

Rural-Urban Gender Disparities in Access to Higher Education in Haryana (India)

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Abstract: *In the Indian system, higher education includes the education imparted after the higher secondary stage. According to World Bank, Tertiary education broadly refers to all post secondary education including but not limited to universities. Education is an important social resource and a means of reducing inequality in any society. It helps the individual to raise his or her socio-economic status, knowledge, skills, values and attitudes acquired through education helps one to lead a desired quality of life. It is the most important agent of social change, particularly among the females and socially backward sections. Compared to equality, equity is a modern concept. As a concept equity means 'equality among the equals', broadly the disparity between the castes is a case of inequality, but the disparity within the caste such as rural-urban and male-female shows the inequity within the population. The access to higher education is generally measured by enrolment ratio. Three alternative methods are used to estimate the access to higher education namely Gross Enrolment Ratio, Net Enrolment Ratio and Eligible Enrolment Ratio in paper study. In this paper an attempt to analyze the rural-urban gender disparities in access to higher education in Haryana (India) at the block level and to identify reasons thereof. The statistical tool of Kundu's Index for disparity, GER, NER & EER, correlation and cartographic technique (GIS, bar & pie diagram) has been used in the study. The study is based on secondary data from the Census of India, 2011 and field work report.*

Keywords: Higher education, access, disparities, availability

1. Introduction

The access to higher education is generally measured by enrolment ratio. Three alternative methods are used to estimate the access to higher education namely Gross Enrolment Ratio (GER), Net Enrolment Ratio (NER) and Eligible Enrolment Ratio (EER). Hence, three different angles to look at the access to higher education are available for paper analysis. The paper explores the gross enrolment ratio, net enrolment ratio and eligible for enrolment ratio in higher education within the social groups and highlights also the inequalities in the gross enrolment ratio, net enrolment ratio and eligible for enrolment ratio in higher education within the social groups with reference to the urban-rural variations. These spatial analyses of rural-urban gender disparity in access to higher education have been worked out the Census of India, 2011 for all the districts of the state. The enrolment ratio is taken as one of the indicators of educational development. University and college facilities have been expanded in the state and more general and scheduled caste students are increasingly attending the educational institutes (Gen. and Prof.). However, enrolment ratio is low in comparison to other states of India.

Objective

The paper aims at exploring the level of access (GER, NER and EER) to higher education in the state of Haryana (India). The second aims to analyze the rural-urban gender disparity in access to higher education and to identify reasons thereof. The third is to examine the linkages between the socio-economic variables and higher education.

Hypotheses

Based on facts and literature survey, the following hypotheses have been developed:

- There is a positive relation between enrolment in higher education and urbanization.

- There is a positive relationship between the availability of higher educational institutions and enrolment in higher education.
- The enrolment in higher education is positively related with the enrolments in senior secondary classes.

Data Base and Methodology

The analysis is based on secondary data. The data relating to higher education have been collected from the respective Census of India, Haryana (Social and Cultural Tables 8, 8A, 10, SC8, SC8A and SC10, 2011). **Correlation** has been used for analysis of relationship between enrolment and socio-economic variables. Correlation Co-efficient (r) has been computed by Karl Pearson's method. **Sopher's index (modified by Kundu)** has been used to measure the inequality in access to higher education. The index is used to look into the disparities of various data at district level

$$\text{GER} = \frac{\text{Total number of Students Enrolled in Higher Education} \times 100}{\text{Total Population in Age-Group 18-23 Years}}$$

NER = $\frac{\text{Total number of Students Enrolled for Specific Age-Groups namely 18-23 [NSS 52nd, 55th & 61st Round (NSSO), gives the data age-group of 18-23 for enrolled students in higher education at state level] / 18-24 [Selected Educational Statistics, MHRD, Govt. of India, gives the data age group of 18-24 for enrolled students in higher education at state level] / 20-24 [and colleges at district level, Table-11 and Table-10.] in Higher Education} \times 100}{\text{Total Population in Age-Group 18-23/18-24/20-24 Years}}$

$$\text{EER} = \frac{\text{Total number of those students who have completed Senior Secondary Education} \times 100}{\text{Total Population in Age-Group 17-18 Years}}$$

Cartographic Techniques (Bar Diagram and Choropleth (GIS) Maps) have been used to show the regional pattern of access to higher education and disparity in higher education.

2. Gross Enrolment Ratio (GER) in Higher Education

The GER measure the access level by taking the ratio of persons in all age groups, enrolled in various programs to total population in the age group of 18 to 23. The gross enrolment ratio in higher education in the state was 12.83 percent in 2001. It increased upto 34.82 percent in 2011. This shows that only 35 percent youth in 18-23 age groups are enrolled in higher education. The gross enrolment ratio of general male and female population stands at 38.09 percent and 30.93 percent respectively, and scheduled caste male and female population stands at 22.81 percent and 14.97 percent respectively. Thus, there exists a large gap between the male and female population in respect to their enrolment. Despite some improvement in equity over the decades, higher education is still not accessible to the poor groups of the population. The inter-district variations reveals glaring picture with 12 districts out of 21 districts have GER higher than state average (34.82 percent). The GER in higher education is the highest in Rohtak (44.95 percent) and Panchkula (44.10 percent) districts, followed by Faridabad (43.53 percent), Gurgaon (41.83 percent), Jhajjar (41.48 percent) and Mahendargarh (41.11 percent) districts, while Mewat (10.59 percent), Fatehabad (25.24 percent), Sirsa (27.98 percent), Palwal (28.72 percent), Kaithal (29.37 percent) and Panipat (29.92 percent) districts showed the lowest GER. We can notice here that highest and lowest gross enrolment ratio lies in the eastern and western part of the state. The gross enrolment ratio in the Rohtak and Panchkula districts are much higher in comparison to the other districts, due to nearness to the national and state capitals as more facilities are available there. The gross enrolment ratio in higher education of scheduled caste population is higher in Mahendargarh (28.32 percent), Rewari (25.51 percent) and Jhajjar (24.63 percent) districts. The higher availability of government colleges is one of the facts which lead to higher gross enrolment ratio in the southern part of the state. On the other hand, Fatehabad (11.63 percent), Sirsa (11.97 percent), Mewat (14.00 percent) and Palwal (17.87 percent) districts are among the districts having lower gross enrolment ratio in higher education of scheduled caste population.

3. Urban-Rural and Gender Variations in GER

The gross enrolment ratio of general population is 48.09 percent and 27.84 percent in urban and rural areas, and 25.46 percent and 16.78 percent respectively of scheduled caste population. Thus, there exists a gap of 20.25 percent in gross enrolment ratio of general population and 8.68 percent of scheduled caste population, which presently is very high

of general population. In other words, out of every hundred students forty eight students reaches to college in urban areas while it is twenty eight students in rural areas of general population, and twenty five students and seventeen students reaches to college in urban and rural areas of scheduled caste population respectively. A district level analysis reveals that Panchkula (61.53 percent) and Kurukshetra (60.71 percent) districts have higher urban gross enrolment ratio in higher education while Mahendargarh (39.95 percent) and Rewari (38.12 percent) districts have higher rural gross enrolment ratio. In case of Mahendargarh (46.04 percent) district and Panipat (20.89 percent) districts rural general and scheduled caste males' gross enrolment ratio is higher than urban (41.76 percent) and (19.26 percent) general and scheduled caste males' gross enrolment ratio. This may be result of higher number of government institution in rural areas. The urban-rural comparison reveals that the position of the general population is far better the scheduled caste population in urban areas, but almost is same in case of rural areas. This is attributed to better availability of higher education institution in urban areas. Population belonging to scheduled castes is much less educated and unskilled than the general population both in urban and rural areas. Females belonging to scheduled castes living in rural areas are the most disadvantaged.

On the whole, in urban and rural areas, the scheduled caste populations are much behind the general population in GER. The inter-district variations between urban and rural gross enrolment ratio shows (Table 1.1) that in rural areas, the coefficient of variation is higher when compared with urban areas of general population but vice versa of scheduled caste population. This shows that in case of rural areas the access to higher education is highly concentrated to some districts. In case of women gross enrolment ratio in rural areas, the coefficient of variation is higher than urban areas. The gross enrolment ratio varies not only from one district to another district but also within the districts. The females GER in higher education is also low in comparison to the males. The GER is 38.09 percent and 30.93 percent of general male and female population, and 22.81 percent and 14.97 percent of scheduled caste male and female population. Gender differences in gross enrolment ratio are high mainly in rural areas. In urban areas, the gender differences are minimal. Panchkula (63.81 percent) and Kurukshetra (60.96 percent) districts have highest female gross enrolment ratios followed by Rohtak (58.24 percent) and Jhajjar (51.11 percent) districts in urban areas. On the other hand, Mahendargarh (32.78 percent), Jhajjar (32.76 percent) and Rewari (32.56 percent) districts have highest female gross enrolment ratio in rural areas.

Table 1.1: Inter-District Variations in Gross Enrolment Ratio by Social Group, 2011

	General Population								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	34.82	38.09	30.93	27.84	32.30	22.55	48.06	49.06	46.87
Mean	34.71	37.92	30.91	27.79	32.19	22.57	47.34	48.07	46.46
Standard Deviation	8.08	7.85	8.80	7.03	7.31	7.13	8.45	8.20	9.44
Coefficient of Variation	23.27	20.70	28.48	25.29	22.71	31.60	17.85	17.05	20.31
	Scheduled Caste Population								

	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	19.25	22.81	14.97	16.78	20.95	11.67	25.46	27.64	22.96
Mean	19.73	23.35	15.36	17.25	21.55	12.00	25.96	28.20	23.41
Standard Deviation	4.50	4.65	4.80	4.22	4.55	4.33	5.85	6.00	6.00
Coefficient of Variation	22.82	19.91	31.22	24.48	21.10	36.09	22.53	21.27	25.65

Source: Calculated from raw data of Census of India, 2011 by author

Regional pattern reveals that northern and southern districts have comparatively high female gross enrolment ratio than the western districts. This corresponds to the situations of scheduled caste females. The male and female comparison within the respective groups shows that position of females in case of scheduled caste is the worst as gap between males and females is the widest. However, when compared to general population the position of females is better. Only

two districts (Panchkula and Ambala) have higher scheduled caste female gross enrolment ratio than scheduled caste male gross enrolment ratio in urban areas. Mahendargarh, Rohtak, Sirsa, Fatehabad, Karnal, Kurukshetra, Ambala, Yamunanagar and Panchkula districts have higher general female GER than male GER in urban areas (Figure 1.1). This may be the result of larger number of females passing, as compared to the males.

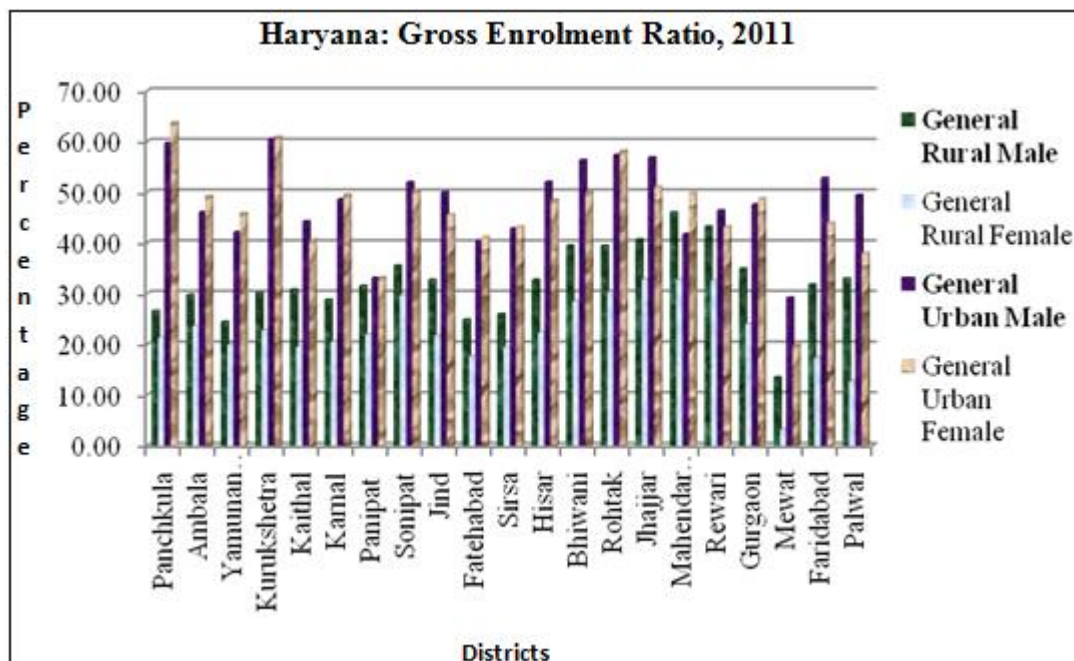


Figure 1.1

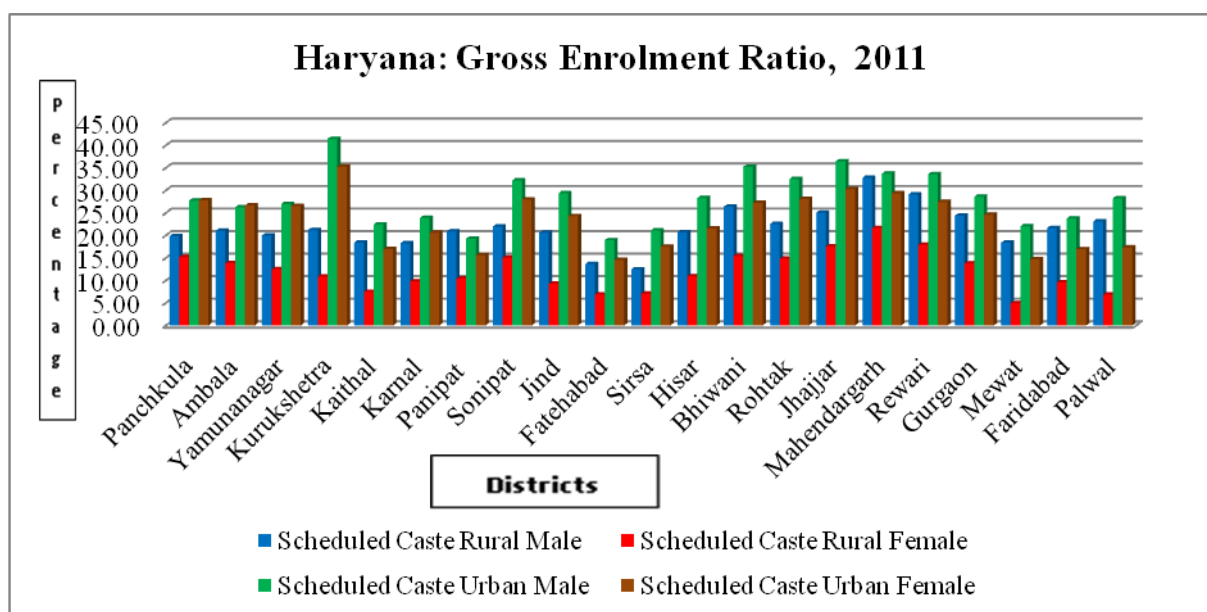


Figure 1.2

4. Net Enrolment Ratio (NER) in Higher Education

The NER measures the level of enrolment of specific age-groups namely those in age group of 20-24 years and above.

The COI, 2011 gives the data of specific age-group 20-24 years and above population who are attending higher education and colleges (Gen. and Prof.) at district level. Here only two age-groups of 20-24 years and 25-29

Table 1.2: Inter-District Variations in Net Enrolment Ratio by Social Group, 2011

	General Population-20-24 years age-group								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	22.58	25.17	19.61	18.50	21.99	14.47	30.02	31.03	28.88
Mean	22.67	25.26	19.70	18.56	22.03	14.55	30.01	31.42	31.09
Standard Deviation	4.82	4.78	5.25	4.52	4.81	4.56	5.99	5.35	9.90
Coefficient of Variation	21.25	18.93	26.66	24.36	21.86	31.31	19.97	17.03	31.86
	General Population-25-29 years age-group								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	4.08	4.84	3.24	3.05	3.91	2.06	5.78	6.41	5.10
Mean	4.01	4.76	3.16	2.99	3.84	2.03	5.72	6.35	5.43
Standard Deviation	1.00	1.11	1.01	0.75	0.90	0.70	1.47	1.72	2.02
Coefficient of Variation	24.86	23.28	31.97	24.93	23.52	34.61	25.78	27.06	37.27
	Scheduled Caste Population-20-24 years age-group								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	13.30	16.06	10.04	11.66	14.91	7.74	17.34	19.01	15.49
Mean	13.59	16.41	10.28	12.00	15.35	7.98	17.70	19.36	15.85
Standard Deviation	2.97	3.04	3.22	2.83	3.03	2.99	4.00	3.99	4.19
Coefficient of Variation	21.86	18.55	31.32	23.61	19.76	37.49	22.58	20.61	26.41
	Scheduled Caste Population-25-29 years age-group								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	2.79	3.62	1.83	2.29	3.18	1.26	4.00	4.72	3.21
Mean	2.84	3.69	1.87	2.34	3.25	1.27	4.13	4.96	3.20
Standard Deviation	0.76	0.93	0.70	0.66	0.79	0.59	1.40	1.83	1.14
Coefficient of Variation	26.72	25.09	37.26	28.07	24.23	46.04	33.99	36.96	35.70

Source: Calculated from raw data of Census of India, 2011 by author.

years have been used in the census data for net enrolment ratio in higher education. NER in higher education of age-groups of 20-24 years among the social groups is low compared to GER. Further, Figure 1.3 shows that NER in higher education of age-group of 25-29 years is also low as compared to 20-24 years age-group. Rohtak district, NER is recorded 29.99 percent of 20-24 years age-group and 5.86 percent of 25-29 years age-group of general population. Mahendargarh district is recorded 19.74 percent of 20-24 years age-group and 4.15 percent of 25-29 years age-group of scheduled caste population. Interestingly, Rohtak and Mahendargarh district emerged as an island of net enrolment ratio in higher education among general and scheduled caste population followed by Panchkula, Kurukshetra, Jhajjar and Rewari districts in the same two age groups. The lowest percentage of NER is recorded in Mewat and Fatehabad district at 7.38 percent and 8.27 percent of 20-24 years age-group and 1.38 percent and 1.39 percent of 25-29 year age-group for general and scheduled caste population.

5. Urban-Rural and Gender Variations in NER

The NER in urban and rural areas is 30.02 percent and 18.50 percent respectively of age-group of 20-24 years, and 5.78 percent and 3.05 percent of 25-29 years age-group years of general population. Scheduled caste populations have NER

in higher education at 17.34 percent and 11.66 percent of age-group of 20-24 years, and 4.00 percent and 2.29 percent of 25-29 years age-group years in urban and rural areas (see Table 1.2). Thus, there exists a gap of 11.52 percent in net enrolment ratio in higher education of age-group of 20-24 years and 2.73 percent of 25-29 years age-group years of general population. Rural-urban gap in net enrolment ratio is found higher in 20-24 years age-group in comparison to 25-29 years age-group and also high of general population as compared to scheduled caste. Only Mahendargarh and Panipat districts have high net enrolment ratio in higher education for both age-groups in rural areas compared to urban areas of general and scheduled caste male population. The district level analysis reveals that female NER in both the age groups are very low in comparison to the male NER. NER in higher education of general male and female population is 25.17 percent and 19.61 percent respectively for age-group of 20-24 years, and corresponding figures for scheduled caste being 16.06 percent and 10.04 percent respectively. Net enrolment ratio of 25-29 years age-group is less than 5 percent for males and females. The districts, which have shown the higher female NER than male NER in urban areas, are Panchkula, Ambala, Yamunanagar, Kurukshetra and Sirsa districts among general population in the age-group of 20-24 years. Only Ambala and Panchkula

districts have the highest female net enrolment ratio than males among scheduled

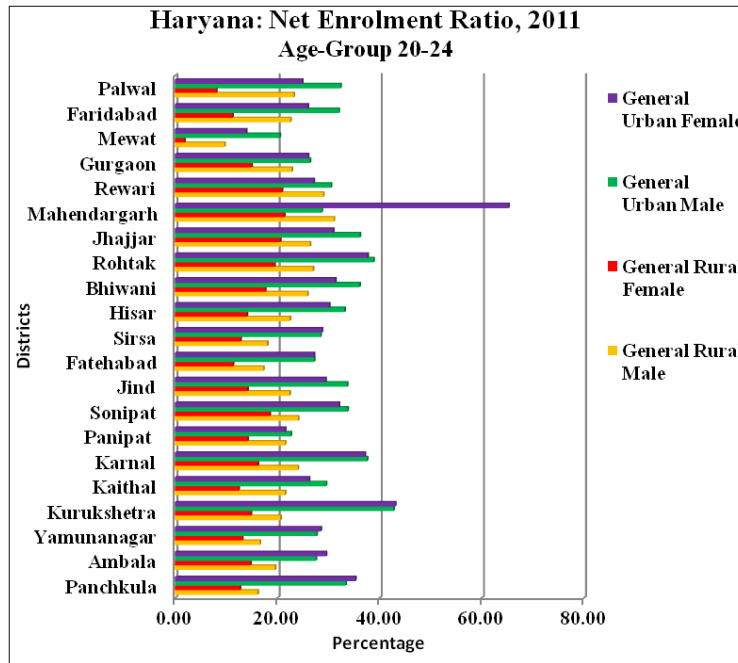


Figure 1.3

caste both age-groups. There are several factors which affect the access and disciplinary orientations of women in higher education. Factors which affect female access to higher education are non-availability of colleges and inadequate delivery system, i.e., unsuitable infrastructure and absence of basic physical facilities. For example, in the western districts of the state there may be co-educational colleges. Yet, daughters may not be sent there because in this region women are secluded. Yet separate colleges for women are considered desirable because prolonged interaction with men (students and teachers) is not socially desirable. Thus, physical access also becomes social access.

6. Eligible for Enrolment Ratio (EER) in Higher Education

The EER measure the level of enrolment of those who have completed senior secondary education. The enrolment ratio based on eligible student (completion of senior secondary education) is useful estimate the access to higher education. According to the Census of India, 2011 about 17.13 percent of those who have completed senior secondary

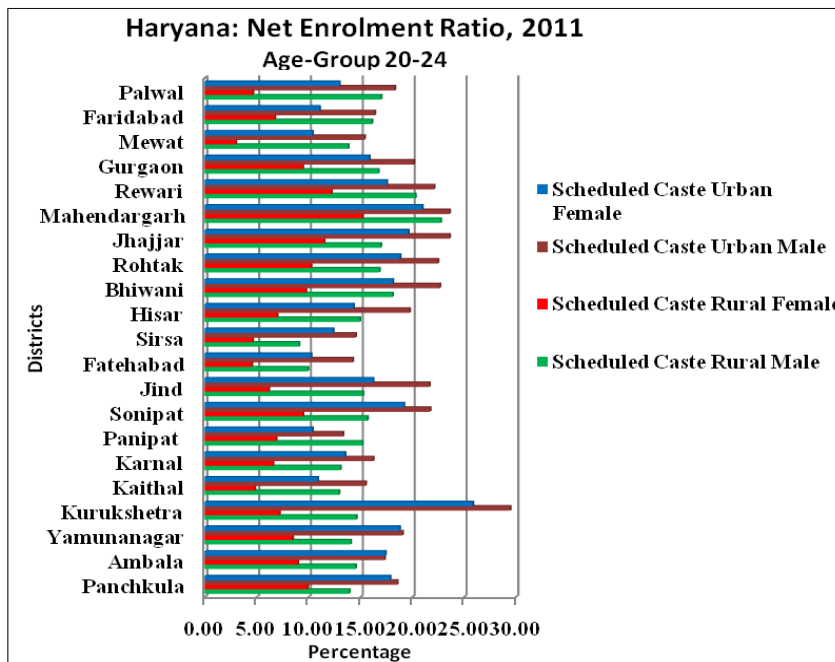


Figure 1.4

Table 1.3: Inter-District Variation in Eligible Enrolment Ratio (EER) by Social Group, 2011

	General Population								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	17.13	16.82	17.53	15.04	15.29	14.74	21.36	19.88	23.29
Mean	17.12	16.78	17.55	14.72	14.89	14.52	22.79	21.39	24.64
Standard Deviation	4.03	3.85	4.50	4.73	4.82	4.83	7.40	7.68	7.28
Coefficient of Variation	23.56	22.92	25.65	32.11	32.39	33.29	32.48	35.89	29.54
	Scheduled Caste Population								
	Total			Rural			Urban		
	All	Male	Female	All	Male	Female	All	Male	Female
Haryana	8.47	8.65	8.24	7.48	8.02	6.79	11.03	10.31	11.91
Mean	8.68	8.90	8.40	7.50	8.07	6.77	11.90	11.31	12.66
Standard Deviation	2.13	2.18	2.33	2.33	2.56	2.34	3.58	4.38	3.15
Coefficient of Variation	24.55	24.43	27.79	31.07	31.75	34.60	30.05	38.69	24.89

Source: Calculated from raw data of Census of India, 2011 by author.

(age group of 17-18) education entered in the higher education (Table 1.3). This ratio is higher as compared with the state average in Jhajjar (22.18 percent), Rohtak (21.53 percent), Sonipat (19.91 percent), Rewari (21.36 percent), Ambala (17.88 percent), Faridabad (19.13 percent), Kurukshetra (18.17 percent), Gurgaon (20.81 percent) and Mahendargarh (21.41 percent) districts. Within the state the ratio is lower in Mewat (4.89 percent), Fatehabad (13.26 percent), Kaithal (15.33 percent), Sirsa (13.40 percent) and Karnal (15.19 percent) districts. Jind district have the ratio around the state average.

7. Urban-Rural and Gender Variations in EER

The EER is worked out to 15.04 percent and 21.36 percent in rural and urban areas-latter being higher by about 6.32 percent points within general population and 3.55 percent within scheduled caste population. A district level analysis reveals that Fatehabad (51.85 percent) and Kurukshetra (27.12 percent) districts have higher urban eligible enrolment ratio for higher education, while Mahendargarh (21.29 percent), Jhajjar (21.36 percent) and Rewari (20.55 percent) districts have higher rural eligible enrolment ratio for higher education of general population. Bhiwani, Mahendargarh, Jhajjar and Rewari districts have higher urban and rural eligible enrolment ratio for higher education of scheduled caste population. The lowest eligible enrolment ratio in rural and urban areas is in districts of Fatehabad, Sirsa, Mewat and Kaithal of social groups. Urban-rural

variation reveals that Kaithal and Mahendargarh district has higher EER for rural scheduled caste male population as comparison with the urban scheduled caste male population. This may be the result of higher number of government schools and infrastructure facility in rural areas. The EER is high for girls as compared to the boys in urban areas. Significant male-female disparities also exist in the enrolment ratio of the eligible student (EER). EER is 16.82 percent and 17.53 percent of the general male and female population, and 8.65 percent and 8.24 percent respectively of the scheduled caste male and female population. The female EER is lower by 0.41 points within scheduled castes and by 0.71 points being higher in the general females. Table 1.3 shows that female EER is lower in comparison to the male EER in rural areas, while in the urban areas female EER is higher than the male EER. In the urban areas, all districts in the state except Fatehabad, Mewat and Palwal districts have higher female EER as compared to the male EER of the general and scheduled caste population, and in the rural areas only five districts (Panchkula, Ambala, Yamunanagar, Kurukshetra and Sonipat) have higher female EER as compared to the male EER of the general and scheduled caste population (Figure 1.5 & 1.6). This finding can be contextualized for it is observed that in higher castes, female education is linked with marriage and not with the carrier. While in

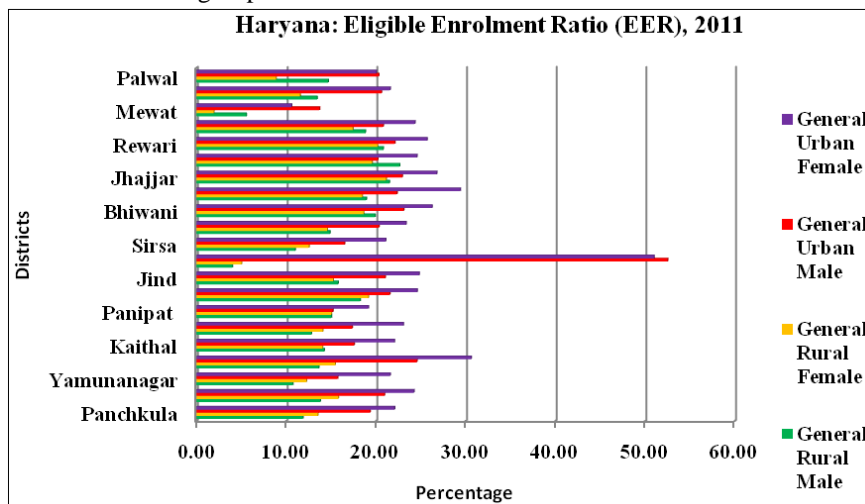


Figure 1.5

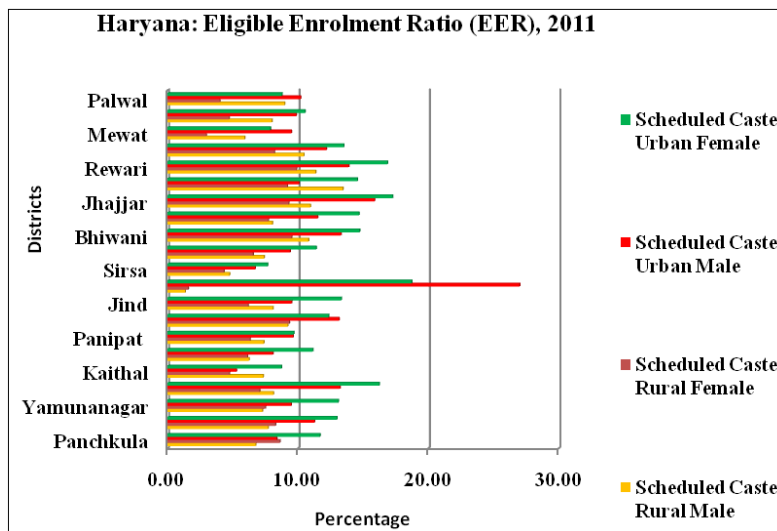


Figure 1.6

lower castes, it is linked with carrier because of poor economic background of their family. Nevertheless, from the policy perspective it is important to determine the gap between these social groups.

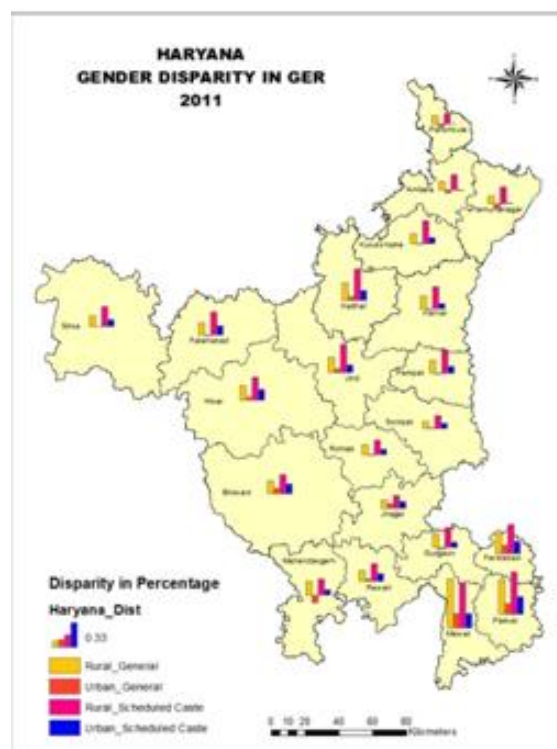
Inequalities in the Access to Higher Education:

The district level analysis of the disparities shows that there is a vast inequality between the social groups population in all areas of socio-economic development, also the disparities between male-female are not less. District level data analysis in the state reveals that gender GER, NER and EER disparity is high in the rural areas compared to the urban areas. In urban areas, all districts have almost negative disparity within general population and some districts have also negative disparity within scheduled caste population. Gender disparity is high within scheduled caste population as compared with the general population in urban and rural.

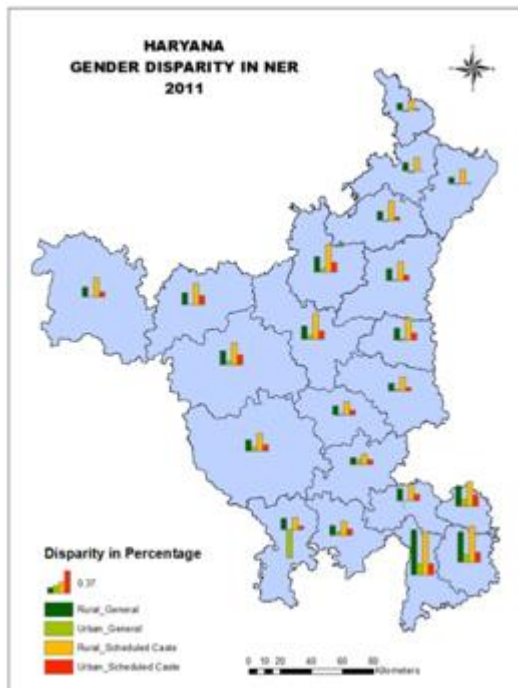
8. Rural-Urban Gender Disparity (GER, NER & EER) in Higher Education

The district level analysis of gender disparity shows that except Mahendargarh, Bhiwani, Jind and Kaithal districts, all districts in the state have the disparity in favour of the female (Map 1.1). These districts have higher gross enrolment ratio of the general females as compared to the general males. Only Ambala and Panchkula districts have the disparity in favour of the scheduled caste females. The higher disparity in western and south-western districts is associated with socio-cultural values and restriction on the female mobility. There is higher disparity in Mewat, Palwal, Kaithal and Jind districts, and the lower in Panchkula, Sonipat, Yamunanagar, Jhajjar and Ambala districts in both areas in the general and scheduled caste population. The gender disparity 0.13 (rural) and 0.00 (urban) in scheduled castes is higher as comparison to the general population 0.11 and -0.04 respectively in the same area. As the areas in south-western parts and western parts show high gender disparity whereas areas namely eastern, south-eastern and northern parts are performed the best. In the urban areas, gender disparity is lower as compared to the rural areas of general and scheduled caste population. Gender GER disparity is low within general population as compared with

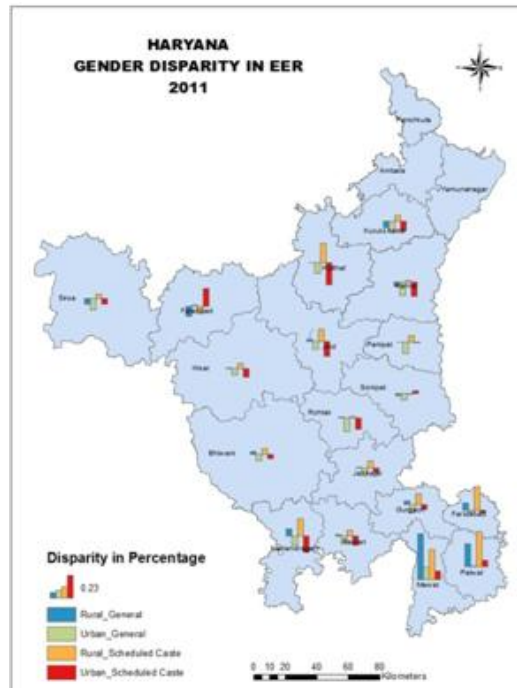
the scheduled caste population in urban and rural areas. In urban areas, gender disparity is negative as compared to the rural areas. Scheduled castes are basically inhabitants in the rural areas. Their presence in urban areas is due to migration which is a selective process, and only those who have the potential and qualities, migrate to the urban areas. Other thing is that nature of the job in urban areas requires people to be



Map 1.1



Map1.2



Map: 1.3

educated. Due to these factors GER among the general population in the urban areas is comparatively higher than the rural areas. The gender NER disparity reveals that there is low in general population as compared to the scheduled caste population in the 20-24 years age-group and 25-29 years, while disparity is also lower in the urban areas than the rural areas. The disparity is low in the 20-24 years age-group as compared to the 25-29 years age-group for both the social group population. It is very high in Mewat, Palwal, Kaithal and Jind districts for both the social group population (both the age-groups) in rural areas and urban areas. The Panchkula, Ambala, Yamunanagar, Sirsa and Mahendargarh districts have lower gender disparity for both the social group population (both the age-groups) in rural areas and urban areas. In urban areas, Panchkula, Ambala, Yamunanagar, Karnal and Sirsa districts have negative gender disparity in general population (20-24 years age-group).

The district level analysis of gender EER disparity shows that except Palwal, Mewat, Fatehabad and Sonipat districts, all districts in the state have negative disparity for the general and scheduled caste population in both areas. These districts have higher EER for general and scheduled caste females as compared to the general and scheduled caste males. Panchkula, Ambala, Yamunanagar, Sonipat and Fatehabad districts have negative disparity within general and scheduled caste population in the rural areas. There is very high disparity in Palwal, Faridabad, Mewat and Kaithal districts in rural and urban areas among the social groups.

9. Statistical Finding

In this paper, an attempt has been made to identify the spatial pattern of access to higher education. There are widespread inequalities in enrolment of higher education from district to district in the state among the social-groups population. However, existence of these inequalities are not the outcome of social factor alone; the availability of the educational institutions, level of urbanization, enrolment in senior secondary classes etc. are other important factors. There are various factors which directly or indirectly influence the access to higher education. All these correlates are mutually dependent and the social inequalities in higher education are the products of their interaction with each other. First consider the direction of the relation of these factors with enrolment in higher education. For this, correlation analysis has been used. The correlation of GER in higher education with different independent variables has been calculated in Table 1.4. Hypotheses have been proposed which will be tested statistically in the light of observed patterns.

Hypotheses: There is a positive relationship between the availability of higher educational institutions and enrolment in higher education.

The availability of colleges is not evenly in the state, there is variation in access to higher education. There may be certain other factors, which also determine the access to higher education like restrictions, prejudice and economic constraints, but availability is most determining factor. The availability of colleges shows positive relationship (0.649**) with GER in higher education. This is significant at one percent level of significance. The availability of college in an area is the first step in access to education. The availability of colleges is positively and significantly related with male and female GER. However, the strength of relationship for males (0.649**) is much stronger in comparison to the females (0.531*). The availability of colleges shows the significantly relationship with scheduled caste GER (0.676**) and the strength of relationship for scheduled caste female GER (0.649**) is much stronger in comparison to male GER (0.612**).

Hypotheses: There is a positive relation between the enrolment in higher education and urbanization.

In this paper, we have noticed that the urban areas have high GER in comparison to the rural areas. These differences are attributed to differences in the socio-economic condition of the people along with the greater availability of educational institution which result into more accessibility of the higher educational system in the urban areas. The urban areas have larger demand for higher education in various specialized streams. Rural students are relatively less aware of such

courses. Many of the rural people cannot afford the cost associated with the institutions providing such courses as most of such institutions are under private hand. Therefore, GER is positively correlated (0.388) with the urbanization, and female GER is significantly positively (0.598**) with the urbanization. The result is significant at one percent level of significance.

Hypotheses: The enrolment in higher education is positively related with the enrolments in senior secondary classes.

Eligibility is a criterion for demand of higher education to become effective. Related to this Majumdar (1983) [Majumdar, Tapas (1983): *Investment in Education and Social Choice*, Cambridge University Press] beautifully argues that an individual cannot opt Ph.D after primary education just because it is more remunerative. Education is sequential in nature. To demand higher education an individual has to pass senior secondary classes as well. The enrolment ratio based on eligible student (completion of senior secondary education) is useful estimate the access to higher education. The GER in higher education is positively and significantly correlated (.931**) with GER in senior secondary education, and scheduled caste GER is also positively and significantly correlated (.898**) with GER in senior secondary education. The positive relationship is significant at one percent level of significance, message is clear that the increase GER in senior secondary classes tends to have positive impact on higher education.

Table 1.4: Correlation Matrix

Correlations	GERA	GERM	GERF	RGER	SCGER	SCGERM	SCGERF	URBN	PRWR	AC	AWC	GERSS	GERSCSS
GERA	1												
GERM	.901**	1											
GERF	.905**	.632**	1										
RGER	.580**	.791**	0.26	1									
SCGER	.844**	.915**	.613**	.842**	1								
SCGERM	.720**	.899**	0.409	.890**	.962**	1							
SCGERF	.888**	.723**	.881**	.524*	.830**	.647**	1						
URBN	0.388	0.095	.598**	-0.246	-0.012	-0.137	0.238	1					
PRWR	-.479*	-0.191	-.676**	0.081	-0.225	-0.07	-.500*	-.813**	1				
AC	.649**	.649**	.531*	.586**	.676**	.612**	.649**	0.08	-0.202	1			
AWC	0.453	0.351	0.449	0.315	0.349	0.229	.468*	0.014	0.104	0.243	1		
GERSS	.931**	.787**	.889**	.605**	.797**	.654**	.883**	.469*	-.582**	.586**	.468*	1	
GERSCSS	.791**	.727**	.703**	.708**	.898**	.789**	.898**	0.151	-.472*	.572*	0.364	.868**	1

****Correlation is significant at the 0.01 level (2-tailed).**

***Correlation is significant at the 0.05 level (2-tailed).**

GERA= Gross Enrolment Ratio of General Population.

GERM= Gross Enrolment Ratio of General Male Population.

GERF= Gross Enrolment Ratio of General Female Population.

RGER= Gross Enrolment Ratio of Rural Population.

SCGER= Gross Enrolment Ratio of Scheduled Caste Population.

SCGERM= Gross Enrolment Ratio of Scheduled Caste Male Population.

SCGERF= Gross Enrolment Ratio of Scheduled Caste Female Population.

URBN= Percentage of Urban Population.

PRWR= Percentage of Primary Workers to total Workers.

AC= Availability of Colleges.

AWC= Availability of Women Colleges

GERSS= Gross Enrolment Ratio in Senior Secondary

GERSCSS= Gross Enrolment Ratio in Senior Secondary of

Scheduled Caste Population

10. Conclusion

Thus, from the above analysis, it is found that the enrolment ratio in higher education in the state is low. The high stagnation and dropout at senior secondary level is primary reason for low enrolment at higher level. There are inequities between urban/rural and male/female enrolment ratio in higher education. The enrolment ratio (GER, NER & EER) in higher education is higher in urban areas in comparison to the rural areas. Male GER, NER and EER in education is much higher than the female, and enrolment ratio of general population in higher education is higher as compared to the scheduled caste population in rural and urban areas. Female GER, NER and EER is higher as compared to the male GER, NER and EER in urban areas in all districts except Mewat, Palwal, Kaithal and Jind districts

within general population and scheduled caste population. NER (20-24 years age-group) in higher education is high in comparison to the 25-29 years age-group in urban and rural areas. The GER, NER and EER in higher education is found high in northern, north-eastern, eastern, southern and south-eastern parts, and disparity is found low. In the western, south-western, central and north-western parts have vice-versa.

District level analysis reveals that disparity exists in rural/urban and male/female. General gender GER, NER and EER disparity is low as compared to the scheduled caste disparity. Similarly, gender GER, NER and EER disparity is high in rural areas in comparison to the urban areas, while gender GER, NER and EER disparity is negative in urban areas within general and scheduled caste population.

The statistical findings are supported hypotheses. The availability of institutions has positive relationship with access to higher education. The strength of relationship gets weakened from male to female and general population to scheduled caste population. Female GER has a positive relationship with availability of women colleges. The correlation exercise shows that enrolment in senior secondary is highly correlated with the GER in higher education. As enrolment in higher education significantly depends on the enrolment in senior secondary, thus improvement in enrolment in senior secondary will lead to the improvement in enrolment in education. To increase the GER in higher education number of students passing out from senior secondary classes should also be increased along with the increase in availability of the institutions. In order to remove the disparities in enrolment both demand and supply should be considered, that is, focus should not be only on creating new institutions of higher education but also on creating new demanders of higher education. If any district in the state is lagging in higher education then along with the creation of new institutions, attentions should also be paid on increasing enrolment in senior secondary (10+2).

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