



Analysis of Gender Disparity Index among Indian States

Shweta Sharma

Asst. Professor, Department of Economics,
Dr.APJ Abdul Kalam Govt. College, Silvassa
Email:nitesh25shweta@gmail.com

Abstract

The Millennium Development Goals (MDGs) have focused in basic development issues; The MDGs originated from the Millennium Declaration adopted by the General Assembly of the United Nations in September 2000. In terms of India's progress towards MDGs, the progress so far has been mixed. The nation has already achieved the target of halving the poverty head count ratio, eliminated gender inequality in primary and secondary education.

Education is the Basic prerequisite for sustained Economic development. In this study we are tend to analyze the third MDG goal "Promote Gender Equality and Empower Women" and fourth Target "Eliminate gender disparity in primary, secondary education, preferably by 2005, and in all levels of education, no later than 2015". Educational empowerment is the best way for uplifting the status of women from the present position especially in the rural areas of India. In this paper we are analyzing the Gender Disparity Index (GDI) of different categories for different level of education in Indian states. Results shows that there is an improvement in the Index value over the year and most of the states have achieved the unitary value of Gender Disparity Index in 2011-12.

JEL Classification: C38, I00, R20

Key Words: Wellbeing, MDG, Education, GDI

Introduction

Millennium Development Goals (MDGs) (2000) were set with the objectives to deal with extreme poverty, hunger, disease, lack of adequate shelter, promote gender equality, education, and environmental sustainability.

Indian government has given significant weight to achieve the targets of all MDGs. and it has shown tremendous progress in achieving targets of some goals before the deadline of 2015.

In this study we are tend to analyze the third MDG goal "Promote Gender Equality and Empower Women" and fourth Target "Eliminate gender disparity in primary, secondary education, preferably by 2005, and in all levels of education, no later than 2015". Educational empowerment is the best way for uplifting the status of women from the present position especially in the rural areas of India. In this paper we are analyzing the Gender Disparity Index (GDI) for Indian states for different categories in general, at the national level the number of girls enrolled is lesser than the number of boys. However, the female-male ratio has been improving over the years.



Status of Gender Disparity in Literacy rates since Independence:

The main challenge in India’s education system is gender disparity. Women constitute 48.5% of the total population of the country so it essential to abolish the gender gap in education for overall development of the country as well as for empowerment of women. India has shown visible improvements in each level of education for boys and girls in the decade of 2001-2011. Many studies and report have specified that there has been significant improvement in different parameters of education and improvements in female literacy. The gender gap in literacy has also reduced during that time,

EFA report (2014) shows that The Gender Parity Index (GPI) for GER in primary, upper primary and elementary education has been improving steadily since 2000-01. The GPI for GER in primary education (Classes I-V) improved from 0.82 in 2000-01 to 1.03 in 2013-14. The GPI for GER in upper primary education (Classes I-V) improved from 0.75 to 1.08 while the GPI for GER in elementary education (Classes I-VIII).

Table 1 highlights the trends in gender gap in literacy rates since 1951. Which reveals that gender gap in literacy rate has increased till 2001, after that it has shown the decline in literacy rate gaps.

Table 1: Gender Disparity in Literacy rates since Independence

Census year	Persons (%)	Male (%)	Female (%)	Gap in Male-female Literacy Rate
1951	18.33	27.16	8.86	18.30
1961	28.3	40.4	15.35	25.05
1971	34.45	45.96	21.97	23.98
1981	43.57	56.38	29.76	26.62
1991	52.21	64.13	39.29	24.84
2001	64.83	75.26	53.67	21.59
2011	74.04	82.14	65.46	16.68

Census of India 2011

The literacy rate in India has increased from 64.8% in 2001 to 74.04% in 2011. What has been encouraging for the country is increase in female literacy rate (10.9%) has been much higher than the increase in male literacy rate (5.6%). Female literacy increased from 53.67% (Census 2001) to 65.46 % (Census 2011. The increase in female literacy rate (between 2001 and 2011) has been 11.8 percentage points in rural areas and 6.2 points in urban areas. In spite of these encouraging facts, gender gap in education is still very much a cause of concern. Although the gap between male and female literacy rates has come down from 21.6 in 2001 to 16.3 in 2011, it is still quite pronounced. It is worth mentioning that the gap is more prominent in rural areas where it is 19.3% in 2011.

Status of Gender Disparity among Indian States:

According to Census of India 2011 smaller numbers of girls are enrolled in the schools in comparison with boys, and many of them drop out. Kerala and Mizoram have approached



universal female literacy rates. (NSS, 1997). Higher Literacy rate in Kerala is the main reason for improved social and economic status of women. Gender gap has been reduced significantly; but problems remain in the quality of education for girls.

EFA report (2014) shows that there is an increase in literacy rate among population aged 15 years and above during the period 2001-2011, but gender and regional disparities in adult literacy levels persist. Nationally the gender gap was 19.5%, 9.5 % more than the targeted 10 per cent. Only seven States/UTs had achieved the target of reducing gender gap in adult literacy rates to less than 10% points. These States/UTs include Andaman & Nicobar Islands (9.5 % points), Goa (9.1 % points), Kerala (4.6 % points), Lakshadweep (9.1 % points), Meghalaya (5.1 % points), and Mizoram (4.8 % points), and Nagaland (8.4 % point)

During the year 2011, The literacy rate for population, aged 15 years and above, ranged between 93.5% in Kerala and 55.4 % in Bihar, the difference being about 38.1%. Only 12 States and Union Territories achieved a literacy rate of 80 per cent and above. These States/UTs are Kerala (93.5 %), Lakshadweep (91.6 %), Mizoram (91.3 %), Goa (87.7 %), Daman & Diu (86.1 %), Tripura (85.8 %), Andaman & Nicobar Islands (85 %), NCT of Delhi (84.8 %), Chandigarh (84.8 %), Puducherry (84.4 %), Himachal Pradesh (80.4 %) and Maharashtra (80.2 %).

During the year 2011, the literacy rate for males aged 15 years and above ranged between 96 per cent in the Union Territory of Lakshadweep and 67.5 per cent in the State of Bihar. Twenty one States and Union Territories achieved a male literacy rate of 80 per cent or more. During the year 2011, the literacy rate for females aged 15 years and above ranged between 91.3 percent in Kerala and 42.2 per cent in Bihar, the difference being 49.1 percentage points. Only four States and one Union Territory have achieved a female literacy rate of 80 per cent or more. Gender gap in adult literacy rates ranged between 4.6 percentage points in Kerala and 32.5 percentage points in Rajasthan.

EFA report (2014) explains that Gender Parity Index (GPI) for GER in primary, upper primary and elementary education has been improving steadily since 2000-01. The GPI for GER in primary education (Classes I-V) improved from 0.82 in 2000-01 to 1.03 in 2013-14. The GPI for GER in elementary education (Classes I-VIII) improved from 0.80 to 1.04 during this period. The GPI values are shown in the given table for all categories (general students, SC and ST students) for the year 2011-12. There have been significant increases in the values for each category for primary, upper primary and secondary education. However, all the values are below unity reports the existence of gender disparity against girls.

Gender Parity in Adult Literacy Rates

EFA report (2014) shows The Gender parity index (GPI) for adult literacy rates have shown considerable improvement during the period 2001 to 2011. The GPI for adult literacy rate improved from 0.65 in 2001 to 0.75 in 2011. The GPI for youth literacy rate improved from



0.81 to 0.91 during this period.

Literature Review

Geraldine Forbes (1998) studied and found the role of education to understand and solve women problems in traditional society. Duvvury and Allendorf (2001) found that participation of women in community level activities and credit-based groups mainly depends upon their education. UNDP (2001) measures women empowerment in terms of choice of long healthy life, better education, access to resources needed for a decent standard living. H. Subrahmanyam (2011) compares women education in India at present and Past. He found that there has an excellent growth in overall enrolment of girl students in schools. He defines empower as a process of acquiring some activities of women. Digumarti Bhaskara Rao and Digumarti Pushpa Latha (2004) focused on the importance of women education, the availability of various schemes for women empowerment after independence. Sakuntala Narasimhan (1999), studied behavior of rural scheduled caste and scheduled tribe women and assessed the strategy of development and empowerment of women. Ramachandran (2002) highlights the importance of restructuring the education pattern for helping the women to increase their role in household decision making which in turn increase the level of empowerment. They argue that Education is an investment because it enhances the skill.

Objectives of the study

1. To compare the Gender Parity Index in primary, secondary and higher education for all classes for different Indian states.
2. To compare the Gender Parity Index in primary, secondary and higher education for the schedule caste indifferent Indian states.
3. To compare the Gender Parity Index in primary, secondary and higher education for the schedule tribes indifferent Indian states.

Gender Parity Index

Gender Parity Index (GPI) is released by UNSECO to measure the relative differences in education of males and females. It measures the progress of developing countries in the field of socio-economic development. It is calculated by given formula

$$\text{GPI} = \text{value of indicators for girls} / \text{value of indicator for boys}$$

This is calculated for each school phase. The indicators are such as gross enrollment ratio in a given stage of education (primary, secondary and higher). If the value of GPI is 1, it indicates parity between the boys and girls. A value of GPI that varies between 0 and 1 means a disparity in favour of boys whereas value of GPI greater than 1 indicates a disparity in favour of girls.

Study Area

Present study is focused to analyze the GPI for all Indian states and all categories have been taken in to consideration.



Data sources

Present study is based on the secondary data. Required data tables have been extracted from “Statistics of higher & technical education (2009-10)” published by Government of India, Ministry of Human Resource Development Bureau of Planning, Monitoring & Statistics. New Delhi 2011.

Analysis of GDI for Different Categories in Indian States

As we have hypothesized that the value Gender Parity Index in primary education, upper primary and secondary education for the all categories is one in different Indian states. To examine it we have taken data from Statistics of School Education 2011 -12, MHRD. Following table shows the value of GPI for all categories of different Indian States.

Table 2: Gender Parity Index(GPI) (All Categories {2011- 12})

Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII	Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII
1	Andhra Pradesh	1.02	1.03	1.01	19	Nagaland	1.00	1.04	1.02
2	Arunachal Pradesh	0.96	0.97	0.91	20	Odisha	0.98	0.98	0.84
3	Assam	1.04	1.04	1.19	21	Punjab	1.00	0.99	1.03
4	Bihar	0.98	0.96	0.93	22	Rajasthan	0.99	0.91	0.73
5	Chhattisgarh	0.97	0.95	0.93	23	Sikkim	1.00	1.18	1.20
6	Goa	0.97	0.94	1.00	24	Tamil Nadu	1.02	1.01	1.13
7	Gujarat	1.01	0.93	0.82	25	Tripura	1.01	1.00	0.96
8	Haryana	1.09	1.09	1.06	26	Uttar Pradesh	1.03	0.92	0.84
9	Himachal Pradesh	1.01	0.99	1.00	27	Uttarakhand	1.02	1.05	0.98
10	Jammu & Kashmir	1.04	0.98	0.94	28	West Bengal	1.03	1.13	1.09
11	Jharkhand	1.02	1.02	0.98	29	Andaman & Nicobar Islands	1.00	0.97	0.99
12	Karnataka	0.98	0.98	1.05	30	Chandigarh	1.04	0.97	1.02
13	Kerala	1.00	0.97	1.07	31	Dadra & Nagar Haveli	0.99	0.95	0.90
14	Madhya Pradesh	1.04	1.05	0.72	32	Daman & Diu	0.96	0.99	1.37
15	Maharashtra	0.99	0.97	0.95	33	Delhi	1.03	1.01	1.03
16	Manipur	1.04	1.05	0.99	34	Lakshadweep	0.96	1.04	0.92
17	Meghalaya	1.04	1.15	1.21	35	Puducherry	0.98	0.99	1.09
18	Mizoram	0.94	0.95	1.04					
	India	1.01	0.99	0.93					

STATISTICS OF SCHOOL EDUCATION 2011 - 12



It is obvious from the above table that some states have achieved the unitary value of GPI in primary, upper primary and secondary education levels. These states are Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Gujarat, Jharkhand, Kerala, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Punjab, Sikkim, Tripura, Uttar Pradesh, West Bengal, Andaman & Nicobar Islands and Delhi. Some states are still in the queue of achieving the target of the unitary value of GPI. These states are Arunachal Pradesh, Bihar, Chhattisgarh, Goa, Karnataka, Maharashtra, Mizoram, Odisha, Rajasthan, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry.

It is also seemed that Gender Parity Index in primary education, upper primary and secondary education for the Schedule Caste is one in different Indian states. The number of SC girls enrolled as percentage of total SC enrolment in primary education (Classes I-V) increased from 42.9 per cent in 2000-01 to 48.4 per cent in 2012-13 and then marginally declined to 48.3 per cent in 2013-14 (EFA report (2014)). Table 2 shows the status of GPI of schedule caste for primary, upper primary and higher secondary classes in 2011-12.

Table 3: Gender Parity Index (GPI) (2011-12) Scheduled Caste

Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII	Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII
1	Andhra Pradesh	1.00	1.00	1.02	19	Nagaland	-	--	-
2	Arunachal Pradesh	-	-	-	20	Odisha	0.99	1.00	0.85
3	Assam	1.02	1.00	1.17	21	Punjab	1.01	1.00	1.08
4	Bihar	0.88	0.90	0.94	22	Rajasthan	0.98	0.91	0.70
5	Chhattisgarh	0.96	0.90	0.95	23	Sikkim	0.96	1.22	1.15
6	Goa	0.69	0.87	1.04	24	Tamil Nadu	1.11	1.03	1.12
7	Gujarat	1.11	0.93	0.77	25	Tripura	1.01	1.03	1.04
8	Haryana	1.04	1.10	1.04	26	Uttar Pradesh	1.07	1.08	1.06
9	Himachal Pradesh	1.02	1.00	0.99	27	Uttarakhand	1.03	1.07	0.94
10	Jammu & Kashmir	1.01	1.02	0.95	28	West Bengal	1.00	1.04	1.03
11	Jharkhand	0.99	0.95	1.01	29	Andaman & Nicobar Islands	-	-	-
12	Karnataka	1.04	0.94	1.01	30	Chandigarh	0.94	1.04	1.01



13	Kerala	0.98	0.96	1.06	31	Dadra & Nagar Haveli	0.91	0.77	1.11
14	Madhya Pradesh	1.05	1.08	0.80	32	Daman & Diu	0.87	0.92	1.12
15	Maharashtra	0.99	0.97	0.92	33	Delhi	1.03	1.15	1.17
16	Manipur	1.04	1.14	0.97	34	Lakshadweep	-	-	-
17	Meghalaya	1.04	1.01	1.00	35	Puducherry	0.98	1.00	1.06
18	Mizoram	0.91	0.93	0.54					
	India	1.02	1.02	0.99					

STATISTICS OF SCHOOL EDUCATION 2011- 12

On the basis of above table, we can say that more than 50% Indian states have achieved the unitary value of GPI for all the level of education. In Some states such as Bihar, Chhattisgarh, Maharashtra, Mizoram girls are still lagging behind in education.

The value Gender Parity Index in primary education, upper primary and secondary education for the Schedule tribe is one in different Indian states. EFA report (2014) states that The Gender parity index (GPI) in primary, upper primary and secondary education for ST students has been improving steadily since 2000-01. The GPI for GER in primary education (Classes I-V) for ST students improved from 0.73 in 2000-01 to 0.98 in 2013-14. The GPI for GER in upper primary education (Classes VI-VIII) for ST students improved from 0.66 to 1.02 while the GPI for GER in elementary education (Classes I-VIII) for ST students improved from 0.72 to 0.99 during this period. Table 3 explains the GPI of ST students in 2011-12.

Table 4: Gender Parity Index (GPI) (2011-12) Scheduled Tribe (2011-12)

Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII	Sl. No.	States/UTs	Classes I-V	Classes VI-VIII	Classes IX-XII
1	Andhra Pradesh	1.01	0.97	0.91	19	Nagaland	0.99	1.00	1.00
2	Arunachal Pradesh	0.98	0.96	0.90	20	Odisha	0.94	0.91	0.82
3	Assam	1.04	1.00	1.05	21	Punjab			
4	Bihar	0.90	0.90	0.83	22	Rajasthan	0.95	0.86	0.73
5	Chhattisgarh	0.96	0.91	0.92	23	Sikkim	1.04	1.31	1.30
6	Goa	0.99	0.98	1.07	24	Tamil Nadu	1.01	1.01	1.08



7	Gujarat	0.98	0.93	0.89	25	Tripura	1.00	0.93	0.89
8	Haryana				26	Uttar Pradesh	0.99	1.04	1.07
9	Himachal Pradesh	1.03	0.99	0.93	27	Uttarakhand	1.05	1.09	1.03
10	Jammu & Kashmir	0.91	0.89	0.72	28	West Bengal	1.01	1.00	0.94
11	Jharkhand	0.98	0.99	0.96	29	Andaman & Nicobar Islands	1.04	1.03	0.99
12	Karnataka	0.97	0.95	0.96	30	Chandigarh			
13	Kerala	0.97	0.96	1.10	31	Dadra & Nagar Haveli	1.00	0.91	0.75
14	Madhya Pradesh	1.00	1.04	0.67	32	Daman & Diu	0.90	1.01	0.95
15	Maharashtra	0.96	0.93	0.92	33	Delhi			
16	Manipur	1.07	1.05	1.04	34	Lakshadweep	0.96	1.03	0.91
17	Meghalaya	1.04	1.16	1.21	35	Puducherry			
18	Mizoram	0.94	0.95	1.03		India	0.98	0.96	0.87

STATISTICS OF SCHOOL EDUCATION 2011 - 12

It is clear from the above table that states are still operational to achieve the unitary value of GPI for ST girls. Dadra & Nagar Haveli, Daman, Mizoram, Chhattisgarh etc states have achieved the GPI in some levels.

Table 5 shows the trends of GPI in higher education. Backward states are very far from the target.

Table 5: Gender Parity Index in Higher Education (18-23 years) (2009-10)

Sl. No.	States/UTs	All Categories	SC Students	ST Students	Sl. No.	States/UTs	All Categories	SC Students	ST Students
1	Andhra Pradesh	0.58	0.51	0.32	19	Nagaland	0.95	-	0.93
2	Arunachal Pradesh	0.72	0.73	0.70	20	Odisha	0.24	0.36	0.40
3	Assam	0.54	0.53	0.51	21	Punjab	1.03	0.94	-



4	Bihar	0.53	0.34	0.41	22	Rajasthan	0.64	0.55	0.49
5	Chhattisgarh	0.66	0.64	0.59	23	Sikkim	0.86	0.70	0.87
6	Goa	1.18	1.02	1.44	24	Tamil Nadu	0.83	0.81	0.75
7	Gujarat	0.72	0.66	0.58	25	Tripura	0.71	0.69	0.65
8	Haryana	0.79	0.68	-	26	Uttar Pradesh	0.79	0.74	0.59
9	Himachal Pradesh	1.07	0.96	0.88	27	Uttarakhand	1.64	1.52	1.31
10	Jammu & Kashmir	0.94	0.85	0.79	28	West Bengal	0.75	0.69	0.67
11	Jharkhand	0.51	0.41	0.39	29	Andaman & Nicobar Islands	1.28	-	1.10
12	Karnataka	0.82	0.62	0.59	30	Chandigarh	1.72	1.03	-
13	Kerala	1.18	1.28	1.05	31	Dadra & Nagar Haveli	1.28	1.37	0.59
14	Madhya Pradesh	0.79	0.75	0.57	32	Daman & Diu	2.17	1.16	0.50
15	Maharashtra	0.67	0.73	0.39	33	Delhi	0.89	0.73	-
16	Manipur	0.76	0.81	0.71	34	Lakshadweep	2.59	-	2.30
17	Meghalaya	1.09	0.97	1.03	35	Puducherry	1.02	1.04	-
18	Mizoram	0.87	-	0.80	19	Nagaland	0.95	-	0.93

Statistics of Higher & Technical Education 2009-10

From the above-mentioned table, we can interpret that Indian states need to work hard for achieving the unitary value of GPI. Goa, Himachal Pradesh, Kerala, Madhya Pradesh, Meghalaya, Punjab, Uttarakhand, Andaman & Nicobar Islands and DNH are the states with Unitary Value of GPI. Some states are still in the line of achieving the target of the unitary value of GPI. These states are Arunachal Pradesh, Bihar, Chhattisgarh, Karnataka, Maharashtra, Mizoram, Odisha, Rajasthan, Lakshadweep and Delhi.



Conclusion

Indian government has given higher priority to girl's education and achieving gender parity in education. The constitution of India has made a provision for equal rights and opportunities to men and women in political, economic and social area Under Article 14. The Indian government has initiated many programmes such as Sarv Siksha Abiyan, Beti Bachao Beti Pado, Kasturba Gandhi Balika Vidhyalay, Mahila Samakhya Program etc in primary, secondary and higher education to encourage women education.

Especially Higher education of women can create positive changes in family welfare, health and nutrition of women and their families. Higher education has the potential to empower women with knowledge and ways of understanding the issues around them. Education of women is connected with lower fertility, infant mortality, and better child health and nutrition.

References

- 1) UNDP (2001), Human Development Report, Oxford.
- 2) Kadam, R. N. (2012). Empowerment of Women in India- An Attempt to Fill the Gender Gap. International Journal of Scientific and Research Publications, 2(6), 11-13.
- 3) Ruchira Sen (2007-08), Education for Women's Empowerment: An Evaluation of the Government run Schemes to educate the girl child, CCS Working Paper no. 183, Summer Research Internship Programme 2007-08, Centre for Civil Society.
- 4) Millennium Development Goals, Indian Country Report (2015), Social Statistics Division Ministry of Statistics and Programme Implementation, Government of India, www.mospi.nic.in
- 5) Ramachandran, Vimala: Bridging the Gap Between Intention and Action: Girls and Women's education in South Asia, UNESCO-PROAP and ASPBAE, Mumbai, 1998
- 6) <http://censusindia.gov.in>