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WATERWAY ON GANGA WOULD MAKE THE RIVER LIFELESS

The inauguration of the first multi-modal terminal on the Ganga river in Varanasi in the month of November 2018 was publicised by the Centre as a major breakthrough in search for cheap mode of transport. It also was feted as major feat for generating employment in Prime Minister Narendra Modi's parliamentary constituency of Varanasi. The cargo route is soon to be extended up to Allahabad aka Prayagraj.

However, down the stream, the move has not generated much appreciation, as the river closer to the delta especially as it flows east of Patna into Jharkhand and West Bengal before joining the Bay of Bengal. This stretch is home to the threatened Gangetic Dolphins, which ironically has been christened by the government as the National Aquatic Animal.

The NDA government enacted National Waterways Act, 2016, which declared 111 inland waterways as National Waterways (NWs) in addition to the five existing NWs across 24 states for utilising them as sustainable mode of transport. Point to be noted is that out of total 111 inland waterways, 38 are habitat of the riverine dolphins.

So, in achieving the so-called development feat, ecological health of the rivers would stand to be compromised. Moreover, this move goes against the spirit of 'Namami Gange', under which the same government is spending millions to bring the river to its pristine glory by making it free from pollution and saving its biodiversity.

The commencement of Jal Marg Vikas Project (JMVP) aims at developing the stretch of the Ganga river between Varanasi and Haldia for navigation of large vessels weighing up to 1,500-2,000 tonnes. This project includes construction of three multi-modal terminals (Varanasi in Uttar Pradesh, Sahibganj in Jharkhand and Haldia in West Bengal); two inter-modal terminals; five roll on-roll off terminal pairs; a new navigation lock at Farakka; assured depth dredging; integrated vessel repair and maintenance facility, differential global positioning system, river information system, river training and river conservancy works.

But what does this mean to river, its waters and creatures that live in it? River experts feel that it is a misnomer to say that inland water transport would be cheap. Amidst all the most contentious issue is dredging of the river and its costs. To allow ocean-going vessels to traverse a river, it should have a depth of 2 to 3 metres and a width of 45-60 metres, the parameter that the Ganga river does not fulfill. The river will have to be dredged continuously which will cause severe erosion.

Besides erosion, dredging will destroy aquatic life of the river. Actually, dredging increases water

turbidity which affects fish. It also affects benthic organisms that are creatures which live in and on the bottom of the river bed. They include worms, clams, crabs, lobsters, sponges, and many other tiny organisms that live in the nethermost sediments.

Several conservation groups have now planned a Sadbhavna Yatra from Varanasi to Gangasagar in West Bengal, which will culminate on Makar Sankranti day that is on January 14, 2019 to create awareness about the threat posed by the inland waterways. "The habitat of these aquatic flora (still to be sufficiently studied) and fauna especially in the sanctuaries will be altered due to dredging, river water pollution due to oil spillage and waste disposal activities which pose real challenges," says Arvind Mishra, founder of Mandar Nature Club, which works extensively in the Vikramshila Gangetic Dolphin Sanctuary near Bhagalpur.

"Riverine biodiversity concerns like threat to fish, turtles, gavial, otter, molluscs and crustaceans and dolphin and birds have not been considered properly while introducing intense water transport in the Ganga," says Mishra.

There is a need to understand that most of the ships moving on the Ganga river will be carrying cargo of mostly coal and crude oil. Spillage of these substances could cause irrevocable damage to the eco system of river. Union ministry of environment, forest and climate change had recently commissioned a research project to study about effects of transporting coal between Farakka and Haldia as thermal power plant at Farakka regularly needs coal and ships travel upriver from Haldia. The study revealed that coal transportation had severely affected fish stocks.

Big ships passing through the river would also cause lots of noise affecting fish and other wildlife mostly the Gangetic dolphin. This is in the common knowledge that river dolphins find their way through echolocation. Noise generated by these vessels would disturb their delicate Sound Navigation And Ranging (SONAR) and affect them in such a way that cannot be assessed.

JMVP also plans construction of barrages and locks on the Ganga river which might reduce river flow at various stretches making life difficult for wildlife. Gharial is another species that would be affected by this new venture as for the fish-eating crocodile Ganga river is the home. Though Varanasi-Haldia stretch has a negligible population of gharials, but Ganga tributaries like Yamuna, the Gandak and Ghagra have lots of them. The government has declared Gandak river to be the National Waterway 37. Big vessels could disturb gharials, dredging would destroy mid-channel sand islands, vital to the animal for basking and regulating its body temperature. In case ships start plying the Gandak, it will be catastrophic for the gharial as scientists have already warned. Incidentally, Varanasi itself is home to the famous turtle sanctuary.

Those supporting the inland waterways point towards their use in big global rivers like the Amazon, Yangtze and Mississippi that are regularly traversed by vessels. Even smaller rivers like the Clyde and Thames in the UK and the Elbe in Germany have ocean-going vessels plying in them. The difference is that unlike them the Indian rivers are Monsoon-fed and do not have voluminous discharge of their own as these rivers. Moreover, high levels of water for navigation in Ganga and other Indian rivers are available only during the Monsoon months.

31st December 2018 **Sidharth Mishra**

secretary's desk

We continue with our endevour to establish high bench marks for scholastic research. It's with great humility and also sense of achievement that we had announced that The Discussant was successfully audited by an international agency for the impact factor – International Scientific Indexing.

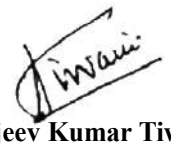
With equal humility we share the information that The Discussant has now been shortlisted by the Library of the US Congress as part of its India Collection and in due course awarded the LCCN (Library of Congress Control Number) and also will be catalogued online. In these years, this journal has proved to be an asset in promoting research among young scholars across the universities, and what better recognition for our effort than the one coming from the US Congress. The Discussant indeed has come to be recognised as journal of honest endevour.

We have completed six years of unbroken publication of The Discussant as an RNI registered quarterly periodical. We had received the ISSN accreditation a year earlier. I am happy to share with you that our online edition too is crossing new frontiers and getting accessed from new territories, which gives our writers a global exposure unthinkable for any journal of our vintage. The online edition too has been successfully audited for impact factor. We continue with our endevours to partner in intellectual exercises.

This edition contains full length and also short articles of much intellectual interest from diverse fields. As we have repeatedly mentioned in reports at the beginning of the various past editions, the members of Centre for Reforms, Development and Justice including Centre president, self and other members have taken up academic activities in the right earnest participating in seminars and deliberations of national importance.

Our book on political history of Delhi, in oral tradition will be released during the World Book Fair in New Delhi in first week of January. We welcome young scholars to associate with us with ideas and proposal for an intellectual enterprise, where we can join hands.

Wishing All A Happy New Year



31st December 2018

Dr Sanjeev Kumar Tiwari

HIGHER EDUCATION AND HUMAN DEVELOPMENT: A STUDY FROM INDIA

PROF. RAJIV R THAKUR*
ANKIT MISHRA*

Unlike the popular belief, development of any country is not economic alone; rather it is measured by the people and their capabilities. Human Development Index (HDI), a measure of development initiated by UNDP includes knowledge, a long healthy life and decent living standard of people. Amongst the top ten countries in HDI 2018, a country like Singapore ranked 9th under HDI has 38th ranking in terms of nominal GDP and the number 1 HDI ranked country Norway is at 28th rank in terms of nominal GDP. Contrarily, the US which is no 1 in nominal GDP terms is at 13th position in HDI rank. Such findings and more suggest that economic policies have varied impact on the development of people and their capabilities, a higher level economic growth does not necessarily have a higher positive impact on people.

In this paper, further focus is on analyzing the status of higher education contributing to knowledge creation across states of the country and comparing it with the development status. The objective is to understand the kind of impact knowledge has on the development status of different states in the country. The preliminary finding from AISHE report shows a state like Kerala having Gross Enrollment Ratio (GER) of 36% in the year 2017-18 and the Development index 2017-18 is found to be at 0.78 which is much ahead of the many other states. On the other hand a state like Bihar which had 13 % GER in 2017-18 is having Human Development Index at 0.56 much less than Kerala. Further in- depth study suggests that there is a significant role of knowledge creation towards human development. The paper delves over the status of higher education in India and its state wise variations and draws up priorities to improve the status of higher education for a long term sustainable impact on human development

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INTRODUCTION

Human Development Index (HDI) initiated by UNDP explains human development combining three aspects namely, knowledge, long healthy life and decent living standard of people. Unlike the popular belief, development of any country is not economic alone. The difference between economic development and human development can be very well explained by looking at the empirical data of GDP levels (economic) and HDI index (development) of few countries. Amongst the top ten countries in HDI 2018, a country like Singapore, which ranked 9th under HDI has 38th ranking in terms of nominal GDP and the number 1 HDI ranked country Norway is at 28th rank in terms of nominal GDP. Contrarily, the US which is no 1 in nominal GDP terms is at 13th position in HDI rank. These data show that rich and advanced countries measured in terms of GDP alone do not guarantee higher level of human development in those countries, the US being one of the foremost examples. Countries ranking lower in GDP terms like Singapore or Norway have higher human development index thus indicating that there are more factors to development in human society than the economic side of it. India which is 6th largest country in terms of nominal GDP is poorly ranked at 130th rank in human development as per HD Index. India's neighbour Sri Lanka though at 66th position in terms of nominal GDP ranking is above India at 76th rank in HDI ranking. These make the difference more clear and visible,

It is therefore important to understand that HDI, a comprehensive index as a measure of development indicates the limitations of measuring a country's development on economic parameter alone and thereby necessitating study of the impact of other factors such as health and knowledge as per HDI index on human development. Of the three factors, impacting people development and their capabilities as per HDI, knowledge is one of the three. This paper focuses on analyzing the role of knowledge (education) and its impact on people development in different states of India. Further the paper has focused on higher education only as far knowledge creation is concerned. The objective is to understand whether knowledge (education) makes an impact or no and if it does what kind of impact it has. More importantly, it is the attempt of the paper to understand the status of higher education in India and its state wise variations measured under certain parameters. This shall help policy makers to redraw the priorities to improve the status, particularly in those states, which are lagging behind and getting adversely impacted in development.

MEASURING DEVELOPMENT

The GDP or Gross Domestic Product of a country provides a measure of the monetary value of the goods and services that country produces in a specific year. This measurement is an important aspect of economic analysis prevalent today. At an individual level, Per capita income (PCI) or average income measures the average income earned per person in a given area (city, region, country, etc.) in a specified year. It is calculated by dividing the area's total income by its total population. The parameter shows the average income individuals of a country have. Beyond these macro and micro measurements of economy, Gini coefficient is a measure which is a single number aimed at measuring the degree of inequality in the distribution of income in a nation. It is used to measure how far a country's wealth or income distribution deviates from a totally equal distribution. This index is used and measured in 157 countries of the world. .

With times, thinking on measuring human development evolved into more holistic measures. It was increasingly felt that material well-being is important, but it is also important to enjoy sufficient well-being in things like community, culture, governance, knowledge and wisdom, health, spirituality and psychological welfare, a balanced use of time, and harmony with the environment. This thinking brought forward the measurement concept of Gross National Happiness (GNH) in the 1970s. GNH is a much richer objective than GDP or economic growth. How we are doing as a society or nation is an important question in GNH. This index is used and measured in 156 countries of the world.

Increasing concern for environmental sustainability has brought the concept of Green GDP. It is a term used for expressing GDP after adjusting for environment degradations. Green GDP is an attempt to measure the growth of an economy by subtracting the costs of environmental damages and ecological degradations from the GDP. Further, recently a measurement

Global Peace Index (GPI) has been introduced which measures the relative position of nations' and regions' peacefulness. The GPI ranks 163 independent states and territories according to their levels of peacefulness. The GPI starts with the same personal consumption data that the GDP is based on, but then makes some crucial distinctions. It adjusts for factors such as income distribution, adds factors such as the value of household and volunteer work, and subtracts factors such as the costs of crime and pollution.

On the other hand, Human Development Index (HDI) measuring human development, the index in focus in this paper is a statistical tool used to measure a country's overall achievement in its social and economic dimensions. The social and economic dimensions of a country are based on their level of educational attainment, the health of people and their standard of living. Human Development Index (HDI) is calculated as (Life Expectancy Index X Education Index X Income Index) 1/3. The new Human Development Index (HDI) is geometric mean of Life Expectancy Index (LEI), Education Index (EI) and Income Index (II). After this calculation total value lies between 0 and 1. As per the values gained, countries are placed in the list of the division of countries. They are divided into very high human development, high human development, medium high human development and low high human development countries.

EDUCATION INDEX ASSESSMENT

Higher education is found to be effective in enhancing the human capabilities and their productivity levels and add up to the desired outcomes of economic growth and development. It has an impact on socio-economic and development of a country and has an influence on raising the quality of human life and capital. Nelson Mandela believes that instruction is the most powerful weapon to change the world. Instruction is considered extendedly a real tool to reinforce commercial growth social and private cases. As per him, advanced instruction is the most important factor in stable human improvement.

One of the three measurements in HDI is the education index assessment. Until the year 2009, knowledge and education used to be measured by the adult literacy rate and the combined primary, secondary, and tertiary Gross Enrollment Ratio (GER). However with the new index, Education Index assessment is composite of two indices, namely Mean Years of Schooling Index (MYSI) and Expected Years of Schooling Index (EYSI). In the present paper the gross enrolment ratio (GER), yardstick used until 2009 for measuring education levels has been used to study the impact of education on development in the states of India.

Of the seven states in India picked up in Table 1 Maharashtra leads in GDP terms with Rs 24.96 lakh crores in the year 2017-18. Uttar Pradesh one of largest states in the country is at Rs 13.75 lakh crores GDP. Odissa is at the bottom and Bihar is a notch higher at Rs 4.87 lakh crore. GDP levels in 2009-10 remained in similar order across these states. If GDP measuring economic prosperity of states were alone the criteria for development, Maharashtra state should have been at the top followed by U.P. However, looking at development from a holistic prism of HDI, within India across these states, GDP size does not necessarily have a direct and positive impact on human development. For instance states with higher GDP such as Maharashtra, U.P., having relatively bigger size GDP as compared to Kerala are lower in Human Index levels. While Kerala amongst the three states tops HDI at 0.784 (with GDP of Rs. 7.47 Lakh Crores), Maharashtra and U.P. having much higher GDP sizes (Rs 24.96 and Rs 13.75 Lakh crs) have HDI at 0.695 and 0.583 respectively which are much lower than Kerala. Jharkhand which has a lesser size GDP than Bihar is much higher than it in HDI. Odissa also is ahead in HDI from Bihar even though it is almost similar in GDP size. These suggest that economic policies alone have varied impact on the development of people and their capabilities, a higher level economic growth does not necessarily have a higher positive impact on the development of people. There is a definite role of other factors as indicated in the HD index such as health and education.

State	GDP in ₹ lakh crore (2017-18 est.)	GDP in ₹ lakh crore (2009-10)	Human development Index (2017-18)	Human development Index (2009-10)
Kerala	7.47	2.31	0.784	0.732
Maharashtra	24.96	8.55	0.695	0.651
Andhra Pradesh	7.54	4.76	0.643	0.581
Bihar	4.87	1.62	0.566	0.511
Jharkhand	2.55	1.006	0.589	0.572
Oddisa	4.15	1.62	0.597	0.533
Uttar Pradesh	13.75	5.23	0.583	0.529
India	129.85	61.08	0.640	0.570

Table 1.

(Data from CMIE, Wikipedia, PRSindia.org, Nipfp.org, AISHE, http://hdr.undp.org/en/data#)

EDUCATION AND HUMAN DEVELOPMENT

The findings from All India Survey on Higher Education (AISHE) 2017-18 report shows a state like Kerala having Gross Enrollment Ratio (GER) of 36% and the Development index 2017-18 is found to be at 0.78 which is much ahead of the many other states. On the other hand a state like Bihar which has 13 % GER is having Human Development Index at 0.56 much less than Kerala. Increase in Human Development Index in the year 2017-18 of Bihar state over 2009-10 is also meager at 0.05 in spite of being at a low base level as compared to other states. These data suggest a relationship and role of knowledge creation towards human development.

Maharashtra though top most state in terms of GDP amongst the states listed in Table 1 but lags behind Kerala in HDI ranking and one of the reason apparent could be lower GER at 31.2% in 2017-18 as compared to Kerala with GER of 36.2%. Andhra Pradesh having much less GDP than Uttar Pradesh has a higher HDI ranking which possibly is impacted by the higher GER of 30.9% as compared to 25.9 % of Uttar Pradesh. Bihar at the bottom of the HDI ranking in the table has also got the lowest GER of 13 %. Jharkhand a relatively new state carved out of Bihar has a higher GER of 18% and also scores a higher HDI rank at 0.589

State	GDP in ₹ lakh crore (2017-18 est.)	GDP in ₹ lakh crore (2009-10)	Human development Index (2017-18)	Human development Index (2009-10)	GER (2017-18) (2009-10)	GER
Kerala	7.47	2.31	0.784	0.732	36.2%	13.1%
Maharashtra	24.96	8.55	0.695	0.651	31.2%	21.4%
Andhra Pradesh	7.54	4.76	0.643	0.581	30.9%	16.9%
Bihar	4.87	1.62	0.566	0.511	13%	11%
Jharkhand	2.55	1.006	0.589	0.572	18%	9.4%
Orrisa	4.15	1.62	0.597	0.533	22%	11.3%
Uttar Pradesh	13.75	5.23	0.583	0.529	25.9%	10.9%
India	129.85	61.08	0.640	0.570	25.8%	15%

Table2.

(Data from CMIE, Wikipedia, Nipfp.org, AISHE, http://hdr.undp.org/en/data#)

It is evident from the above analysis that GER in higher education has an impact on the human development and has a positive relationship. States with higher GER are showing higher HDI ranking, though latter doesn't necessarily move in the direction of GDP movements. Globally across, a similar trend is found to be prevailing at national level. From Table 3, it can be inferred that Norway with HDI rank 1 has 99 % literacy rate with 80.55% GER in higher education and a high education index of .915. Germany in top 5 HDI rankings again has 99 % literacy rate with 0.94 education index though the higher education GER is 68.33%. Pakistan which has 150th HDI rank has a low literacy rate of 58% and a lower education index of 0.411 and an abysmally low GER in higher education at 10.12%. Amongst the countries in Indian Sub-continent countries listed in Table 3 India at 130th HDI ranking is shade better in literacy rate at 74.04%, education index of 0.566 and GER of 25.8% in higher education. This implies that across countries there is a movement in same direction in education and the development levels of people.

Countries	Literacy rate	Education Index	Higher education GER	HDI Index and rank
Norway	99% (2014)	0.915	80.55%	0.953 (1)
Germany	99%(2014)	0.940	68.33%	0.936 (5)
Singapore	97% (2014)	0.832	83.94%	0.932 (9)
Finland	100% (2017)	0.905	86.99%	0.920 (15)
India	74.04% (2011)	0.566	25.8%	0.640 (130)
Bhutan	71.4% (2017)	0.445	27.02%	0.612 (134)
Bangladesh	72.76% (2016)	0.508	17.62%	0.608 (136)
Pakistan	58% (2017)	0.411	10.12%	0.562 (150)

Table3.

(Data source: country website, Economic survey, UNESCO and UNDP)

Few of significant findings from AISHE report suggest the positive relationship between the higher education in Indian states and development of people. Few of the relevant findings can be listed as:

1. Kerala has the highest GER and consequently have higher HDI as compared to all other states.
2. As compared to 2009, in 2017 Kerala's GER has improved immensely and so has it's HDI over the period.
3. All other states except Bihar has seen improvement more than 9% on an average in their GER which has a positive impact on their HDI
4. Bihar, despite its low performance in improving GER has improved drastically in HDI which can be explained because of improvements in its economy and health over a very low base considering that the state is quite backward in each of these parameters.
5. One thing to note here is that the change in 2017 over 2009 of HDI in Kerala and Bihar both is quite closer to each other despite having huge difference in change in GER of both states. This anomaly can be explained because of the low base in all three parameters in case of Bihar and improvements over a period on these parameters yielded a higher rate of growth.
6. In country wise data, the impact of education Index can be seen on HDI of the country. This is applicable to almost all countries.
7. Countries having higher GER have higher education Index (Germany being an exception) which contribute to higher HDI
8. Huge differences in GER in countries like Norway and India also has large differences in education Index.

STATUS OF HIGHER EDUCATION IN INDIA

In order to understand variations in education levels and development levels measured by Development index in the indicated states in India, the study has focussed on the AISHE data reflecting upon the status of higher education across these states. Table 4. shows the number of institutions in the states, their growth over last 5 years and number of colleges per lakh population. The most developed of these states as per HDI index has the highest number of colleges per lakh of population in 2017-18 and the growth of university over last 5 years have also been highest at 5.22% . Bihar the lowest in HDI index has just 14 colleges per lakh of population and the growth rate of universities in last 5 years have been just 3.41% and colleges 2.27% . Remaining states show a corresponding trend between HDI levels and the number of colleges per lakh of population. States those have been proactive in providing opportunities for education to its people have seen higher GER and hence better education possibilities translating into better human development. It is evident that GER is also dependent on certain factors like density of educational Institute in the region, disciplines offered, quality of education in the institutions, facilities provided by institutions and also the participation of stakeholders in general.

Table 5 shows GER growth over years keeping very low in development lagging states like Bihar and states like Kerala having taken lead in growth of GER over the years. However states like Jharkhand has caught up in GER growth rates but for them reaching the desired level is also a humongous task. What is equally concerning is that economically prosperous states like Maharashtra is lagging behind with a very low growth rate in GER which is not a healthy sign for the development of its people. Similarly the larger states like Uttar Pradesh are also quite low on growth of GER which would further arrest its efforts to develop.

Pupil Teacher ratio is another critical parameter to measure the effectiveness and quality of education having deeper impact on outcomes. Backward states like Bihar, Jharkhand and Uttar Pradesh have a highly adverse ratio of 67, 59 and 60 respectively whereas states like Kerala and Maharashtra have better ratio than national average of 30 having a ratio of 20 and 27 respectively. Incidentally states like Andhra Pradesh and Oddisha are having favourable pupil teacher ratio though in other parameters of education they are lagging behind.

What is most intriguing is the growth of teacher recruitment over last 5 years in backward states of Bihar, Oddisha, Uttar Pradesh which has been negative, raising question over the priority of education in their policy, it being the most critical tool for people development.

PLEASE FIND CONTINUED ON PAGE 13

PARAMETER 1 INSTITUTION				
States/parameter	**Total(2017-18)**	**Specialization (2017-18)**	**Growth(last 5 yr average)**	**College/lakh(2017-18)**
Kerala	1759	Agriculture: 4 Engineering: 101 Management: 26 Medical: 149	Univ.: 5.22% College: 3.29%	44
Maharashtra	6318	Agriculture: 104 Engineering: 233 Management: 95 Medical: 220 College: -0.98%	Univ.: 4.77%	33
Andhra Pradesh	3446	Agriculture: 17 Engineering: 223 Management: 38 Medical: 195	Univ.: 6.15% College: 0.63%	48
Bihar	930	Agriculture: 6 Engineering: 28 Management: 2 Medical: 25	Univ.: 3.41% College: 2.27%	14
Jharkhand	395	Agriculture: 00 Engineering: 15 Management: 2 Medical: 13	Univ.: 15.32% College: 2.30%	8
Orrisa	1423	Agriculture: 00 Engineering: 65 Management: 26 Medical: 40	Univ.: 4.61% College: -0.58%	23
Uttar Pradesh	7849	Agriculture: 13 Engineering: 114 Management: 77 Medical: 103	Univ.: 5.25% College: 6.30%	28

Table 4
Data source: AISHE reports

PARAMETER 2: STUDENT AND ENROLMENT

States/ parameter	GER-(201718)	GPI(2017-18)	Social Category (2017-18)	Level wise Enrolment (2017-18)	Level wise out-turn (2017-18)	Growth in enrolment(Last 5 year Average)
Kerala	36.2%	1.26	GEN: 557395 SC: 67764ST: 10089OBC: 447669	Phd: 3755 UG: 2421610 M.Phill: 719PGDip: 1489 PG: 51707 Diploma: 669	Phd: 616 M.Phill:577 PG: 39440 UG: 147016 PG Dip: 518 Diploma: 14404	8.82%
Maharashtra	31.1%	0.91	GEN:2223305 SC:503283 ST:184995 OBC:1220174	Phd: 9206UG:3314911 M.phill: 2421 PGdip: 19730 PG: 445783 Dip: 315911	Phd: 2654 M.Phill: 1158 PG: 148926 UG: 598579 PG Dip: 8752 Diploma: 99513	4.12%
Andhra Pradesh	30.9%	0.78	Gen: 641395 SC: 273702 ST: 73655OBC: 708530	Phd: 6289 UG: 1290153 M.phill: 897 PGdip: 2614 PG: 219296 Dip: 167214	Phd: 2368 M.Phill: 354 PG: 87170 UG: 255919 PG Dip: 1416 Diploma:36902	-0.85%
Bihar	13%	0.79	Gen: 670331 SC:160254 ST: 21541 OBC: 662469	Phd: 2856 UG: 1333769 M.phill: NA PGdip: 2771 PG: 125139 Dip: 44349	Phd: 872 M.Phill: NA PG: 37225 UG: 36902 PG Dip: 886 Diploma: 7957	2.13%
Jharkhand	18%	0.96	Gen: 240840 SC: 662469 ST: 122919 OBC: 262048	Phd: 1798 UG: 578778 M.phill: 204 PGdip: 4003 PG: 69168 Dip: 29585	Phd: 354 M.Phill: 174 PG: 15929 UG: 126074 PG Dip: 1333 Diploma:6851	9.57%
Orrisa	22%	0.85	Gen: 534039 SC: 153035 ST: 124967 OBC: 203736	Phd: 2982 UG: 793548 M.phill: 1080 PGdip: 3000 PG: 73233 Dip: 125599	Phd: 798 M.Phill: 959 PG: 19267 UG: 19267 PG Dip: 1087 Diploma:32361	7.26% 5.69%
Uttar Pradesh	25.9%	1.06	Gen: 2958984 SC: 1086562 ST: 45336 OBC: 2364493	Phd: 15408 UG: 5446769 M.phill: 860 PGdip: 19621 PG: 637473 Dip: 260547	Phd: 2615 M.Phill: 441 PG: 234261 UG: 1363021 PGDip:10568 Diploma:68038	

Table 5
Data source: AISHE reports

PARAMETER 3: PUPIL TEACHER RATIO

States/parameter	Pupil Teacher ratio (2017-18)	Growth in no. of teachers (last 5year average)
Kerala	20	2.76%
Maharashtra	27	0.25%
Andhra Pradesh	19	-1.79%
Bihar	67	-0.98%
Jharkhand	59	8.91%
Odissa	28	-1.72%
Uttar Pradesh	60	-3.21%

Table 6
Data source: AISHE reports

POLICY IMPLICATIONS AND THE WAY FORWARD

India has gained in world economy owing to the skilled workforce. However, the potential of its human resources is harnessed much less than its potential because of lack of education amongst the majority population, unemployment and existing poverty levels. World Bank and UNESCO constituted a taskforce in the year 2000 which had observed the positive impact of higher education in increasing wages and productivity. The report inferred that the latter have a direct impact on enriching the individuals and the society thereby impacting human development.

India focuses on three goals in its policy towards higher education, namely, expansion, inclusion and excellence. However, vast differences have been noticed in the outcomes across its states and in also pursuing such policies. The recent document published by The National Institution for Transforming India (NITI Ayog), Strategy for New India @ 75 emphasizes making higher education more inclusive and improving the GER to 35 % on an average from 25 % by 2022-23. It has recognized the importance of improving access and equity of higher education in the country besides its emphasis on excellence. One of the important directions to make higher education attractive is to improve employability of students. Curriculum which is old and not aligned with the job market requirements cuts down on the relevance of the education and has an impact on the abilities and creativity of students. Further it recognises the need of faculty recruitment as a large number of posts are vacant. Moreover due to lack of training their competence is also inadequate. It is suggested that there should be merit based incentives which can attract better talent to the teaching profession.

With the advent of digital technology and the remotest of India being connected through internet, scope of online teaching platforms should be harnessed to make the education more inclusive. The document sees an opportunity in broadening the scope of Massive Open Online Course (MOOCs) and Open and Distance Learning (ODL). It suggests that universities of high credence should be allowed to offer online education programme. Technology can also facilitate overcoming the problem of faculty shortages.

Besides ensuring the reach and increase in GER, increased focus on quality and excellence is timely and here lies the big challenge. As the issue in front of the country is not only of providing opportunity of higher education but also ensuring that the education is of relevance and of quality.

There has been a realisation and demand for taking the spending on education beyond 6% of gross domestic product which is far less at present times. The role of private sector is recognized in increasing the spending besides the funding agencies. The states have recently got larger devolution of funds under the 14th finance commission. NITI Aayog is expected to guide states in matters of education expenditure and ensure threshold bounds. A better coordination I required between central government, other central agencies and state govt. for better and effective coordination towards implementation.

Looking beyond, it is important to mention here that India may have witnessed its economic emergence supported by higher education however its larger potential has been restricted due to lagging access and relevant learning outcomes at primary and elementary levels for the masses. The progress achieved so far may not be sustainable unless the majority in the society can be self dependent and confident which can only happen with right knowledge and skills. A sincere attempt has to be made in not only devising but timely and effective implementation of policies for providing opportunities for education at all levels ensuring proper choices for a sustainable future.

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