



Status of Women Education in North East India

A . Pushpalata Singh

Assistant Professor, Department of Economics, Cachar College, Assam
e-mail : pushpu.ak@gmail.com

Abstract :

Human capital influences economic growth and can contribute to the development of an economy. Investment in education especially in education of women leads to empowerment of women which acts as an important channel in attaining a stronger, more inclusive and more resilient growth. An educated woman not only serves her family in all aspects of life but also promotes prosperity and economic development of the country. The present study intends to analyse the status of women education in North East India and also attempts to examine the relationship between gender parity and economic growth. It is found that the status of women education in North East India is better in comparison with the national level. The gender parity in education is also found to be in favour of females but a comparative study on the status of women education among the states of North East India reveals that some states like Sikkim, Manipur and Mizoram are in a better position while some states like Assam and Tripura are at the bottom. The study also finds that gender parity and economic growth go in the same direction and with a higher magnitude towards higher education. Governmental strategy should be oriented in improving not only primary and secondary levels of education but also in increasing the enrolment of women at higher level of education especially in states like Assam, Tripura and Nagaland.

Key Words: *Women Education, Economic Growth, Gender Enrolment Ratio, Gender Parity Index, North East India.*

Introduction :

Economic growth encompasses a combination of different types of capital to produce goods and services among which human capital plays a key role. Human capital aids in developing an economy through the expansion of knowledge and skills of its people. Investing in such capital enriches the abilities and qualities of labor and

influences productivity which ultimately accelerates the production of economic output. Barro (2013) pointed out that growth rate of an economy can be linked with human capital. He specified that education, health and aspects of social capital comprises human capital and emphasised on education as a factor of growth. Education plays a very important role in human capital formation.



Human capital refers to both women and men. Policy planners and educationists have realised that women form an important section of the society and without promoting their education growth and development of the society cannot take place. Education creates various opportunities for women to participate in numerous fields of life. The association of educational attainments with consciousness of hygiene, progress in family health, child health, girl's education and general family welfare is well recognised. Women's earning capacity and the potential for empowerment are also increased when women become educated (Jabeen and Alam, 2009). In the present era when things are moving at a very fast pace along with the impact of globalisation touching each and every aspect of our life, women cannot be kept behind. The participation of women in the field of socio-economic development and for the comprehensive welfare of the human beings has become a 'necessity' and not merely a 'wish' or a 'desire'.

Education has been well accepted as a vital instrument of social transformation and economic development in any society. Hence, it is impossible to think of a pleasant development if women lag behind in terms of education. Many studies find a significant influence of female literacy on social and economic status of women. Education builds confidence in women and thus surges their aptitudes to deal with the different complications of her life as well as her family and her society. Educated women possess the mind-set of maintaining gender parity in the family in several aspects like education of their children, nutrition and many others. Education of women leads to empowerment of women which acts as an important channel in attaining a stronger, more

inclusive and more resilient growth. This realisation made the Government of India to introduce several schemes and policies to include women in its much hyped intensive development. The newest among it is "*Beti Bachao Beti Parhao*" which is targeted at protecting the daughters from social evils by creating awareness amongst the people and empowering them through education. Nevertheless, the female literacy rate in India is observed to be woefully lower than that of the male. As per 2011 Census, the literacy rate of women is 67.27 per cent as compared to 78.81 per cent of that of men.

Statement of the Problem :

The North East (NE) India encompasses eight states namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Unlike the mainstream homogeneous culture, the region is multi-ethnic with mixed cultural background. The women of the region are perceived to be relatively much liberal than the rest of the country due to the dominance of tribal and indigenous cultures. People generally posit that both men and women of the region play equal role in different spheres of lives. But the question that arises is practically whether the women in NE India are enjoying same status as that of their male counterparts. As education of women acts as an important means of women empowerment by bringing about a positive attitudinal change in them, it becomes pertinent to examine whether women in NE get equal opportunities in the field of education. Thus, an attempt has been made in the present study to examine the status of women education in North East India and to compare the gender disparity in educational attainment between India's NE states



and the nation. Moreover, the advancement of any society is followed by the development of all members of the concerned society. But if half of its members are lagged behind, obviously it will stand as a hindrance to its development. The goals of growth and sustainable development can be achieved only by bringing equality between men and women through education. It is seen that the economic growth in the NE states is far below the national level. So, the present study also attempts to analyse the impact of education of women on the economic growth of the region.

Literature Review :

The association between gender inequality in education and growth examined by Dollar and Gatti (1999) confirmed that women education positively influences economic growth. Balatchandirane (2003) found that without substantive reduction in gender discrimination in education or eliminating it, no country in this world can attain considerable progress in modernisation, economic and otherwise. Sekhar (2007) examined the impact of educational programmes on the empowerment of women and found that though there is a significant impact on women, there is a wide disparity in educational attainment between male and female. The study further revealed that social discrimination, gender-based inequality, poor enrolment of girls in schools, economic exploitation, employing girl child in domestic tasks and high dropout rates are some of the factors for poor female literacy rate.

Hazra (2009) made a study on gender disparity in education and estimated from empirical evidence that countries that fail to provide

basic education to women are likely to countenance a huge cost in terms of lessened rates of reduction in fertility and foregone economic growth. The study suggests that gender parity in universal basic education is the only key to reduce both the structural factors and impacts of poverty. Bhat(2011) held the view that women education is the most effective tool to alter the status of a society. A recent study by Khan, Majeed and Sayeed (2020) observed that keeping apart the developments observed in women education, there have been various critical issues which have remained unaddressed. He opined that utmost attention and collaborative efforts are required from all stakeholders including government, NGO's, civil society etc. so as to improve the status of women in India in terms of education which ultimately can aid in achieving considerable economic development. Overall, the existing literature shows that investment in education of women is the key determinant of economic growth across time and countries.

Objectives :

The study intends to attain the following specified objectives -

1. To analyse the status of women education in North East India.
2. To examine the relationship between women education and economic growth.

Methodology :

The present study uses secondary data collected from Ministry of Human Resource Development (MHRD), annual reports of All India School Education Survey (AISES) and various documents of the RBI, Government of India which include the Handbook of Statistics on Indian



States (2015-16, 2019-20), RBI Bulletin (various issues) and the Economic Survey (various issues).

To examine the status of women education in North East India, statistical tools like percentage tabulation, compound annual growth rate (CAGR) and One Sample test are used. The formula for CAGR between two time periods is given as

$$CAGR(t_0 t_n) = \left\{ \left(\frac{Y_{t_n}}{Y_{t_0}} \right)^{\frac{1}{t_n - t_0}} \right\} \times 100$$

Here t_n and t_0 denote last or final period and base or first period respectively.

The study employs Gross Enrolment Ratio (GER) and Gender Parity Index (GPI) to analyse the status of North East women in the field of education. Gross Enrolment Ratio (GER) represents the number of students enrolled in a given level of education regardless of age and is expressed as a percentage of the official school-age population corresponding to the same level of education. A high degree of participation is indicated by a high GER regardless of whether the pupils belong to the official age group or not (UNESCO Institute for Statistics). Gender Parity Index (GPI) is derived by dividing female GER to male GER. A GPI of 1 indicates parity between sexes. This index is released by UNESCO.

To check the disparity in women education between India's North East states and the nation One-Sample test is conducted. The test statistic used is given as below

$$t = \frac{\bar{X} - \mu_0}{s/\sqrt{n}}$$

Using the level of significance of 0.05, the null hypothesis is rejected if $|t|$ exceeds the table

value of t . Here, \bar{X} denotes the mean GPI of India's North East states and μ_0 represents GPI of India. If null hypothesis is rejected then it implies that mean GPI of North East states is more than that of the nation.

To examine the relationship between women education and economic growth, Pearson correlation coefficient is estimated where GPI and Gross State Domestic Product (GSDP) are used as indicators of women education and economic growth respectively.

Findings and Discussions:

Status of Women Education in North East India

In recent years, India has reportedly shown considerable improvement in women education. In 1991 female literacy rate was 39.3 per cent which went up to 53.7 per cent in 2001 and in 2011 female literacy reached 65.5 per cent. Along with improvements in literacy at national level, North East (NE) India has also witnessed a significant increase in participation of women at all levels of education as the CAGR 2019-20/2004-05 of GER is positive in almost all the states of NE India and at all levels of education except in Sikkim and Tripura at Lower Primary level and in Manipur at both Lower and Upper Primary levels. Regarding disparity in enrolment of education between male and female, it is seen that CAGR of GPI has shown a positive growth rate in almost all the states of North East India at all levels of education except for Sikkim at both Lower and Upper Primary levels. This implies that disparity is decreasing in all the NE states and it is decreasing at a faster rate in Senior Secondary and Higher Education.

**Table 1: CAGR of GER and GPI**

States/Cou- ntry	CAGR 2019-20/2004-05 of GER of Women					CAGR 2019-20/2004-05 of GPI				
	Lower Prim	Upper Prim	Sec	Senior Sec	Higher Edu	Lower Prim	Upper Prim	Sec	Senior Sec	Higher Edu
AP	0.20	1.58	2.21	2.76	13.54	0.86	1.45	2.15	3.33	2.53
Assam	0.73	2.45	3.73	6.78	7.15	0.31	1.05	2.22	3.17	2.19
Manipur	-0.47	-0.12	0.20	6.44	6.95	0.44	0.63	0.30	1.39	1.67
Meghalaya	0.72	2.38	4.57	4.73	5.67	0.00	0.17	0.81	1.58	2.35
Mizoram	0.74	1.49	2.38	5.52	5.67	0.39	0.06	0.08	0.93	2.71
Nagaland	0.62	1.81	5.28	5.48	9.64	0.37	0.60	0.67	0.99	2.09
Sikkim	-2.48	1.17	5.86	5.51	12.97	-0.46	-0.85	0.45	1.60	0.48
Tripura	-0.48	1.48	3.26	5.61	6.93	0.44	0.63	0.84	2.11	0.66
India	-0.06	2.08	3.44	4.88	5.06	0.45	0.93	1.48	1.69	2.23

Source: Author's Computation based on MHRD, Govt. of India.

The present status of women education is depicted in Table 2 where GER and GPI at all levels of education in 2019-20 is shown. It is observed that GER of women in all the NE states is higher in Lower Primary and lower in Higher Education. Among the NE states GER of women in Higher Education is highest in Sikkim (67.6) followed by Manipur (38.9) while it is lowest in Assam (17.2). GER of women in Senior Secondary is also found to be highest in Sikkim followed by Manipur and Mizoram while it is lowest in Assam. In case of Secondary education, Sikkim again occupies the top position followed by Mizoram. But when we look at the GER of women at Lower and Upper Primary levels it is observed that the position of Sikkim goes down and states like Assam,

Arunachal Pradesh and Tripura have greater enrolment than Sikkim.

It is seen from the table that in all the states of North East India and at all levels of education, the values of GPI are very close to 1 or equal to 1 or greater than 1. This implies that the disparity between male and female at all levels of education is negligible and that women in North East India are enjoying the same status as that of men and even more than the latter in some states. At Secondary and Senior Secondary levels it is seen that GPI is more than 1 in all the states of NE India except in Manipur (0.98) at Senior Secondary level. At Lower Primary and Upper Primary levels all the states have GPI value greater than 1 except in Mizoram (0.98) and Sikkim (0.92) at Lower Primary level (Table 2).

**Table No 2: GER and GPI in 2019-20**

States	GER of Women					GPI				
	Lower Prim	Upper Prime	Sec	Senior Sec	Higher Edu	Lower Prim	Upper Prime	Sec	Senior Sec	Higher Edu
AP	119.6	88.9	66.1	38.7	34.3	1.02	1.07	1.13	1.17	0.94
Assam	117.8	99	80.7	31.4	17.2	1.04	1.1	1.19	1.03	0.99
Manipur	138	89.8	74.5	56.5	38.9	1.03	1.04	1.03	0.98	1.03
Meghalaya	168.2	117.9	92	47.9	28	1.03	1.15	1.23	1.23	1.16
Mizoram	138.1	103.1	98.4	56.3	25.1	0.99	1	1.08	1.1	0.92
Nagaland	96.2	73.9	61.9	35.5	20.5	1.04	1.1	1.13	1.09	1.24
Sikkim	95.5	86.9	105.3	59.7	67.6	0.92	1.02	1.13	1.24	0.81
Tripura	118.7	95.6	92.6	41.9	18	1.03	1.04	1.07	1.06	0.8

Source: Author's Computation based on MHRD, Govt. of India.

Now, to check the disparity in the status of women education between India's NE states and the nation One-Sample test has been conducted, the result of which is shown in Table 3. Here comparison has been done for two time periods viz. 2004-05 and 2018-19. During 2004-05 the mean difference at all levels of education are found to be significant except at Lower Primary level. The mean differences are all positive which implies that the GPI of India's NE states are higher than the national level. Thus, during 2004-05, the status of

women in the field of education is higher than the national level. Now coming to the period 2018-19 it is found that the mean differences are significant only at three levels of education viz. Upper Primary; Secondary and Senior Secondary combined; and Primary to Senior Secondary levels. The results depict that in all these three levels, the mean differences are all positive which again shows that during 2018-19 also the status of women education in India's NE states still stands at a better position than that of the status in the nation.

Table 3 : One-Sample Test for comparing North East India's Average with National Average

Period	GPI at different levels	National Avg	North East Avg	Std. Deviation	Mean Difference	T	Sig. (2-tailed)
During 2004-05	Lower Primary	0.95	0.97	0.04	0.02	1.08	0.31
	Upper Primary	0.88	0.99	0.11	0.11	3.02**	0.02
	Prim and Upper Prim	0.93	0.98	0.05	0.05	2.35**	0.05



Period	GPI at different levels	National Avg	North East Avg	Std. Deviation	Mean Difference	T	Sig. (2-tailed)
During 2004-05	Sec and Senior Sec	0.79	0.93	0.10	0.14	4.28*	0.00
	Prim to Senior Sec	0.91	0.97	0.06	0.06	2.89**	0.02
	Higher Education	0.71	0.74	0.09	0.06	2.89**	0.02
During 2018-19	Lower Primary	1.02	1.01	0.04	-0.01	-0.5	0.62
	Upper Primary	1.02	1.07	0.05	0.04	2.57**	0.04
	Prim and Upper Prim	1.02	1.03	0.04	0.01	0.59	0.58
	Sec and Senior Sec	1.04	1.11	0.09	0.08	2.27***	0.06
	Prim to Senior Sec	0.67	0.99	0.16	0.32	5.78*	0.00
	Higher Education	1.01	0.99	0.16	-0.02	-0.43	0.68

Source: Author's Computation based on MHRD, Govt. of India. The parenthesis*, ** and *** denote significant at less than 1% level of significance, 5 % level of significance and 10 % level of significance respectively

Relationship between Women Education and Economic Growth in North East India:

During the study period the degree of association between SGDP and Gender Parity

Index at different levels of education is positive and significant. This implies a strong relationship between SGDP and gender parity in the North East states of India (Table 4).

Table 4: Correlation between SGDP and GPI at different levels of Education

Correlation with SGDP	Pearson Correlation Coefficient	Sig. (2-tailed)
Gender Parity Index at Lower Primary Level	0.3566*	0.00
Gender Parity Index at Upper Primary Level	0.6638*	0.00
Gender Parity Index up to Upper Primary Level	0.6804*	0.00
Gender Parity Index at Secondary and Senior Secondary Level	0.7553*	0.00
Gender Parity Index up to Senior Secondary Level	0.7910*	0.00
Gender Parity Index at Higher Education Level	0.9514*	0.00

Source: Author's Computation based on MHRD, Govt. of India. The parenthesis* denote significant at less than 1% level of significance.

Further it is observed from the table that at higher level of education the value of correlation coefficient is high. For example for primary level

the correlation coefficient is low, in case of upper primary and secondary levels it is high while for higher education the coefficient value is very high.



This implies that SGDP and gender parity goes in the same direction with a higher magnitude towards higher education.

Conclusion:

The present paper has examined the status of women in North East (NE) India at different levels of education and for this purpose different statistical tools have been used. The findings of the study reveal that at higher levels of education like Secondary, Senior Secondary and Higher Education, Sikkim stands at the top position followed by Manipur and Meghalaya while Assam has the lowest GER of women in Senior Secondary and Higher Education. At primary levels of education it is seen that GER of women is highest in Meghalaya followed by Mizoram while it is lowest in Nagaland. To check the disparity between men and women, GPI has been used and it is found that gender parity is in favour of women in almost all the states of North East India and at all levels of education. To examine the change in the status of women education, CAGR 2004-05/2019-20 of GER of women and GPI have been calculated and it is seen that at higher levels of education like Secondary, Senior Secondary and Higher Education, the growth rates are all positive which implies that the status of women at these levels of education have improved nevertheless at Primary level, some states like Manipur, Tripura and Sikkim have negative growth rates. To compare the gender parity in education between North East states and the nation, One-Sample test has been performed and the results depict that women in NE India are in a better

position than the overall women of the nation. The present study has also analysed the relation between women education and economic growth by estimating Pearson Correlation coefficient. The results depict that there exists a strong association between SGDP and gender parity in the NE states of India and both the factors move in the same direction. It is also observed that the higher the level of education a woman attains, the higher is the value of the correlation coefficient. Although the status of women in NE states of India is relatively better as compared to the national level in the field of education yet they are much below the top-ranked state like Kerala. Moreover the economic growth in India's North East states is much low compared to the other developed states of the country. As women education is positively related with economic growth and the magnitude of correlation is larger at higher levels of education, there is need to spread awareness amongst people about the benefits of the enrolment of women in higher education. Access of women to higher education should be one of the main strategies for North East India and this strategy without any doubt will generate intergenerational benefits. Governmental strategy should be oriented in involving women not only in primary and secondary education but also in increasing the enrolment of women at higher level of education especially in states like Assam, Tripura and Nagaland. Thus, the formation of human capital through investment in educational process especially of women remains a global responsibility for all individuals as well as for government.



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