

GROSS ENROLLMENT RATIO (GER) IN HIGHER EDUCATION SECTOR AND ECONOMIC DEVELOPMENT OF NORTH-EASTERN STATES OF INDIA: AN INTERLINKAGE ANALYSIS FROM DISPARITY PERSPECTIVE

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ABSTRACT

Higher Education in India has gone through a phase of unprecedented expansion, marked by a huge increase in the volume of students and exponential increase in the number of institutions and a quantum jump in the field funding. Yet, today the Higher Education system is faced with many challenges such as financing and management, access, equity, quality, relevance and reorientation of policies and programmes for laying emphasis on values, ethics and quality of Higher Education together with assessment of institutions and their accreditation. These issues are vital importance for the Country, since Higher Education is the most powerful tool to build a Knowledge-based economy that can ensure the sustainability in development process.

Regarding the access and equity of or Tertiary Sector of Higher Education, the GER is an important indicator. There are inter- state disparities at different levels from various directions in the field of GER in Higher Education among the states of North-East India being the GER, 28.7(Arunachal Pradesh),15.4 (Assam), 34.2 (Manipur),20.8 (Meghalaya), 24.1 (Mizoram), 14.9(Nagaland),16.9 (Tripura),37.6 (Sikkim) against 24.5 in case of India. On the other side there is the variation in the growth rates of GSDP and NSDP among the states.

Key Words: Disparity, Economic Development, GER, Higher Education, North-East

1.0 Introduction:

Higher Education in India has gone through a phase of unprecedented expansion, marked by a huge increase in the volume of students and exponential increase in the number of institutions and a quantum jump in the field funding. Yet, today the Higher Education system is faced with many challenges such as financing and management, access, equity, quality, relevance and reorientation of policies and programmes for laying emphasis on values, ethics and quality of Higher Education together with assessment of institutions and their accreditation. These issues are vital importance for the Country, since Higher Education is the most powerful tool to build a Knowledge-based economy that can ensure the sustainability in development process.

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In the global knowledge-based economy, education in general and higher education in particular is universally recognized as a form of investment in human capital that yields economic

returns and contributes to nation's future wealth. Higher education, besides inculcating necessary skills and competence for achieving both personal and social goals, is also a means to generate larger personal and social wealth. In the present global context, the significance of higher education has increased manifold and it is strongly believed that the quality of higher education ensures the pace of economic and social development of a country. Though it is well recognized by planners and policy makers that higher education is a means of strengthening the human resource base of an economy, but unfortunately a low level of educational achievement in a large number of economies in the world acts as a drag in fostering economic development and social change in such economies.

2.0 Objective:

A humble step has been initiated through this Paper to examine the inter linkage from disparity perspective between GER in Higher Education and Economic development among the states of North- East States of India.

2.10 Geographical Map of North East Region of India



The North Eastern part of India consist of eight states – Assam, Arunachal Pradesh, Nagaland, Meghalaya, Manipur, Tripura, Mizoram, Sikkim. The Longitude of North East region of India is $93.2473^{\circ}E$ and Latitude is $25.5736^{\circ}N$. The total area of this region is $262,230 \text{ Km}^2$.

3.0 Methodology:

The statistical data used in this paper are secondary in nature that are collected from All India Survey of Higher Education (2015-16), conducted by the Ministry of Human Resource Development, Department of Higher Education, Govt. of India.

For the treatment of statistical data simple statistical tools such as standard deviation, correlation etc. along with diagrams and graphs are used under the statistical package of excel.

4.0 Findings / Results & Interpretation:

4.1 Gross Enrolment Ratio (GER):

GER is a statistical measure used to determine the number of students enrolled at particular level or sector of education. Thus, GER of higher education is –

$$GER_H = \frac{\text{Enrolment in Higher Education Level}}{\text{Population of official age group(18–23)for higher education level}} \times 100$$

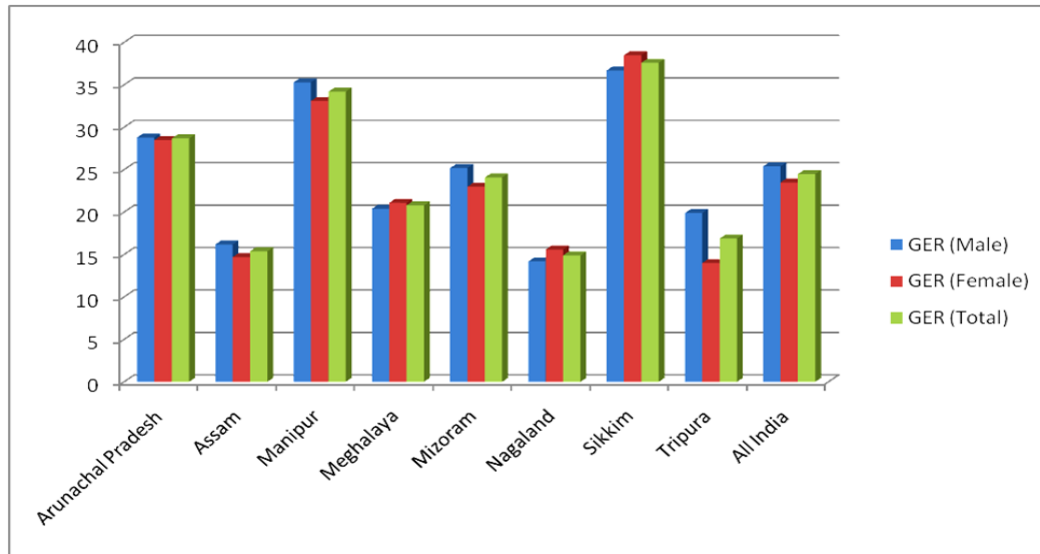
A higher value of GER indicates higher degree of participation, regardless of age.

Table 1: GER of N.E. States and India.

States	GER (Male)	GER (Female)	GER (Total)
Arunachal Pradesh	28.8	28.5	28.7
Assam	16.2	14.7	15.4
Manipur	35.3	33.1	34.2
Meghalaya	20.4	21.1	20.8
Mizoram	25.2	23.0	24.1
Nagaland	14.2	15.6	14.9
Sikkim	36.7	38.5	37.6
Tripura	19.9	14.0	16.9
All India	25.4	23.5	24.5

Thus, the GER in the NE States as a whole is 24.08 against the GER rate of 24.5 in case of India. As such the NE States are not far behind from the national GER rate being the GER gap of only 0.42 as per the Higher Education Report, 2015-16 of India (Table 1).

Bar diagram 1 : GER of N.E. States and India



The value of Standard deviation in case of GER among NE States is 8.69, indicating comparatively a high degree of disparity among the NE States in the field of GER in Higher Education. In this regard the GER of Arunachal Pradesh, Manipur, Mizoram and Sikkim is higher than the GER of North East, while the GER of Assam, Meghalaya, Nagaland and Tripura is lower than it.

Another important indication regarding the GER is in case of growth rate of GER (Table 2).

Table 2: GER growth rate of N.E. States and India.

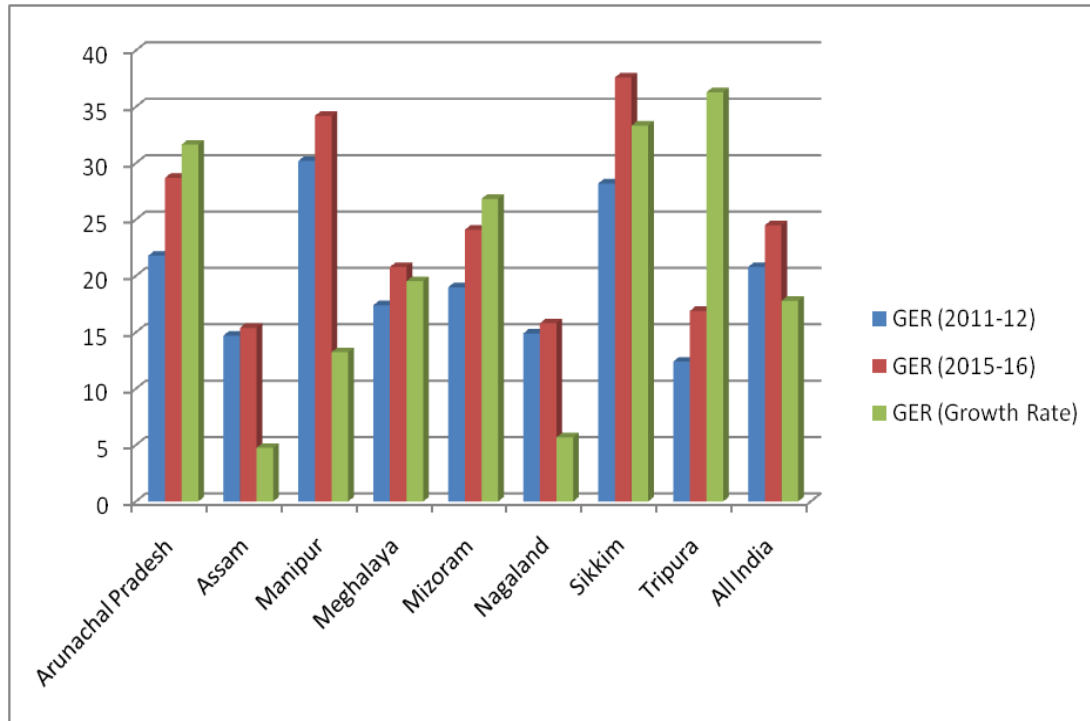
States	GER (2011-12)	GER (2015-16)	GER (Growth Rate)
Arunachal Pradesh	21.8	28.7	31.65
Assam	14.7	15.4	4.76
Manipur	30.2	34.2	13.24
Meghalaya	17.4	20.8	19.54
Mizoram	19.0	24.1	26.84
Nagaland	14.9	15.8	5.69
Sikkim	28.2	37.6	33.33
Tripura	12.4	16.9	36.29
All India	20.8	24.5	17.79

Between 2011-12 and 2015-16, the average growth rate of GER in case of NE States as a whole is 23.64% as against the GER growth rate of 17.79% for India during the same period. As such the performance of North Eastern States is better than the performance of the country as a whole.

There is the disparity in the growth rate of GER among NE States; the value of Standard deviation in this regard is 11.75, which is comparatively higher. In this regard the GER growth rate during the period 2011-12 to 2015-16 in case of the states Arunachal Pradesh, Mizoram, Sikkim and Tripura is higher than the average GER growth rate of N.E. states and the GER of rest

of the states is lower than it. On the other hand except Assam, Manipur and Nagaland the GER growth rate of other N.E. states is higher than the national growth rate of GER (Table 2 & diagram 2).

Bar diagram 2 : Growth rate of GER of N.E. States and India



4.2 Gender Parity Index (GPI) in Higher Education:

GPI is a social-economic index usually designed to measure the relative access to education of males and females. It is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education.

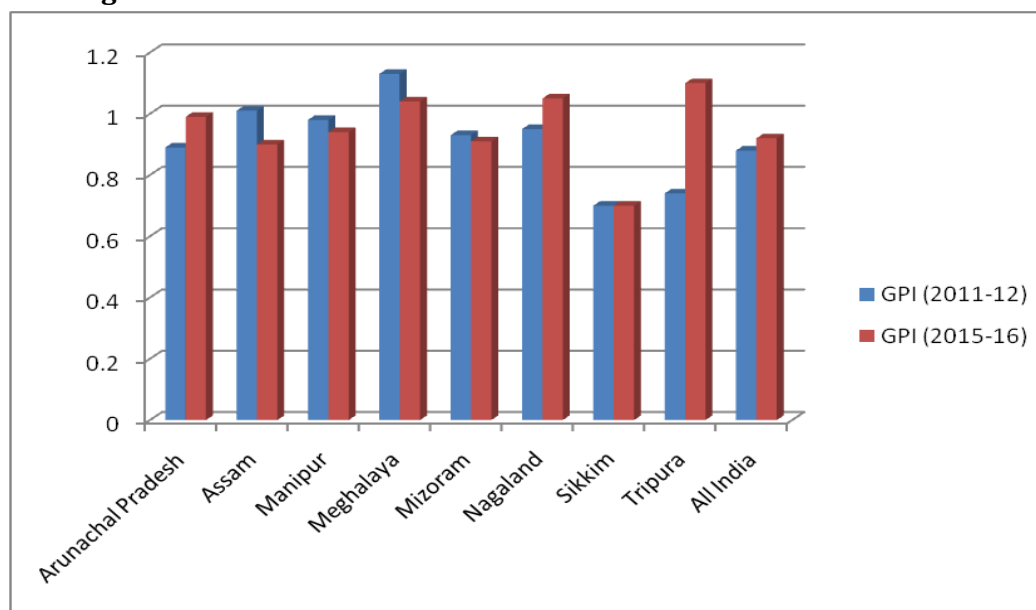
$$GPI = \frac{\text{Value of indicator for females in higher education}}{\text{Value of indicator for males in higher education}}$$

A value of less than 1 indicates differences in favour of males, whereas a number near 1 indicates that parity has been more or less achieved. A GPI of 1 indicates parity between sexes, a GPI vary between 0 and 1 means a disparity in favour of male. A GPI greater than 1 indicate disparity in favour of females.

Table 3: GPI of N.E. States and India (18-23 years of age)

States	GPI (2011-12)	GPI (2015-16)
Arunachal Pradesh	0.89	0.99
Assam	1.01	0.90
Manipur	0.98	0.94
Meghalaya	1.13	1.04
Mizoram	0.93	0.91
Nagaland	0.95	1.05
Sikkim	0.70	0.70
Tripura	0.74	1.10
All India	0.88	0.92

In 2015-16, except Assam, Mizoram and Sikkim, the GPI in higher education in case of other N.E. states is higher than the national GPI rate. In this regard the GPI of Meghalaya, Nagaland and Tripura is higher than 1 which means that there is the disparity in higher education in favour of females. On the other hand there is the disparity among the N.E. states in case of GPI, the value of standard deviation being 8.01 which is comparatively higher (Table 3 & diagram 3).

Bar diagram 3 : GPI of N.E. States and India

4.3 Net State Domestic Product (NSDP) at factor cost and Per capita NSDP:

The NSDP at factor cost as well as Per capita NSDP are the important indicators for measuring the trend of economic growth of states. As such a comparison can be made between GER in higher education and NSDP a factor cost and Per capita NSDP (Table 4).

Table 4: NSDP at factor cost and GER of N.E. States

States	NSDP at factor cost (Current prices), 2015-16 (Rs. in Lakh)	GER (Total)
Arunachal Pradesh	1722860	28.7
Assam	20175787	15.4
Manipur	1618865	34.2
Meghalaya	2393589	20.8
Mizoram	1013607	24.1
Nagaland	1613710	14.9
Sikkim	1455779	37.6
Tripura	2748405	16.9

The value correlation between NSDP at factor cost and GER in case of N.E. states is 0.44 which is a moderate value. As such there is a moderate degree of positive correlation between NSDP at factor cost and GER in case of NE India, which indicates that states having higher GER in higher education have also moderately higher NSDP at factor cost.

Table 5: Per capita NSDP and GER of N.E. States

States	Per capita (Current prices), 2015-16 (In Rs.)	GER (Total)
Arunachal Pradesh	113645	28.7
Assam	60952	15.4
Manipur	52436	34.2
Meghalaya	73176	20.8
Mizoram	85659	24.1
Nagaland	78526	14.9
Sikkim	227465	37.6
Tripura	71666	16.9

The value correlation between Per capita NSDP and GER in case of N.E. states is 0.62 which is a moderately higher value. As such there is comparatively a higher degree of positive correlation between Per capita NSDP and GER in case of NE India, which indicates that states having higher GER in higher education have also moderately higher Per capita NSDP.

4.4 Human Development Index (HDI) and GER of N.E. States:

The Human Development Index (HDI) is considered as important indicators for overall development process. Moreover, enrolment in higher education is one of the important factors in the process of calculation of HDI. As such there is a link between HDI and GER (Table 6).

Table 6: HDI and GER of N.E. States

States	HDI (2011-12)	GER (Total)
Arunachal Pradesh	0.124 (27)	28.7
Assam	0.138 (26)	15.4
Manipur	0.199 (22)	34.2
Meghalaya	0.246 (20)	20.8
Mizoram	0.408 (13)	24.1
Nagaland	0.257 (19)	14.9
Sikkim	0.324 (15)	37.6
Tripura	0.354 (14)	16.9

N.B: The figures in the brackets indicates the ranks of HDI of states in the country

The value correlation between HDI and GER in case of N.E. states is 0.012 which is a lower value. As such there is comparatively a lower degree of positive correlation between HDI and GER in case of NE India. The reason is that the calculation of HDI the weight imposed on tertiary sector is only $\frac{1}{3}$ of the educational attainment component.

5.0 Challenges & Suggestions :

Although Higher Education has gradually expanded in N.E. states, issues involving access, equity and quality still continue to present challenges that need to be addressed. In this regard, some of the important challenges are -

- i. The problem of Access to higher education
- ii. The problem of Inequality in higher education in case of Gender, Castes as well as regional disparities.
- iii. The problem of Standard in higher education along with continuous quality improvement process and total quality management in higher education.
- iv. The problem of Reservation in higher education
- v. Shortage of qualified Human Resources
- vi. Neglect of Traditional fields of knowledge
- vii. Problem of infrastructure in State run institutions
- viii. Financial problems; etc.

As such the following suggestions can be made for sustainable development of higher education along with ensuring sustainable process of development in the N.E. region -

- a) It is necessary to formulate and implement the plans and strategies to correlate the process of sustainable overall development along with development in higher education sector in the region.
- b) The disparities or inequalities in the fields of higher education in the region should need to be addressed. In this regard, corrective measures should be introduced to minimize the gap of inequalities in different fields of higher education.

- c) The regional disparities in higher education as well as overall development among the states of N.E. India is an important issue in this regard. Therefore, proper strategies should be initiated towards solving the problem of regional disparities in case of higher education and overall development process.
- d) Moreover, development perspectives of N.E. region of India should be examined from disparities or inequalities angle also.

6.0 Conclusion

Higher Education in N.E. states as well as India is facing big challenges having them to compete with the global players, especially after education became a marketable product and after India opened its market for global competitors. However, institutions of higher education in N.E. states, with crying needs for basic amenities and infrastructure, are hardly ready for this global competition. A well thought policy of higher education combined with proper development policy of the govt. along with proper strategies and implementation can bring much needed change in the area.

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