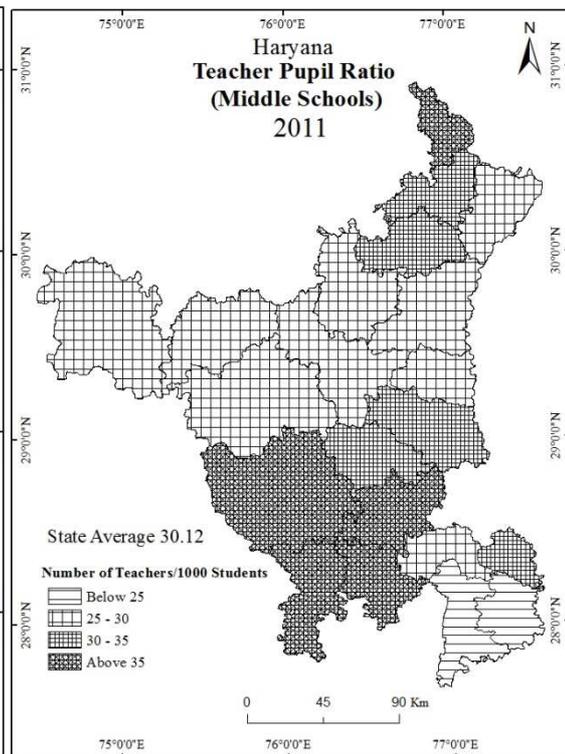


Figure 10

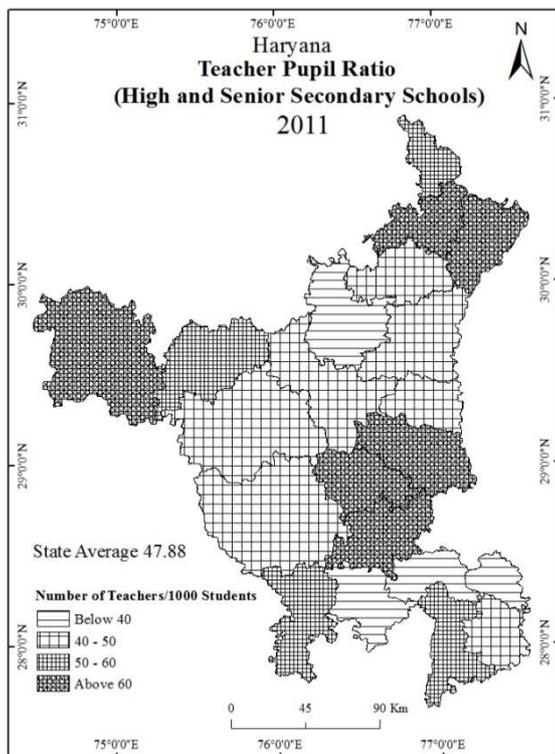


Figure 11

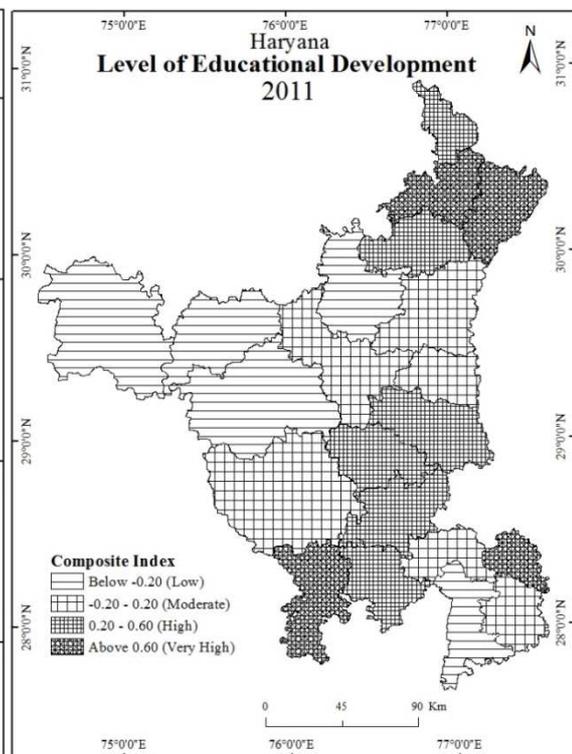


Figure 12

Level of Educational Development

Figure 12 reveals that the level of education is not uniform in Haryana. Out of total 21 districts, only four districts (Faridabad, Yamunanagar, Mahendragarh and Ambala) lies in very high category of educational development. On the other hand, Kaithal, Fatehabad, Hisar, Sirsa, Mewat fall under the low level of educational development. Six districts (Jhajjar, Rewari, Kurukshetra, Sonipat, Panchkula and Rohtak) come under a high level of educational development category. Six districts fall under the medium category of educational development (Bhiwani, Gurugram, Jind, Karnal, Panipat and Palwal). Faridabad district is highly developed, whereas least developed is Mewat district in the state.

CONCLUSIONS

The study depicts that there is a large spatial variation in the level of educational development in the Haryana state. The districts of north-eastern, surrounding national capital (except Gurugram) and Mahendragarh district in the south are highly developed in terms of educational development than rest of the districts of the state. The Mewat, Kaithal and north-west districts have a low level of educational development. A total of 10 districts come under the category of high to a very high level of education development. Conversely, 11 districts come under moderate to low level of educational development. Overall, it has been observed that Faridabad district is most developed and Mewat is the least developed district in terms of educational development in the state.

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