# Access to General Higher Education in Haryana: An Inter-District Analysis

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**Abstract**
The present paper attempts to examine the growth pattern of General Higher Education sector and the level of inter-district disparities in terms of (a) Access ratio or GER and (b) Spread of General Higher Education facilities in the State of Haryana. The study found that despite tremendous growth in the General HEIs and enrolment therein, wide disparities existed in all the 21 districts of Haryana. On the basis of the GER and Composite Index, the study confirms the presence of disparities across districts: few districts- Ambala, Rohtak and Rewari have turned out to be the best performers while some districts like Mewat, Palwal and Fatehabad have been identified to lag behind in the adequacy and spread of higher educational facilities/performance. Hence, the policy makers need to take care of inter-district disparities while preparing policy on education.
**Keywords***:* General Higher Education, Inter-district disparities, Gross Enrolment Ratio, Composite Index

## 1. INTRODUCTION:

Higher Education occupies a centre stage in this era of knowledge; it acts as a catalyst in promoting the acquisition of new knowledge and higher skills for development of physical and human resources and for building an environment of creative thinking and growth of individuality. There is general consensus that higher education is one of the vital factors of national development, an important social resource and means of reducing inequalities in the societies. Keeping in view the important role of higher education in transforming the society into a more enlightened, prosperous and civilized community, the Indian Governments (Central & State level both) and various Commissions & Committees paid special attention towards the growth and spread of higher education facilities in the country.

Though, Indian higher education system has grown tremendously both in terms of size and diversity, yet there exist large disparities in the spread of higher educational facilities across States/regions in India. Some States are educationally advanced while others are relatively backward. Even within each State, some regions have better educational facilities while others lag behind. The apex body i.e. University Grants Commission identified 374 Educationally Backward Districts of India in 2009 with an aim to address the problem during the tenure of the Eleventh Five Year Plan. Therefore a serious scrutiny is required regarding the issue of adequacy and spread of General Higher Educational opportunities. As the "*Equality of all types Educational opportunity*" is a well-cherished objective of most welfare states and it is also a pre-requisite for any policy formulation or developmental programs both at the National or State level that aims at reduction in state/regional disparities on all fronts, including higher education. The present paper is one such modest attempt in this direction i.e. it is devoted to trace the access and spread of General Higher Education facilities in the State of Haryana.

Haryana, which is presently one of the economically well-off States of India and has made tremendous progress in improving human welfare by increasing health and educational facilities etc. but still wide inequalities persist in these areas. The adverse sex-ratio and literacy ratio in Haryana is a matter of great

concern. The national ranking of Haryana in terms of sex ratio is 31st out of 35 States/UTs as per 2011 Census of India. Punjab and Haryana are registered to have the worst sex ratio among the Indian States. So far as Literacy is concerned, Haryana stands at 22nd rank out of 35 States/UTs (Census, 2011). The gender gap in literacy levels in Haryana is more than the national average in both 2001 and 2011 Censuses. Hence, it provides an ideal situation for examining the issue of adequacy and spread of educational facilities in the State of Haryana. As the State has shown asymmetry even in basic indicators of development, therefore, it is imperative to examine the issues at the district level. The reason being that an assessment at national or state level provides a general idea of the problem, many inequalities remain hidden. Whereas an assessment of the same issue at district level help in shaping the detailed policy framework for enhancing the educational as well as other welfare opportunities in the State. Secondly, the choice of General Education is justified on the ground that at India level, General Higher Education (comprising Arts, Science & Commerce disciplines) still dominant the landscape of Higher Education system, as it caters to 71 percent of student population in higher education institutions. Thus, for the purpose of presentation, the paper is divided into three main sections:

Section I, provides an overview of the growth of General Higher Education landscape of the State.

Section II, deals with the aspect of adequacy in terms of Gross Enrolment Ratio in General Higher Education Institutions (HEIs) in the State of Haryana.

In Sections III, a composite index for all the districts of the State has been developed on the basis of institutional facilities available in the field of General Higher Education; and the size of enrolment.

## 2. OBJECTIVES OF THE STUDY:

The major objectives of the present paper are as follows:

(1) To estimate the Gross Enrolment Ratio of General Education across districts of Haryana.
(2) To study the spread of General Education Facilities across districts of Haryana.

## 3. DATA & METHODOLOGY:

The present study is based on secondary data taken from various government documents namely Census Reports, Economic Survey of Haryana, Annual Reports of Haryana and Statistical Abstracts of Haryana. Further, to trace the aspect of accessibility of educational facilities, the Gross Enrolment Ratio (GER) which refers to the total enrolment in higher education proportionate to the population in the age group of 18-23 years was used by applying the following formula:

$$\textbf{GER} = \frac{\text{All enrolled in General HEIs}}{\text{Total population in 18-23 age groups}} \times 100$$

It needs to be mentioned that the GER is calculated for Enrolment in all HEIs but here in this paper, GER was calculated only for General Education Courses, hence it was lower than the actual GER as it does not include enrolment in Professional Courses as adequate data for Professional Courses was not available.

Next, to decipher the disparities in the spread of General Higher Education by using the data of 2011 Census for the State of Haryana, a composite index was constructed by applying the following formula:

$$\mathbf{C = \frac{X_i - X\ min}{X\ max - X\ min}}$$

Where:-

**C** = represent the factor score for each district in the index.
**$X_i$ =** Actual value in $i^{th}$ district.
**X min. value =** is minimum goal-post selected for the indicator.
**X max. value** = is maximum goal-post selected for the indicator.
In a composite index, equal weight is given to all the component indicators. Minimum and maximum values (goalposts) are set in order to transform the indicators into indices between 0 and 1. Where 0 represents an absolutely defined "worst performance" and 1 represents an absolutely defined "best performance" (HDR, 2014).
For the analysis of the pattern of disparity in education facilities, the following indicators were selected:
1. Literacy rates.
2. Number of educational institutions per lakh of population or College Population Index (CPI).
3. Density of educational institutions per 100 sq.km of the area.
4. Average enrolment per institutions.

**Aggregate Composite Index**

| | | |
|---|---|---|
| 1 | Literacy rates | ¼ of these indicators |
| 2 | Number of educational institutions | |
| 3 | Density of educational institutions | |
| 4 | Average Enrolment per institution | |

The formula is used to develop Education Index which takes into Secondary Education only. Here same methodology has been used to build index related to General Higher Education. Index is constructed by Human Development Report (2011), but no such indicators are used in respect of higher education facilities. The study has made an attempt to construct composite index of higher education. An aggregate index has been constructed to find relative performance of all districts of the State of Haryana in the field of General Higher Education. Using the values of the composite index, the well performing districts and laggard districts were identified on the basis of the progress of General Higher Education.

## 4. FINDING/RESULTS:

Educational development consists of two important aspects namely educational growth and distribution of educational facilities. The expansion of education is undoubtedly, a major factor for the all-round growth of an economy whereas lack of educational opportunity is indicative of its backwardness. The proper access and adequate availability of requisite infrastructure plays a significant role in the spread of education. Moreover, the post-reforms period has brought tremendous change in the education sector particularly in higher education scene in the nation. Haryana is no exception; rather it came out with its own Education Policy in the year 2000. The major policy initiatives for the improvement and expansion of higher education sector under the State Education Policy of Haryana are mentioned below:-

• Linking education with the world at work and hence accord priority to the vocational, IT, technical, need-based courses in higher education to enhance employability.

• Effective utilization of existing infrastructure, quality improvement in higher education especially in rural areas.

• Inception of State Council for Higher Education as a statutory body in order to maintain academic standards in higher education.

• Encouraging private investment in higher education i.e. self-financing institutions.

• Periodic review of university courses, curriculum, examination etc.

• New scholarship schemes for Girls, and students belonging to Scheduled Castes, Backward Classes and Economically Weaker Sections.

It is in order to visualize the growth pattern of Higher Education with special focus on General Higher Education in terms of institutions and enrolment therein; the next section is devoted to the same.

## 5. GROWTH OF GENERAL HIGHER EDUCATION INSTITUTIONS IN HARAYANA:

The higher education system of the State of Haryana expanded and underwent change during the period 1971-2013 (see Table 1). The number of Total HEIs i.e. *Universities & University level institutions and Colleges* multiplied by 11 times (from 87 in 1970-71 to 932 in 2012-13), with considerable growth especially in the Post-State Education Policy era (2000). The increase in growth of *Universities & University level institutions* was 29 times (from 1 in 1970-71 to 29 in 2012-13) while in case of *Colleges*, it was 11 times (from 86 in 1970-71 to 903 in 2012-13). Further, the bifurcation of Colleges, showed that the number of *Professional Education Colleges* increased exceptionally by almost 35 times while the number of *General Education Colleges* in the State of Haryana increased by almost 3 times (from 66 in 1970-71 to 208 in 2012-13). The *Total Student Enrolment* in overall HEIs of Haryana increased by 12 times from 67,298 in 1970-71 to 7,84,515 by the year 2012-13. While the *Total Student Enrolment* in General Education increased by 5 times from 58 thousand (in 1970-71) to 30.5 lakhs by the year 2012-13 and in case of *Professional Education Colleges,* it increased by 54 times (from 8 thousand to 47.9 lakhs) during the period 1971-2013 respectively.

**Table 1 Growth of Higher Education Institutions & Enrolment**

| Years | Universities | Colleges | | Total HEIs | Enrolment | | |
|---|---|---|---|---|---|---|---|
| | | General | Professional | | General | Professional | **Total** |
| 1970-71 | 1 | 66 | 20 | **87** | 58444 | 8854 | **67,298** |
| 2012-13 | 29 | 208 | 695 | **932** | 304910 | 479605 | **7,84,515** |

**Source:** Compiled from data collected from Deptt. of Higher Education, Panchkula, Haryana.

As one of the important objectives of the State Education Policy (2000) was to ensure a balanced growth in educational opportunities/facilities across regions and all sections of the people in the State. Therefore, it becomes imperative to see the access (in terms of GER) and the spread of General Higher Education facilities across 21 districts of the State. Hence, the subsequent sections are devoted to these two major aspects of General Higher Education across all 21 districts of the State.

## 6. GROSS ENROLMENT RATIO OF HARYANA: 2011 CENSUS

The Higher Education sector in Haryana witnessed tremendous increase in enrolment, but whether that growth was adequate or not can be better explained by Access Ratio or Gross Enrolment Ratio. Though GER for Haryana improved from 19.5 percent in 2001 to 27.8 percent in 2012, yet it was behind many leading States of India, highest being 55.8 percent for Chandigarh (amongst U.Ts of India) and 43 percent for Tamil Nadu (AISHE, 2015). In order to depict the intra-state differences in the enrolment of Higher Education of Haryana, GER was estimated using the relevant information from Census of 2011 (see Table 2). It showed that some districts had better access ratio while some other lags behind in the same. The districts with highest access ratio were: Rohtak (18.6 percent), Mehandragarh (17.2 percent) and Ambala (13.7 percent) while laggard districts comprise: Mewat (1.7 percent), Jhajjar (5 percent) and Kurukshetra (5.8 percent).

**Table 2 Gross Enrolment Ratio of Haryana: 2011 Census**

| Districts | Enrolment | Population (18-23 years) | GER |
|---|---|---|---|
| Ambala | 19003 | 138877 | 13.7 |
| Panchkula | 5626 | 65014 | 8.7 |
| Yamunanagar | 19358 | 153376 | 12.6 |
| Kurukshetra | 7251 | 125148 | 5.8 |
| Kaithal | 10277 | 135671 | 7.6 |
| Karnal | 14609 | 190431 | **7.7** |
| Panipat | 13915 | 154160 | 9.0 |
| Sonipat | 12339 | 183624 | 6.7 |
| Rohtak | 24524 | 131514 | 18.6 |
| Jhajjar | 5936 | 118086 | 5.0 |
| Faridabad | 19610 | 223155 | 8.7 |
| Palwal | 8538 | 127280 | 6.7 |
| Gurgaon | 15120 | 180691 | 8.4 |
| Mewat | 2010 | 120509 | 1.7 |
| Rewari | 12083 | 110509 | 10.9 |
| Mahendragarh | 19618 | 114066 | 17.2 |
| Bhiwani | 21981 | 201719 | 10.9 |
| Jind | 10539 | 167391 | 6.3 |
| Hisar | 21854 | 218914 | 9.9 |
| Fatehabad | 7678 | 117571 | 6.5 |
| Sirsa | 12746 | 163917 | 7.8 |
| **Haryana** | 284615 | 3141624 | **9.1** |

**Note:** GER is calculated for Enrolment in all HEIs but here GER was calculated only for General Education Courses, hence it was lower than the actual GER as does not include enrolment in Professional Courses as adequate data for Professional Courses was not available.

**Source:** Calculated by using data from (i) Govt. of Haryana, Statistical Abstract of Haryana, various issues and (ii) Govt. of Haryana, Census of Haryana, 2011, Director of Census Operations, Haryana.

## 7. GENERAL HIGHER EDUCATION INSTITUTIONS AND ENROLMENT ACROSS DISTRICTS IN HARYANA: 2011 CENSUS

This section is devoted to visualize the spread of General HEIs and Enrolment therein across all 21 districts of Haryana by using the indicators namely (i) Literacy rate; (ii) General Higher Education Institutions per lakh of population i.e. College population Index; (iii) Density of General Higher Education Institutions per 100 square kilometers and (iv) Average Enrolment of Students per Institution.

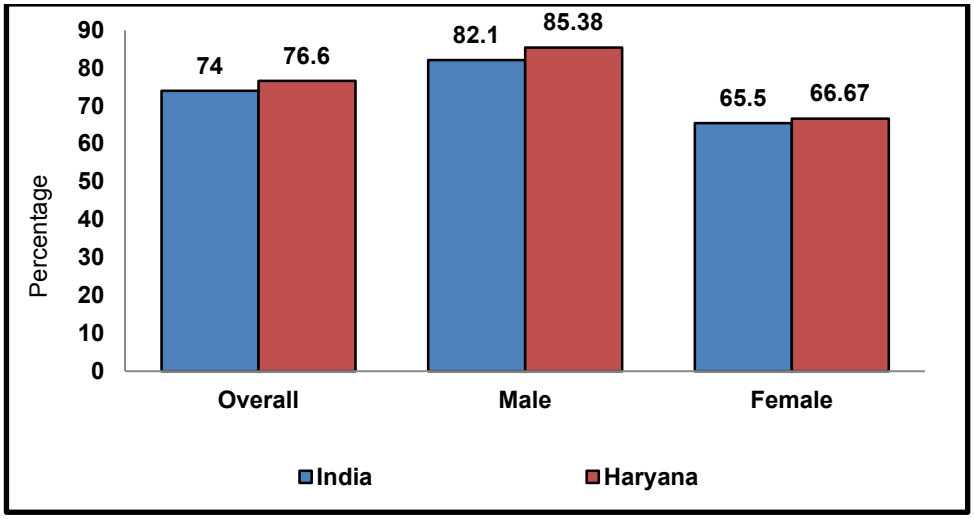
### *7.1 Literacy Rates across Districts*

*Literacy* forms an important input in overall development of individuals enabling them to comprehend their social, economic, political and cultural environment in a better way and respond to it appropriately. Higher levels of education and literacy lead to a greater awareness and also contribute in improvement of socio-economic conditions. It acts as a catalyst for social upliftment enhancing the returns on investment made in almost every aspect of development effort, viz., population control, health, hygiene, control of environmental degradation, employment of weaker sections of the society etc.

According to 2011 Census, the overall literacy rate of India was 74 percent, the male literacy rate was 82.14 percent and female literacy rate was 65.5 percent i.e. the gap of 16.64 percentage points between the literacy rates of two sexes at the national level. The respective figures of literacy rates in the State of

Haryana had almost been similar i.e. 76.6 percent (overall), 85.38 percent (male) and 66.67 percent for females as shown in Figure 1. Further, in terms of ranking of 35 States and U.Ts by literacy rates (2011), Haryana was placed lowly at 22nd rank in case of overall literacy rate, slightly better i.e. at 19th rank in case of male literacy rate but a little lower i.e. at 24th in case of female literacy rate. The position of Haryana slightly worsened on this account during the recent decade of 2001-11 as its rank slipped from 19th in 2001 to 22nd in 2011. It is among the category of lowest literacy States/U.Ts of India.

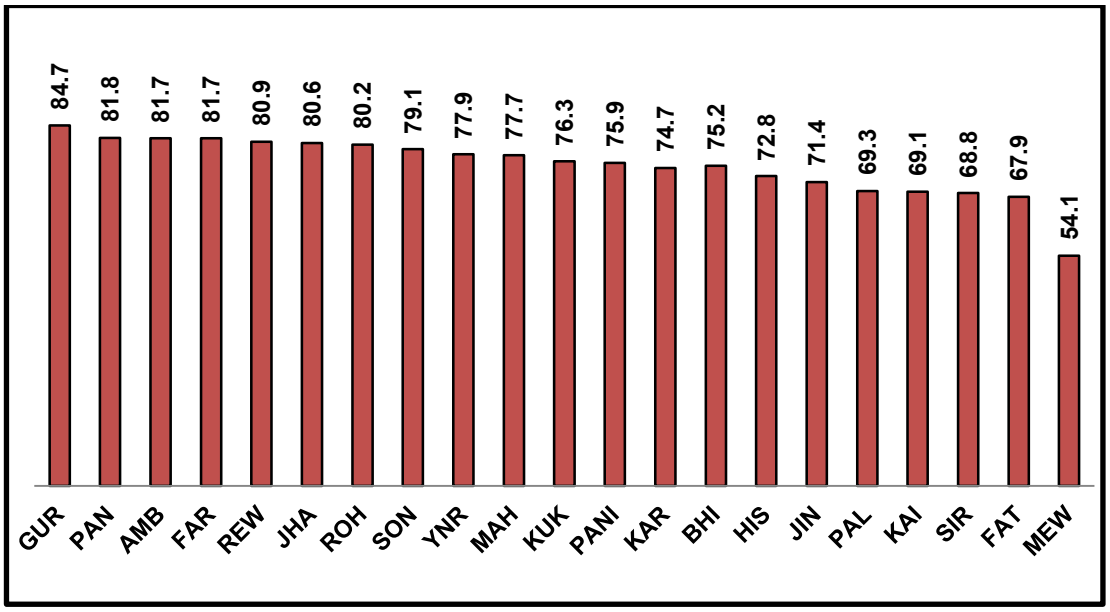
**Fig. 1 Literacy Rates of India and Haryana**




**Source:** Census of India, 2011

On the basis of Figure 2, it was observed that the highest and the lowest literacy rates were registered in the districts of Gurgaon (84.7 percent) and Mewat (54.08 percent) respectively. Moreover, there were nearly 11 districts namely Panchkula, Ambala, Yamunanagar, Kurukshetra, Sonipat, Rohtak, Jhajjar, Mahendragarh, Rewari, Gurgaon, and Faridabad who registered higher literacy rates (75 percent literacy rate), than the State average.

**Fig. 2 Overall Literacy Rate of Haryana (Census 2011)**




**Source:** Govt. of Haryana, Census of Haryana, 2011, Economic and Statistical Organization, Planning Deptt., Chandigarh.

Further, in terms of index values, Table 3 (see Col. 1) depicted that: (i) the *best performing districts* in total literacy index consists of- Gurgaon (1), Faridabad (0.9), Panchkula (0.9), and Ambala (0.9)

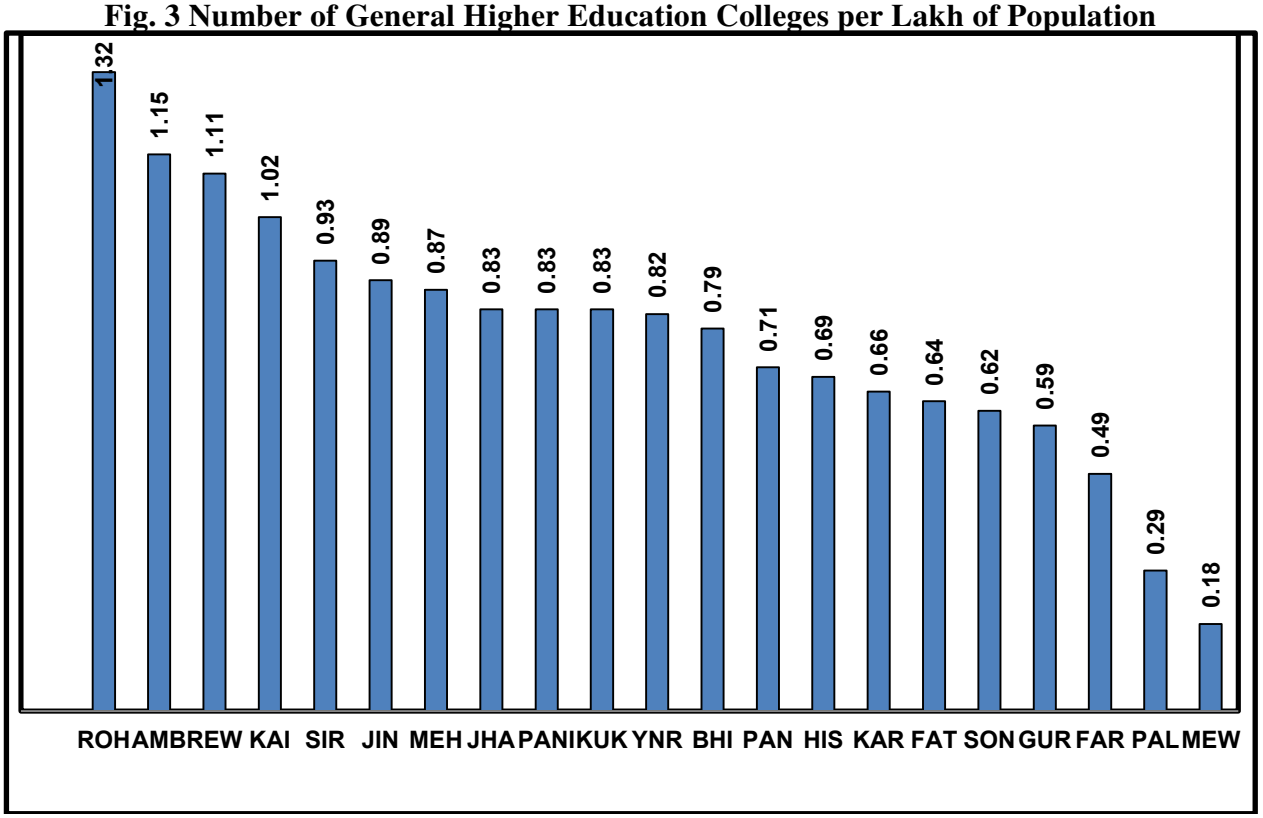
respectively. While the *worst performing or laggard districts* in the respective values comprises-Mewat, Fatehabad (0.45), Sirsa (0.48) and Kaithal (1.41). The spectacular progress of districts like Gurgaon and Faridabad may be due to carving of backward regions i.e. Mewat (2005) separated from Gurgaon while Palwal (2008) separated from Faridabad as new districts, which happen to be the most backward areas of the State.

***7.2 District-wise Availability of General HEIs per lakh of population***

The investment made by the Government in terms of provision of adequate number of educational institutions promoted the overall development of the educational scenario in the state. A skewed and uneven distribution of educational institutions implies a large social loss resulting from underutilization of potential human capital. Thus, in order to see the distribution of General HEIs across all 21 districts of the State of Haryana, two indices were used- (a) availability of General HEIs per lakh of population i.e. College population index and (b) Density of institutions per 100 square kilometer in the State.

When the districts of Haryana are arranged on the basis of *availability of General HEIs per lakh of population,* both in terms of actual values (see Fig. 3) as well as in terms of index values (see Col. 2 of Table-3), the *frontrunners* were - Rohtak (1), followed by Ambala (0.85), and Rewari (0.82); while the *districts lagging behind* consists of Mewat, immediately preceded by Palwal (0.09), and Faridabad (0.27).

**Fig. 3 Number of General Higher Education Colleges per Lakh of Population**




**Source:** (i) Govt. of Haryana, Census of Haryana, 2011, Economic and Statistical Organization, Planning Deptt., Chandigarh; and (ii) Govt. of Haryana, Statistical Abstract of Haryana, 2011-12.

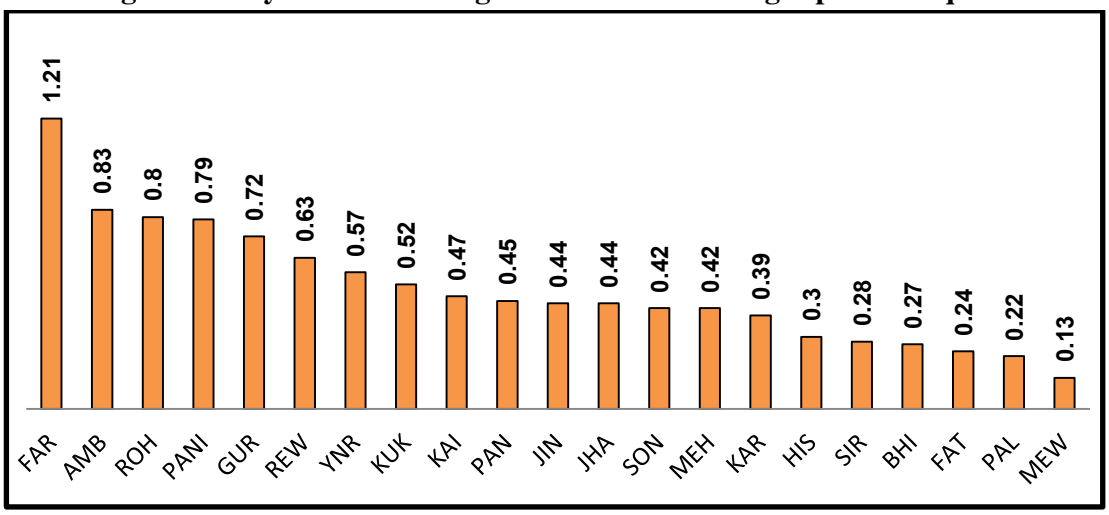
It was found that Gurgaon with highest literacy rate in the State had inadequate availability of General Education Colleges per lakh of its population; whereas Mewat and Palwal districts which had lowest literacy rates also suffered from low availability of General Education Colleges per lakh of population. Ambala was the only district which stood on equal position both in terms of literacy rate and in availability of General Education Colleges. However, no symmetry was found regarding the number of institutions per lakh of population in other districts. This low availability of educational institutions might result in low level of educational attainments of the students as they had to suffered from scarcity and inadequate accessibility of the educational institutions. Hence, provision of adequate number of

higher educational institutions in the region emerges as important indicator to be addressed by policy documents for equal growth of educational facilities.

***7.3 Density of General Higher Educational Institutions (per 100 sq. km.)***

With an aim to see the average distance travelled by students, a *density of educational institutions (per 100 square kilometer)* was calculated. Figure 4 (and Col. 3 of Table 3) depicted that the growth of educational institutions was very dense in some districts while it was thin in others. The *districts with highest density* were- Faridabad (1), Ambala (0.64), and Rohtak (0.62). The *districts with lowest density* comprise: Mewat, Palwal (0.08), and Fatehabad (0.09) respectively.

**Fig. 4 Density of General Higher Education Colleges per 100 sq.km.**



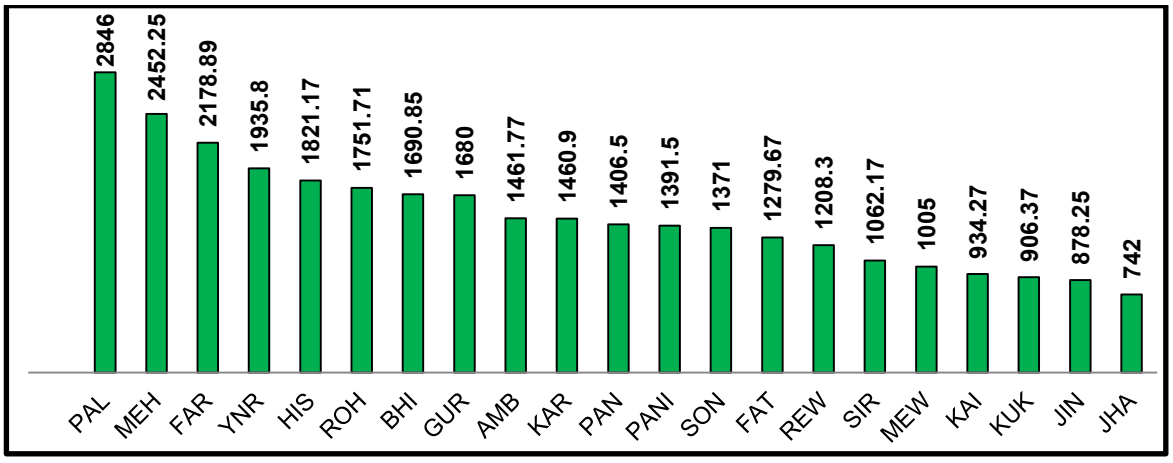

**Source:** (i) Govt. of Haryana, Census of Haryana, 2011, Economic and Statistical Organization, Planning Deptt., Chandigarh; and (ii) Govt. of Haryana, Statistical Abstract of Haryana, 2011-12.

Here also Ambala and Rohtak emerged as the best performing districts whereas Mewat and Palwal lagged behind again. Finally it can be said that students had to travel longer distances to avail the facilities of General Higher Education in the districts with relatively lower density of such educational institutions and it might impact the spread of education amongst lower strata.

***7.4 Average Enrolments Per College***

*Enrolment of students per institution* is an important indicator of effective utilization of infrastructure on one hand and need for establishing more institutions on the other. As per Figure 5 (and Col. 4 of Table 3), the *leading districts* as per indicator were Palwal (1), Mehendargarh (0.81), and Faridabad (0.68). While the *districts with lower enrolment* per institution were Jhajjar, Jind (0.06) and Kurukshetra (0.08) respectively.

**Fig. 5 Average Enrolment per College**



**Source:** (i) Govt. of Haryana, Census of Haryana, 2011, Economic and Statistical Organization, Planning Deptt., Chandigarh; and (ii) Govt. of Haryana, Statistical Abstract of Haryana, 2011-12.

Thus, wide variations were found in terms of enrolment of students per institution among the districts of Haryana. A significant observation was that the district Palwal lags behind in terms of literacy rate, availability of General Higher Education colleges for its population as well as density of colleges, also suffered from highest pressure of student enrolment per institution, thereby indicating that the district urgently needed opening of new colleges of General Education. Because districts with lower availability of educational institutions but with larger enrolment depicted pressure on the existing educational infrastructure and thus demanded more colleges so as to cater to large student population of the district.

### *7. 5 Aggregate Composite Index of all the Individual Variables*

Finally, an aggregate composite index was developed, as depicted in the Col. (5) of Table- 3 for analyzing the overall spread of General Education facilities in terms of institutions and their capacity utilization in terms of enrolment across districts of the State. Following the composite index the overall *leading districts* were: Rohtak (0.74), Faridabad (0.71), and Ambala (0.68), while the *districts which lag behind* were: Mewat (0.03), Fatehabad (0.29), and Sirsa (0.35) respectively.

**Table-3 Composite Index of all the Individual Variables, (2011 Census)**

| Districts | Index Value of Total Literacy Rate (1) | Index value of No. of Colleges per lakh of population (2) | Index value of Density of Colleges per 100 sq.km (3) | Index value of Average Enrolment per College (4) | Aggregate Composite Index (5) |
|---|---|---|---|---|---|
| GUR | 1 **$H_1$** | 0.36 | 0.54 | 0.45 | 0.59 |
| PAN | 0.9 **$H_2$** | 0.46 | 0.28 | 0.32 | 0.49 |
| AMB | 0.9 **$H_2$** | 0.85 **$H_2$** | 0.64 **$H_2$** | 0.34 | 0.68 **$H_3$** |
| FAR | 0.9 **$H_2$** | 0.27 **$L_3$** | 1 **$H_1$** | 0.68 **$H_3$** | 0.71 **$H_2$** |
| REW | 0.88 | 0.82 **$H_3$** | 0.46 | 0.22 | 0.59 |
| JHA | 0.87 | 0.57 | 0.28 | 0 **$L_1$** | 0.43 |
| ROH | 0.85 | 1 **$H_1$** | 0.62 **$H_3$** | 0.48 | 0.74 **$H_1$** |
| SON | 0.82 | 0.38 | 0.27 | 0.29 | 0.44 |
| YNR | 0.78 | 0.56 | 0.40 | 0.57 | 0.58 |
| MAH | 0.77 | 0.60 | 0.27 | 0.81 **$H_2$** | 0.61 |
| KUK | 0.73 | 0.56 | 0.36 | 0.08 **$L_3$** | 0.43 |
| PANI | 0.71 | 0.57 | 0.61 | 0.31 | 0.55 |
| KAR | 0.67 | 0.42 | 0.24 | 0.34 | 0.42 |
| BHI | 0.69 | 0.54 | 0.13 | 0.45 | 0.45 |
| HIS | 0.61 | 0.44 | 0.16 | 0.51 | 0.43 |
| JIN | 0.57 | 0.63 | 0.29 | 0.06 **$L_2$** | 0.39 |
| PAL | 0.49 | 0.09 **$L_2$** | 0.08 **$L_2$** | 1 **$H_1$** | 0.41 |
| KAI | 0.49 | 0.74 | 0.32 | 0.09 | 0.41 |
| SIR | 0.48 **$L_3$** | 0.65 | 0.14 | 0.15 | 0.35 **$L_3$** |
| FAT | 0.45 **$L_2$** | 0.39 | 0.09 **$L_3$** | 0.26 | 0.29 **$L_2$** |
| MEW | 0 **$L_1$** | 0 **$L_1$** | 0 **$L_1$** | 0.13 | 0.03 **$L_1$** |

**Note:** (1) **$H_i$** represents districts with three highest values and **$L_i$** represents districts with three lowest values in their respective group. (2) Institutions per lakh of population are calculated as (number of General Higher Education Colleges/ total population)*100,000. (3) Density of institutions are calculated as (number of institutions/ total area of district)*100.

(4) Enrolment per institutions = Enrolment of students

$$\text{Number of General HEIs}$$

(5) Indicator Index $C = \frac{X_i - X\ min}{X\ max - X\ min}$

(6) Aggregate Composite Index= $\frac{\text{Summation of Cols. (1)+(2)+(3)+(4)}}{4}$

**Source:** Compiled from data collected from (i) Govt. of Haryana, Census of Haryana, 2011, Economic and Statistical Organization, Planning Deptt., Chandigarh; and (ii) Govt. of Haryana, Statistical Abstract of Haryana, 2011-12.

## 8. CONCLUSION:

On the whole, it can be said that despite commendable progress on various fronts; there exist intra-state disparities in case of availability of General Higher Educational facilities as well as in terms of GER as some districts showed better performance and some lag quite behind. Hence, the educational policy-makers should take care of the ground reality prior to policy formulation. Special focus on the laggard districts will definitely push up the average performance of the State.

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