

Status of Access to Higher Education in India

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Abstract

Academically, higher education is the highest level of educational attainment endeavor. It empowers people to utilize their optimum potential. The relationship between access to education and economic development is well-established in the relevant literature. The most important contributors in this literature are Schultz (1961) and Becker (1964) who viewed expenditure on education as an investment in human capital. Subsequent study of Blaug (1969), Tilak (1987) and Psacharopoulos (1993) show that investment in education yields a higher rate of return than investment in physical capital. As India is striving to compete in globalized world, she has to attain a sophisticated knowledge based economy which in turn needs a robust, indiscriminatory and universal higher education system. Importance of higher education is well documented, it becomes essential to know whether Indian higher education institution is inclusive and broad based. It will also indirectly indicate whether India is ready for knowledge economy.

Keywords

Higher Education, GER, MPCE, SC, ST, OBC

Introduction

Historically Indian education system has not been inclusive in India. Brahmins had exclusive right over education for long time. However, with the acquisition of wealth and power, nobleman and merchants started to access higher education for their children. This process is still continuing in field higher education system though due to some legislative factors its intensity has declined somewhat. In aggregate term access to higher education has increased but it has not been equally distributed among the different strata of the society. This inequality can be seen through caste wise, gender wise, residence wise or economic class wise. In general access to higher education depends on either social identity or economic identity (Hasan, 2006).

There has been a considerable improvement in the enrolment from 1% in early 1950's to about 13% in the 2003(Thorat, 2006). But this improvement is very uneven and major portion of improvement is confined to a particular group of people. The Gross Enrolment Ratio (GER) in year 2000 in rural area is much lower for ST, SC, and OBC as compared with others; it's being 6.43%, 5.0%, 7.0% and 16.74% respectively (Srivastava and Sinha, 2008). The 64th round NSS data reveals the significant gap between male and female GER, which is 15 and 11 percent respectively. The data also reveals the presence of huge inequality between rural and urban people. In the same year rural and urban GER was 9 and 23 percent respectively. Monthly per capita expenditure (MPCE) wise access of higher education also tells the similar story. The 64th round NSS report shows, in rural area from the bottom 10 percent people only 1.6 percent people are enrolled in higher secondary and above, whereas from the top 10 percent people 16.4 percent people are enrolled. Thus these educational statistics supports that there is huge inequality in access of higher education from every angle.

Increasing the access to access to higher education among the deprived section has been major challenge since long. In aggregate term access to higher education has increased but it has been unequally distributed among the different section of the society. This inequality can be seen through caste wise, gender wise, residence wise or economic class wise. In general access to higher education depends on either social identity or economic identity. This paper examines disparities in access to higher education in India under above mentioned categories, but the main emphasis is to throw light on disparity among economic classes.

Objective of the Study

Objective of my study is to analyze the existing disparities in access to higher education. The paper primarily investigates the macro level variation in access of higher education on the basis of Monthly per capita expenditure (MPCE)¹ among different sections of society. In other words, paper examines disparities in access to higher education in India among different social as well as economic classes,

¹ Monthly per capita expenditure (MPCE) is the household consumer expenditure over a period of 30 days divided by household size. The population of a domain can be divided into five quintile classes of MPCE. The first quintile of MPCE means the level of MPCE below which 20% of the population lie, the second quintile, and the level below which 40% of the population lie, and so on. In this round quintile classes are obtained separately for rural sector, urban sector and for rural and urban sectors combined in each state (NSS 64th Report).

but the main emphasis is to throw light on disparity among economic classes. Here investigator has divided the society on the basis of Gender, Residence and Caste only. Other sections of society are not investigated because of time constraint and other limitations of the investigator. It also tries to see the state wise variation in access to higher education among different section of economic classes, i.e., consumption quintile classes. Second section of paper deals with change in Gross Enrolment Ratio (GER)² in higher education with help of compound annual growth rate between the period 1995-96 and 2007-08, since in these two years NSSO has collected data on education.

Research Questions

The paper tries to examine the following research question:

- a) To find the status of access to higher education across the states of India.
- b) How does it vary across different quintiles of MPCE in different sections of society?
- c) What is the rate of change in access to higher education over a period of time?

Methodology

This is a descriptive study. Paper tries to investigate the inequality of access of higher education on the basis of above mentioned questions. Paper also tries to explain the situation of increasing gap in access of higher education among different groups. Main data source of the study will be NSS 52nd and 64th round survey. I will also collect data from UGC background papers, MHRD papers and other similar research papers. In order to show rate of change in access to higher education over the time, compound annual growth rate (CAGR) is calculated between the year 1995-96 and 2007-08.

Data collection

In this paper all the results are based on NSS data for the years 1995-96 and 2007-08. In survey 2007-08 social groups has been classified in four groups; ST, SC, OBC and Others. However in survey year 1995-96, only three classifications have been made; ST, SC and Others. Another

² According to 64th NSS Report, Gross Enrolment Ratio (GER) is the ratio of the number of persons in the class-group to the number persons in the corresponding official age-group. i.e., $GER = (\text{All Enrolled in Post Higher Sec. Classes} / \text{Total Population in 18 -23 age group}) \times 100$.

grouping has been made on the basis of religion, residence, sex and consumption expenditure, which is similar in both round of survey. On the basis of consumption expenditure people are divided in five groups which are called five quintiles. Gross Enrolment Ratio (GER) across this quintile has been measured in survey. This facilitates to see the economic dimension of enrolment in higher education.

Review of literature

Hasan and Mehta (2006) based on 55th round of NSS data gave a macro level picture of access of higher education for different caste and religion groups. They find SC, ST, OBC and Muslims are underrepresented in Higher Secondary (HS) level relative to their population shares. The completion rate of HS amongst STs are minimum which is three fourth of national average. The HS completion rate for OBC in rural (urban) areas is 77 % (87 %) of the national average. They show that despite reservations of 15 % and 7.5% for SC and ST respectively, they make up only 10.2 % and 3.9 % of the national college attending population. The OBC comprise 22.5 % of the national male college attending population however their reserve quota is 27 %. They have also shown that Mean Per Capita Expenditure (MPCE) of SC and Muslims are lower than that of national MPCE. Finally they conclude that two factors, identity and economic status are responsible for determining the enrolment in higher education. In similar study **Despande**(2006) finds that Muslims among religious groups are at the bottom on the basis of NSS data. From enrolment point of view Hindu upper caste and other religious groups stands at the top. SC, ST, Muslim and Hindu OBC are underrepresented in higher education while Sikh, Christian, Hindu-Upper castes and other religion are over represented. **Dubey**(2008) studied the disparity in access of higher education at three points of times: 1993-94,1999-00 and 2004-05 based on NSS data. In this study titled “Determinants of Post-Higher Secondary Enrolment in India” he found the hierarchy in enrolment in higher education with ST at the bottom and others (general category) at the top. In rural areas there is not much difference in enrolment between SC and ST but the disparity between others and SC/ST is substantial. In urban area GER of SC is lower than ST at all three points of times. Others had highest GER throughout. The STs performed highest rate of growth in GER and by 2004-05, their GER was almost comparable with others. He has also divided the population in two categories poor and non-poor, based on poverty line defined by planning commission. GER for non poor was many time higher than the SCs and STs. He also showed the declining trend of GER for poor between 1993-94 and 2004-05. On the other hand non-poor showed the increasing trend in this period. **Raju**(2008) in UGC

background paper titled “Gender Differentials in Access to Higher Education” reviewed the existing situation of women’s access to higher education in India and has analyzed the situation of rural-urban divide in terms of access to higher education for women. Her study showed the main reasons behind low access to higher education for rural women are: (a) lack of higher educational institution in rural areas, (b) lack of transport infrastructure, (c) unsafe and unsecure environment for women and (d) under utilisation of fund available for development of higher education. **Sinha(2008)** in his study titled “ Identification of Educationally Backward Districts” showed that there are wide social and regional disparities in accessing higher education in India. He has tried to locate educationally backward districts of India on the basis of GER in higher education. He argued that supply side constraints are responsible for low GER. He proposed that districts with GER lower than the national average (12.4) could be used to identify the educationally backward districts. His study found 374 districts out of the total of 593 districts had lower overall GER than 12.4. He also measured the supply side constraint by College –Population Index(C-PI). The index represents the number of colleges per lakh population in the relevant age-group (i.e. 18-23 years) in a certain district. He calculated the rank correlation between GER and C-PI that is 0.403, which shows significance of educational infrastructure in determining GER. The degree of association in case of GER for the Scheduled Castes was ($r = 0.507$) while it was found to be weak for the Scheduled Tribes ($r = 0.265$).

Acemoglu and Pischke(2000) in their paper “Changes in the wage structure, Family Income, and Children’s Education” suggests that there is a large effect of family income on college enrolments. Their study is done in USA during 1970s. They established that 10 percent increase in family income is associated with a 1.4 percent increase in the probability of attending four-year College. **Duchesne and Nonneman(1998)** in their paper “The Demand for Higher Education in Belgium” tried to investigate the determinants behind the spectacular growth in higher education enrolments in Belgium since 1953 to 1992. Their result shows that income and relative wage differences both influence enrolment decisions positively. The impact of indirect costs (foregone earnings) is negative, which indicates that the negative price effect dominates the additional positive income effect. They calculated income elasticity of +1.02 and a price elasticity of – 0.33 for male enrolment in higher education and the respective elasticity for female enrolment are +1.03 and – 0.52. **Siegel and Campbell(1967)** in “ The Demand For Higher Education in the United States, 1919-1964” established that the income and price elasticity of demand for higher education are +1.20 and -

.44 respectively. Here they have used the enrolment ratio in higher education as a measure of demand for higher education. **Francescon and Ermisch(2000)** in their study “Family Matters: Impacts of Family Background on Educational Attainments” try to find the impact of family background on student’s educational attainments. This study is based on British households for the years 1991-97. They established that parents' educational attainments are very strongly associated with their children's educational attainment. And mother’s education has stronger association with child’s education than the father’s education. They also find that having more siblings, particularly sisters reduce educational attainment of child.

Status of access to Higher Education

The access of higher education is measured in terms of GER which is defined as the ratio of students who enrolled in higher education to population belonging to the age group 18-23(NSS 64th report). Higher education is considered as all education after higher secondary. In year 2007-08 the overall GER was 17.31 percent. GER for male (19.12) is higher than that of female (15.32), this shows the relative backwardness of female in higher education compared to their male counterparts. The detail information can be summarized in following table:

Table1: GER in Higher Education

Year	Gender/ Sector	Rural	Urban	Total
64 th Round NSS	Male	13.74	29.81	19.12
	Female	8.36	30.78	15.32
Year 2007-08	Total	11.12	30.26	17.31
52 nd Round NSS	Male	6.48	21.61	11.27
	Female	2.58	18.70	7.26
Year 1995-96	Total	4.54	20.26	9.32
Growth Rate between year 1995-96 to 2008	Male	0.06	0.03	0.05
	Female	0.10	0.04	0.06
	Total	0.08	0.03	0.05

Source: National sample survey 52nd and 64th round

The huge gap in access of higher education between rural- urban and male –female is visible in both of the NSS data. But the gap in year was 1995-96 was lesser than that of the gap in year 2007-08. This indicates that after adopting New Economic Policy (NEP) the inequality between rural and urban India has increased. However there is positive growth for GER during this period. The growth

for Rural GER is greater than that of growth for Urban GER. GER for female is higher in case of both rural and urban people.

Table 2: GER across social groups : Rural + Urban

Year	Gender/ social group	ST	SC	OBC	Others	Others*	Total
1995-96	Male	5.24	7.42	NA	12.95	NA	11.27
	Female	1.86	2.52	NA	9.14	NA	7.26
	Total	3.58	5.04	NA	11.10	NA	9.32
2007-08	Male	9.33	13.36	17.01	21.74	28.09	19.12
	Female	6.14	9.65	12.37	17.93	25.47	15.32
	Total	7.74	11.60	14.80	19.93	26.85	17.31
Growth Rate of GER between 1995-96 to 2007-08	Male	0.05	0.05	--	0.01	--	--
	Female	0.10	0.12	--	0.06	--	--
	Total	0.07	0.07	--	0.05	--	--

Source: National Sample Survey 52nd and 64th round.

According to 64th NSS report, the GER was lowest for ST (7.74) followed by SC (11.60), OBC (14.80) and others (26.85). In 52nd NSS round separate data for OBC is not collected, so we can't compare GER for OBC between these two periods. In case of ST, SC and Others pattern is similar. GER for SC and ST grew with same rate though there is significant increase in educational infrastructure during this period. The gender disparity in enrolment is also maintained across all social classes. But the gender disparity has decreased during this period, though it is very small, it is positive thing for our society.

Table3: Eligible Students' Enrolment Rate in Higher Education, Age Group 18-23, Social Group, Gender and Residence 2004-2005

	Rural			Urban			Rural + Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
ST	55.71	65.57	59.50	77.03	53.54	64.58	62.79	59.89	61.50
SC	47.10	42.73	45.25	62.18	56.44	59.89	53.39	48.13	51.21
OBC	50.91	39.75	46.71	58.34	48.40	54.19	54.10	43.84	50.05
Others	51.17	42.17	47.52	60.47	54.42	57.57	56.79	50.41	53.90
Total	50.69	42.60	47.49	60.44	53.11	57.10	55.63	48.58	52.61

Source: Saraswati Raju, UGC report(2008)

Changes in GER by Consumption Expenditure Class

The gap between the lowest and the highest MPCE suggests the difference in economic conditions at the two ends. Quintile of MPCE can be representing as quintile of economic class. We know form

review of related literature that Consumption expenditure is one of important variable on which access to higher education depends. In most of the studies GER has been analyzed by social caste, religion, residence and sex identity. In this section GER is analyzed on the basis of consumption expenditure quintile.

Table 4: GER by consumption expenditure class for Rural and Urban class: 1995-96

CEC	Rural			Urban			Rural + Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-20 %	1.21	0.24	0.70	3.71	2.24	2.97	2.08	0.91	1.47
20-40%	2.59	0.40	1.45	8.23	6.50	7.42	7.30	4.32	5.83
40-60%	3.87	0.68	2.27	14.45	12.60	13.56	7.30	4.32	5.83
60-80%	6.43	2.47	4.58	22.79	23.55	23.13	11.20	8.30	9.86
80-100%	14.19	7.58	11.01	49.54	47.49	48.67	24.94	17.90	21.66
Total	6.48	2.58	4.54	21.61	18.66	20.24	11.27	7.24	9.31

Source: National Sample Survey 52nd round.

The table shows, GER increases as we move up across MPCE class. But the difference between GER of highest and lowest is too much which indicates the economic identity is important factor in determining access to higher education. In case of rural India in year 1995-96, GER of highest class was 16 times higher than that of lowest class. This difference was worse in case of rural female; GER for highest class is 31.5 times higher than that of lowest class. And if we compare the access between rural and urban India, it shows huge inequality. The overall gap between the rural total and urban total was 15.7 which is too much. This gap was more in case of higher quintile classes. In words as we move up across MPCE class the inequality between rural and urban increases.

Table 5: GER by Consumption Expenditure Class: 2007-08

CEC	Rural			Urban			Rural + Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-20%	5.03	2.61	3.79	7.50	7.50	7.50	5.94	4.21	5.08
20-40%	6.77	3.52	5.17	17.17	12.59	15.03	9.90	6.06	8.04
40-60%	8.38	5.14	6.81	24.47	23.20	23.87	14.66	11.98	13.37
60-80%	12.38	7.66	10.10	35.03	41.89	38.09	19.90	17.94	18.98
80-100%	30.70	21.29	26.39	61.20	70.55	65.23	39.88	35.02	37.69

Total	13.74	8.39	11.12	29.81	30.78	30.26	19.12	15.32	17.31
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Source: NSS 64th round report.

In year 2007-08, the trend of GER among different classes is almost similar but the absolute access and inequality in access to higher education has increased. The GER for lowest consumption expenditure class is 5.08 percent and for highest consumption expenditure class is 37.69. In case of urban class, Male and female GER in lower economic quintile is very close but in the upper strata female GER becomes higher than their male counterparts. But in rural areas GER for male is uniformly higher than that of female. This gap between overall rural and urban class is 19.14 which is about 5 point higher than last round educational survey.

The progress in access to higher education between the year 1995-96 and 207-08 can be seen through following table:

Table 6: GER Growth Rate by consumption expenditure class for Rural and Urban Class Between the year 1995 to 2007.

CEC	Rural			Urban			Rural + Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	0.13	0.22	0.15	0.06	0.11	0.08	0.09	0.14	0.11
2	0.08	0.20	0.11	0.06	0.06	0.06	0.07	0.09	0.08
3	0.07	0.18	0.10	0.04	0.05	0.05	0.06	0.09	0.07
4	0.06	0.10	0.07	0.04	0.05	0.04	0.05	0.07	0.06
5	0.07	0.09	0.08	0.02	0.03	0.02	0.04	0.06	0.05
Total	0.06	0.10	0.08	0.03	0.04	0.03	0.05	0.06	0.05

Source: calculated table using NSS report.

The growth during this period was higher for the lower MPCE classes in case of both rural and urban classes. And also growth rate in GER was higher for female in all the economic classes and both section of the society. The growth rate was highest for rural female in lowest quintile class and it was lowest for urban male in highest quintile. If we see the picture of overall India the growth rate in GER was decreasing as we move up across economic classes.

Table 7: GER for Social group by Consumption Expenditure Class: All India, 1995- 96

CEC	ST			SC			OBC			Others		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	1.39	0.32	0.82	1.56	0.36	0.92	NA	NA	NA	2.47	1.33	1.89
2	2.18	---	1.00	3.46	0.85	2.16	NA	NA	NA	5.09	2.93	4.01

3	2.48	2.63	2.55	4.64	1.77	3.20	NA	NA	NA	8.56	5.17	6.88
4	6.39	3.11	5.02	9.38	4.26	7.15	NA	NA	NA	12.00	9.53	10.83
5	18.57	6.43	12.86	19.16	7.51	14.00	NA	NA	NA	26.34	20.22	23.47
Total	5.24	1.86	3.58	7.42	2.52	5.04	NA	NA	NA	12.95	9.13	11.09

Source: IIDS report (2012)

Note: In year 1995-96, educational data was not collected for OBC separately, backward class were included in others.

This table provides the access to higher education across MPCE by social class. It shows the hierarchy of social class is maintained in terms of access to higher education. ST has least access to higher education and others have highest access to higher education and SC is in between these two categories. The difference in SC and ST is not too much but difference with others is very huge. In total GER for ST, SC and Others were 3.58, 5.04 and 11.09 respectively.

Table 8: GER for Social group by Consumption expenditure class: Rural + urban, 2007-08

CEC	ST			SC			OBC			Others*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	3.33	1.96	2.62	7.92	3.58	5.82	4.48	4.53	4.51	8.12	5.57	6.82
2	2.63	1.91	2.27	8.82	4.92	6.99	10.53	6.74	8.68	12.94	7.74	10.39
3	8.32	5.79	7.06	11.68	10.42	11.07	12.64	8.18	10.47	20.95	20.65	20.81
4	11.23	9.33	10.28	14.97	11.52	13.32	17.38	15.11	16.32	27.60	26.97	27.30
5	29.01	19.22	24.55	30.02	26.14	28.31	37.23	27.71	32.95	46.08	45.34	45.74
Total	9.33	6.14	7.74	13.36	9.65	11.60	17.01	12.37	14.80	28.09	25.47	26.85

Source: National Sample Survey 64th round in IIDS report (2012)

Note: In year 2007-08, educational data was collected for OBC class separately. So in others column OBC is excluded.

GER across social group for consumption classes shows that the existing hierarchy is maintained. Others have uniformly higher GER and SC/ST have uniformly lower GER with OBC at middle level across all the consumption classes in both NSS surveys. But the disparity in GER is higher at higher consumption expenditure class. In year 2007-08, in quintile 1st, 2nd and 3rd, the gap between GER for

SC and ST is around 3, but in case of 5th quintile this gap is 4. Similarly if we compare between OBC and Others, the gap is only 2 in quintile 1st and 2nd. But this gap increased to 10 in case of 3rd and 4th quintile and it further increased to 13 in case of 5th quintile. The pattern was similar in year 1992-93, but the gap was smaller among all classes. This again proves the increasing inequality among social classes.

Table9: GER for Social group by Consumption expenditure class: Rural + urban. 2007-08

CEC	ST			SC			OBC			Others(including OBC)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	3.33	1.96	2.62	7.92	3.58	5.82	4.48	4.53	4.51	5.67	4.89	5.28
2	2.63	1.91	2.27	8.82	4.92	6.99	10.53	6.74	8.68	11.38	7.09	9.28
3	8.32	5.79	7.06	11.68	10.42	11.07	12.64	8.18	10.47	16.08	13.19	14.69
4	11.23	9.33	10.28	14.97	11.52	13.32	17.38	15.11	16.32	21.88	20.34	21.16
5	29.01	19.22	24.55	30.02	26.14	28.31	37.23	27.71	32.95	41.99	37.25	39.85
Total	9.33	6.14	7.74	13.36	9.65	11.60	17.01	12.37	14.80	21.74	17.93	19.93

Source: National Sample Survey 52nd and 64th round in IIDS report (2012)

Note: In year 2007-08, educational data was collected for OBC class separately. But in order to compare it with last educational NSS, author has included OBC in others.

In lowest two consumption expenditure quintile GER for SC, OBC and Others are roughly the same. However, GER for ST is lower. But after that GER for others increases at a higher rate compared to the SCs and OBCs. It also shows that gap has decreased for every section of the society compare to last round survey.

Table 10: Rate of growth of GER by CEE for social groups between 1995-2007: Rural + Urban

CEC	ST			SC			Others		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	0.09	0.20	0.12	0.18	0.26	0.20	0.09	0.14	0.11
2	0.02	---	0.09	0.10	0.19	0.13	0.08	0.09	0.09
3	0.13	0.08	0.11	0.10	0.19	0.13	0.07	0.10	0.08
4	0.06	0.12	0.07	0.05	0.10	0.06	0.06	0.08	0.07

5	0.05	0.12	0.07	0.05	0.13	0.07	0.05	0.06	0.05
Total	0.06	0.13	0.08	0.06	0.14	0.09	0.05	0.07	0.06

Source: NSS 52nd & 64th round report.

State wise Access to Higher Education

The 64th NSSO report shows the huge inequality among states in terms of access to higher education. It is evident from the following table that rural GER is lower than urban GER in all MPCE Quintile in all states. If we compare all states with each-other, Kerala is at top position in terms of rural GER (84), whereas Jammu and Kashmir comes to second position. The lowest rural GER is 2 in Mizoram. Thus the range of rural GER is 82 which show the high inequality in rural GER among states. The top ten states are Kerala, J & K., Karnataka, Tamil Nadu, Maharashtra, Himachal, Punjab, Nagaland, Haryana and Andhra Pradesh. Whereas bottom ten states in terms of rural GER are Mizoram, Meghalaya, Chhattisgarh, Bihar, Arunachal Pradesh, Tripura, Madhya Pradesh, Jharkhand, West Bengal, Orissa, and Manipur. But the position of state changes if we analyze urban GER of higher education among the states. Highest urban GER is 113 in Himachal Pradesh where as lowest urban GER is 32 in Manipur. The range of variation in urban GER is 81 point. The top five states in terms of urban GER are Himachal, J & K., Goa, Meghalaya, Kerala and bottom five states are Manipur, Arunachal Pradesh, Nagaland, Chhattisgarh and Uttarakhand. If we see the state wise difference in rural –urban gap in GER, Kerala has lowest gap of 9 where as Meghalaya has highest gap of 91 point.

Table 11: State wise and MPCE wise GER in Higher Education, 2007-08

State		MPCE Quintile						Correlation Coefficient (MPCE,GER)	Urban –Rural Gap
		1	2	3	4	5	All		
Andhra Pradesh	Rural	7	13	20	25	86	28	0.84	61
	Urban	41	42	67	101	229	89	0.99	
Arunachal Pradesh	Rural	0	6	11	0	18	7	0.73	25
	Urban	0	64	36	25	38	32	0.45	
Assam	Rural	3	12	9	33	36	18	0.18	43
	Urban	3	39	72	82	114	61	0.86	
Bihar	Rural	1	1	5	5	25	7	0.80	45
	Urban	0	32	21	62	159	52	0.96	
Chhattisgarh	Rural	1	9	0	8	16	7	0.90	42
	Urban	4	36	36	41	130	49	0.85	
Goa	Rural	0	32	65	42	0	28	-0.31	73

	Urban	36	31	89	69	299	101	-0.39	
Gujarat	Rural	7	6	8	21	48	17	0.95	37
	Urban	5	15	52	95	116	54	0.87	
Haryana	Rural	12	7	14	40	83	30	0.89	38
	Urban	24	34	39	118	130	68	0.91	
Himachal	Rural	2	13	31	21	103	32	0.72	81
	Urban	31	52	186	155	167	113	0.60	
Jammu & Kashmir	Rural	2	10	20	66	100	39	0.66	66
	Urban	25	60	132	144	163	105	0.84	
Jharkhand	Rural	6	5	10	13	33	13	0.74	76
	Urban	1	30	89	147	218	89	0.91	
Karnataka	Rural	10	12	14	23	134	37	0.82	19
	Urban	12	34	36	75	141	56	0.93	
Kerala	Rural	43	58	95	85	154	84	0.93	9
	Urban	24	69	95	144	141	93	0.79	
Madhya Pradesh	Rural	4	6	3	8	29	10	0.60	67
	Urban	8	18	52	115	222	77	0.92	
Maharashtra	Rural	9	14	13	27	106	33	0.94	53
	Urban	19	54	73	125	182	86	0.88	
Manipur	Rural	22	3	14	7	35	16	0.46	16
	Urban	26	14	22	29	71	32	0.87	
Meghalaya	Rural	2	0	0	7	23	6	0.98	91
	Urban	77	222	59	71	267	97	0.62	
Mizoram	Rural	0	8	0	0	0	2	0.47	60
	Urban	34	43	74	81	79	62	-0.49	
Naga	Rural	38	46	16	19	35	31	-0.73	10
	Urban	53	17	30	17	80	41	0.24	
Orissa	Rural	4	6	8	16	43	15	0.71	76
	Urban	4	10	56	114	300	91	0.99	
Punjab	Rural	5	13	20	32	100	32	0.99	25
	Urban	26	29	37	70	143	57	0.99	
Rajasthan	Rural	1	9	12	18	53	19	0.98	42
	Urban	6	24	52	85	156	61	0.97	
Sikkim	Rural	3	3	7	2	78	18	0.86	45
	Urban	0	0	0	9	366	63	0.72	
Tamil Nadu	Rural	11	16	24	46	91	36	0.92	35
	Urban	16	41	50	98	168	71	0.99	
Tripura	Rural	0	10	8	11	26	10	0.95	52
	Urban	8	45	97	95	84	62	0.58	
Uttrakhand	Rural	1	21	23	27	65	26	0.61	24
	Urban	6	17	51	64	138	50	0.96	

Uttar Pradesh	Rural	10	12	18	21	57	23	0.97	48
	Urban	12	29	46	92	103	71	0.80	
West Bengal	Rural	4	3	9	11	56	15	0.75	55
	Urban	4	26	79	94	202	70	0.94	

Source: Calculated by author by using NSS 64th report.

Above table also shows that there is positive correlation between MPCE and GER in all states except Goa, Nagaland and Mizoram. Goa has negative correlation between MPCE and GER in both rural and urban cases. Where as in Mizoram this correlation is negative only for urban GER. And in Nagaland this correlation is negative for rural GER. This correlation is higher for urban GER in all states except Goa and Mizoram. This correlation is highest in Punjab for both rural and urban area, where as for Andhra Pradesh and Tamilnadu it is also highest for urban area only.

The literature shows the GER of higher education depends on following factors- GER of Higher Secondary, Expenditure on Higher education (Revenue Account), Per Capita Income, ST and SC population, and higher education infrastructure. When the regression is ran by using cross sectional state wise data for the year 2007-08, the 't' ratio was insignificant for all variables. It shows there is no linear relationship between above mentioned dependent and independent variables. This may happen due to small size of sample and cross sectional analysis. In order to find the association between these variable, the pair wise correlation coefficient is calculated. The result is shown in following table:

Table 12: Pair wise correlation coefficients for year 2007-08

	GER Hig Education	GER High Secondary	Expenditure o Higher Educat	% SC Pop	% ST P	P.C.I.(2007-	College Per la Popn
GER Higher Education	1						
GER Higher Secondary	-0.08	1.00					
Expenditure on Higher Educatior	-0.03	0.26	1.00				
% SC Popn	-0.11	0.39	0.37	1.00			
% ST Popn	-0.12	-0.45	-0.51	-0.68	1.00		
P.C.I.(2007-08)	0.33	0.42	0.01	0.05	-0.37	1.00	
College Per Lakh Popn	-0.23	0.66	0.34	0.26	-0.30	0.34	1

Source: Calculated by author using data from Census of India, Selected Educational Statistics and MHRD Papers

The above table shows the GER of higher education has positive correlation with per capita income only. And all other variables have negative correlation with GER of higher education.

The clearer picture about this relationship can be showed by following table:

Table 13 : State wise GER of higher education and others variables, 2007-08

State	GER Hig Education	GER Higher Secondary	Expenditure Higher Educat	% SC Po (2001)	% ST Popn(2001)	P.C.I.	College Per lakh Popn
Andhra Pradesh	11.40	42.04	8175000.00	16.19	6.59	35864.00	48
Arunachal Prade	28.40	35.15	208584.00	0.56	64.22	27398.00	11
Assam	26.90	10.67	3543344.00	6.85	12.41	21464.00	13
Bihar	13.40	11.40	7773430.00	15.72	0.91	11135.00	5
Chhattisgarh	10.50	23.31	1596172.00	11.61	31.76	19928.00	20
Goa	41.40	44.12	408868.00	1.77	0.04	105582.00	25
Gujarat	13.60	27.71	3742065.00	7.09	14.76	45773.00	27
Haryana	3.60	42.11	2550322.00	19.35	0.00	58531.00	33
Himachal Prade	3.50	61.31	616295.00	24.72	4.02	40134.00	38
Jammu &Kashmi	32.50	27.91	1152890.00	7.59	10.90	24214.00	14
Jharkhand	33.20	6.86	1954259.00	11.84	26.30	36266.00	5
Karnataka	21.30	41.32	5118793.00	16.20	6.55	41814.00	44
Kerala	24.10	47.99	6716861.00	9.81	1.14	18051.00	29
Madhya Prades	26.00	35.41	3468710.00	15.17	20.27	25360.00	23
Maharashtra	16.80	43.82	11006484.00	10.20	8.85	47051.00	35
Manipur	8.10	24.51	689528.00	2.77	34.20	19780.00	23
Meghalaya	25.50	9.47	446575.00	0.48	85.94	26636.00	16
Mizoram	21.90	27.86	241865.00	0.03	94.46	27501.00	21
Nagaland	0.00	17.64	187188.00	0.00	89.15	0.00	20
Orissa	13.60	22.77	3622519.00	16.53	22.13	23403.00	23
Punjab	27.60	32.04	2242628.00	28.85	0.00	44923.00	29
Rajasthan	35.90	24.49	2946361.00	17.16	12.56	23933.00	29
Sikkim	17.50	23.15	48923.00	5.02	20.60	33349.00	14
Tamil Nadu	21.60	53.74	6615274.00	19.00	1.04	40757.00	27
Tripura	21.50	30.12	286859.00	17.37	31.05	28806.00	8
Uttar Pradesh	16.10	41.23	1465283.00	21.15	0.06	16060.00	17
Uttarakhand	31.20	45.42	6870574.00	17.87	3.02	32884.00	28
West Bengal	19.40	27.21	7364952.00	23.02	5.50	31722.00	8

Source: Census of India, Selected Educational Statistics and MHRD Papers

The above table indicates that top five states are Goa, Rajasthan, Jharkhand, Jammu &Kashmir and Uttarakhand in terms GER of Higher education and its value are 41.4, 35.9, 33.2, 32.5 and 31.2 point

respectively. Where as in terms of GER in Higher Secondary top five states are Himachal Pradesh, Tamil Nadu, Kerala, Uttarakhand and Goa and its values are 61.31,53.74,47.99,45.42 and 44.12 point respectively. Thus we see only one state, Goa, is common in these two groups. In one group Goa is at top and in other group it is at bottom. For Haryana GER of higher education is 3.60 where as GER in higher secondary is 42.11. In other words it can be said that for access of higher education Haryana is amongst worst state where as for access of higher secondary its position is good amongst state. This indicates the negative relationship between these two variables. Similarly state wise GER of higher education and educational infrastructure has also negative correlation. For example in terms of educational infrastructure (College per lakh population) Andhra Pradesh is at top with 48 point where as its GER of Higher education is 11.4 only which is below average. Thus we see that GER of higher education has very complex relationship with above mentioned variables.

Non-enrolment and Discontinuance of Education

In 64th round NSS all persons in the age-group 5-29 currently not attending were surveyed. First, they were asked whether they had ever been enrolled in any institution. If the answer was in the negative, it was considered a case of non-enrolment and information was obtained on the reasons thereof as well as on the current activity status of such persons.

Note:-In analyzing the results of this survey, the distinction between dropping out and discontinuance was not made, all those who were currently not attending but had been enrolled at some time in the past being clubbed together as ‘dropped out or discontinued’ (NSS 64th round report).

Table 14: Percentage of never enrolled persons of age 5-29 years, (All India), year 2007-08

Age Group	Rural			Urban			Rural + Urban		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
5	42.5	42.3	42.4	27.9	22.6	25.0	39.3	37.8	38.5
6 – 10	11.2	8.3	9.6	6.0	5.7	5.8	10.1	7.7	8.8
11 – 13	8.6	4.8	6.6	5.6	3.4	4.4	7.9	4.5	6.1
14 – 17	12.7	7.1	9.7	6.0	4.5	5.2	11.0	6.4	8.5
18 – 24	28.4	11.9	20.1	11.0	6.3	8.5	23.5	10.1	16.6
25 – 29	39.4	18.2	29.1	16.3	8.2	12.2	32.7	15.1	24.1
Total	21.0	11.0	15.8	10.0	6.3	8.0	18.2	9.8	13.8

Source: National Sample Survey 64th round report.

Among persons in the age-group 25-29 years, 29% in rural areas and 12% in urban areas – were found to have never been enrolled. In both sectors the percentage drops steadily as one move along

the age-groups 18-24, 14-17, and 10-13, etc. This is an encouraging pattern because it indicates a positive development – diminishing phenomenon of non-enrolment. Clearly, the percentage of never-enrolled persons in the age-group 10-13, 14-17, or 18- 24, must be shrinking over time.

Table 15: Proportion (per 1000) of never enrolled persons (age 5- 29 years) and their per thousand distribution by reason for non- enrolment in each age-group (all India) (rural + urban)

Reason for non - enrolment	Age groups						
	5	06-10	10-13	14-17	18-24	25-29	5-29
Proportion of never enrolled	385	94	64	85	166	241	138
Parents not interested	285	347	310	276	328	371	332
Inadequate no. of teachers	1	1	2	1	1	1	1
School is far off	27	14	10	11	19	22	18
To work for wage salary	1	1	4	16	15	13	10
For participating in other economic activities	2	3	14	22	22	18	16
To look after younger siblings	4	10	14	13	10	7	9
To attend other domestic chores	2	4	12	26	30	24	20
Financial constraints	96	228	287	269	208	195	210
Timing of educational institution not suitable	3	1	0	0	1	0	1
For helping in household enterprises	3	4	11	12	14	6	9
Medium of instruction is unfamiliar	2	2	3	3	0	0	1
No tradition in the community	22	36	55	57	57	48	48
Education not considered necessary	164	169	197	224	236	244	218
Others	387	179	79	69	59	44	106
All	1000	1000	1000	1000	1000	1000	1000

Source: NSS 64th round report.

The above table shows that in higher education (18-24 age group) most important reason for non - enrolment is disinterest of parents toward the higher education. Other important reason for non enrolment is that education is not considered important. And financial constraints are third most important reason for non enrolment in higher education. This indicates that privatization of higher education and increase in cost of higher education may affect the accessibility of higher education.

Non-enrolment and MPCE level

In this section, it is tried to find out how the proportion of never-enrolled changed with change in household living standards as measured by household monthly consumption expenditure (MPCE).

The following table shows that proportion of never enrolled person decreases as we move towards the higher consumption quintile class.

Table 16: Percentage of never enrolled persons of age 5-29 years in each MPCE quintile class (2007-08)(All India)

MPCE Quintile Class (%)	Rural			Urban		
	Female	Male	Person	Female	Male	Person
00-20	58.8	35.1	46.9	42.4	31.3	36.8
20-40	49.2	26.6	37.5	23.9	14.0	18.2
40-60	41.9	22.6	31.9	15.3	8.0	11.5
60-80	34.2	16.4	24.7	6.5	5.4	5.8
80-100	19.7	9.1	13.9	2.8	2.8	2.8

Source: NSS 64th round report

The table shows among 5-29 age group rural female, 58.8 percent are never enrolled in formal education system from the lowest consumption quintile. But this percentage points decreases if we go towards higher consumption quintile. This trend is applicable in both rural and urban settings and for male and female category. This indicates that economic class matters in access of education. It is also evident that economic class impacts more to female students than that of male counterpart in 5-29 age group.

The next table summarizes MPCE quintile wise reason for non-enrolment in 5-29 age group students.

Table 17: Proportion (per 1000) of never enrolled persons (age 5- 29 years) and their per thousand distribution by reason for non-enrolment in each quintile class, all-India, rural + urban person

Reason for non-enrolment	MPCE Quintile Classes					
	0-20	20-40	40-60	60-80	80-100	All
Proportion of never enrolled	255	352	282	189	62	138
Parents not interested	643	369	676	694	604	332
Inadequate no. of teachers	3	3	0	1	10	1
School is far off	39	31	36	40	37	18
To work for wage salary	25	17	18	15	39	10
For participating in other economic activities	36	28	33	26	30	16

To look after younger siblings	26	15	13	14	13	9
To attend other domestic chores	45	40	41	34	31	20
Financial constraints	235	235	397	412	320	210
Timing of educational institution not suitable	1	3	0	1	1	1
For helping in household enterprise	14	22	19	20	21	9
Medium of instruction is unfamiliar	2	4	2	0	2	1
No tradition in the community	82	108	103	98	120	48
Education not considered necessary	450	425	442	215	396	218
Others	198	200	217	238	375	206
All	1000	1000	1000	1000	1000	1000

Source: National Sample Survey 64th round report.

The table indicates that maximum proportion of never enrolled person belongs to lowest quintile class. And as we move toward higher quintile class the proportion of non-enrolment decreases. Most important factor for non-enrolment in higher education in 5-29 age group is disinterest of parents toward the child education. And this disinterest is maximum in case of lowest quintile class. Here one interesting point is that the parents belong to second quintile class have significantly lower disinterest towards the child education than the parents belong to higher quintile class. Second most important factor of non enrolment is 'education not considered necessary'. Here again the lowest consumption quintile have highest proportion. But minimum proportion under this reason comes under third consumption quintile. Financial constraint is third most important cause of non enrolment in education in this age group. Under this constraint general trend is followed among consumption quintile classes, i.e., as we move toward higher consumption class the proportion of financial constraint affected student decreases. The other important factor for non enrolment is 'no tradition in the community'. Here again we find interesting point. Lowest economic class has minimum proportion of people who comes under this category for non enrolment. And highest economic class has highest proportion of people who could not get enrolled due to this reason.

Summary

From above analysis, we see that disparity in access to higher education is very high among different social and economic classes, though it is decreasing over the period of time. The conventional hierarchy across social and economic groups exists in terms of access of higher education. Others

(General category) have highest GER followed by OBC, SC and ST. This differentiation exists in rural as well urban sector. However the condition of SC/STs worsens in rural areas. If access of higher education is analyzed according to the consumption quintile class, it showed that in lowest two consumption expenditure quintile, GER for SC, OBC and Others are roughly the same. However, GER for ST is lower. But after that GER for others increases at a higher rate compared to the SCs and OBCs. It also shows that gap has decreased for every section of the society compare to last round survey.

The GER growth story shows some positive sign between the period 1994-95 to 2007-08. Compound annual growth rate (CAGR) between the period 1994-95 to 2007-08 showed improvement. Data shows the increasing accessibility of higher education in post reform period but simultaneously it shows increasing inequality in this period. The growth rate of GER during this decade is higher for female than their male counterparts. Although the level of GER for female is still very low for female. The enrolment ratio based on NSSO 64th round survey is 17.31 in total and 11.12 and 30.26 in rural and urban areas respectively. In 52nd round these numbers were 9.31 in total and 4.54 and 20.24 in rural and urban area respectively.

The important picture emerging from these data is the gender disparity in enrolment in higher education. Although, GER for both genders and in totals have increased but the gap between male and female enrolment is still remained high. Another important fact is rural–urban disparity in access to higher education which is also very high.

The GER has increased for all the social groups and both gender in aggregate. The growth rate records for SCs, STs and Others are 8%, 9% and 6% respectively for the period 1995-2007. Gender disparity in access to higher education has remained higher for SC than ST. Rural- Urban differences in enrolment has increased over the period of time. This proves the relative advantage of urban region compared to their rural counterparts over time. This happened for all social groups and genders both.

The growth during this period 1994-95 and 2007-08 was higher for the lower MPCE classes in case of both rural and urban classes. And also growth rate in GER was higher for female in all the

economic classes and both section of the society. If we see the picture of overall India the growth rate in GER was decreasing as we move up across economic classes.

The NSS 64th round report also shows the huge inequality amongst the states in access to higher education. Kerala is at top position in terms of rural GER (84), whereas Jammu and Kashmir comes to second position. The lowest rural GER is 2 in Mizoram. Thus the range of rural GER is 82 which show the high inequality in rural GER among states. But the position of state changes if we analyse urban GER of higher education among the states. Highest urban GER is 113 in Himachal Pradesh where as lowest urban GER is 32 in Manipur. The range of variation in urban GER is 81 point. State wise data of GER of higher education shows positive correlation between MPCE and GER in all states except Goa, Nagaland and Mizoram. Goa has negative correlation between MPCE and GER in both rural and urban cases. Where as in Mizoram this correlation is negative only for urban GER. And in Nagaland this correlation is negative for rural GER only. This correlation is higher for urban GER in all states except Goa and Mizoram. This correlation is highest in Punjab for both rural and urban area, whereas for Andhra Pradesh and Tamilnadu it is highest for urban area only.

The NSS report indicates that the most important factors for non enrolment in 5-29 age group are: ‘disinterest of parents’, ‘education not considered necessary’, ‘financial constraints’ and ‘no tradition in community’. The data also shows that maximum proportion of never enrolled person belongs to lowest quintile class. And as we move toward higher quintile class the proportion of non-enrolment decreases.

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