

# Disparities in higher education in the context of inclusive growth in India

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## Abstract

The role of education in facilitating social and economic progress is well recognized. It opens up opportunities leading to both individual and group entitlements. Indian education system is divided into different levels like pre-primary level, primary level, elementary education, secondary education, undergraduate level and postgraduate level. The foundation of education in India is primary or elementary education later to it the students get into secondary level, undergraduate level and post graduate level are the higher education levels. Basic education gives different social and private benefits. Basic education gives inputs to the higher education. Higher education creates skilled labour force. Skilled labour can able to earn higher wage. It will cause the improvement of standard of living as well as the growth of the economy. So in 11<sup>th</sup> Indian planning education is included. Different problems of education can be discussed. In this back drop, our paper concentrates on disparities in number of Higher Education Institutions, disparities in total enrolment in higher education by different social groups, disparities in enrolment in different higher degree courses and Disparities in Enrolment in Different under Graduate and Post Graduate Courses.

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Development is a continuous process of increasing economic variables of the economy in a desirable direction and maintains a favourable standard of living. According to the development Economist the economies can be divided into three categories: development economies, less developed economies and developing economies.

India is a developing economy. Though India is experiencing a double digit GDP growth but at the same time problems like poverty and unemployment are also present. Rapid and sustained poverty reduction requires inclusive growth that allows people to contribute to and benefit from economic growth. The most crucial factors in inclusive growth and faster growth of any economy are education and skilled development. Inclusive growth refers both to the pace and pattern of growth, which are considered interlinked, and therefore in need to be addressed together. The inclusive growth approach takes a longer term perspective as the focus is on

productive employment rather than on direct income redistribution, as a means of increasing incomes for excluded groups.

Education, in its broadest sense of development of youth, is the most crucial input for empowering people with skills and knowledge and giving them access to productive employment in future. Improvements in education are not only expected to enhance efficiency but also augment the overall quality of life. The role of education in facilitating social and economic progress is well recognized. It opens up opportunities leading to both individual and group entitlements. The Eleventh Plan places the highest priority on education as a central instrument for achieving rapid and inclusive growth. It presents a comprehensive strategy for strengthening the education sector covering all segments of the education pyramid.

In this back drop, our paper concentrates on the following sections. Disparities in Number of Higher Education Institutions will be

discussed in Section I. Section II includes Disparities in Enrolment in Different under Graduate and Post Graduate Courses. Disparities in total enrolment in higher education by different social groups are discussed in Section III. Section IV includes disparities in enrolment in different higher degree courses. Section V includes concluding remarks.

### Section I: Disparities in number of higher education institutions

Before analysing the disparities in higher education among Indian States we consider the disparities in number of higher education institutions in different states of India. Here we have taken 20 major states of India to show the disparities in the year 2008/09. These states are Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamilnadu, UP, Uttaranchal and West Bengal. We are analysing the numbers of higher education institutions by dividing the institution in two prime categories as: a) University and b) College.

#### A) University

Universities are divided into six major types: Central university, State University, Private University, Deemed University, Institute Established under State Legislative Act (IEUSLA) and Institution of National Importance. Out of twenty states only eight have Central University. These states are Andhra Pradesh, Assam, Chhattisgarh, Madhya Pradesh, Maharashtra, UP, Uttaranchal and West Bengal. Similarly out of 20 states only 6 have Private University. These states are Bihar, Gujarat, Himachal Pradesh, Punjab, UP and Uttaranchal. Only 4 states have IEUSLA. These states are Andhra Pradesh, Bihar, Jammu & Kashmir and UP. Every State has State Universities and Institutions of National importance. Except Assam, Chhattisgarh, Himachal Pradesh and Jammu & Kashmir every state has deemed university also. The percentage distribution of different types of universities is presented in Table 6. The percentage distribution of State University is more in every States. The numbers of Deemed University and Institution of National Importance have taken the second and third position respectively in every State.

But there is a wide disparity in respect of number of university across the economy. The percentage distribution of State University is highest in Chhattisgarh (77.78%) and lowest in Uttaranchal (25.00%). The percentage distribution of Deemed University is highest in Maharashtra (47.62%) and lowest in Assam, Chhattisgarh, HP and J&K (0%). The percentage distribution of Institution of National Importance is highest in Assam (25%) and lowest in Rajasthan (4.55%).

Higher degree of disparity is there among the states. We measure

this disparity by calculating coefficients of variation (CV). Higher CV implies higher the degrees of disparity. The disparity is higher for IEUSLA (220.05%) and private university (202.56%) because these two types of institutions are not present in all the states. The value of CV is lower for Institute of National Importance (47.33%) and State University (53.54%) because these two types of institutions are equally distributed among the 20 states of India.

#### B) College

Colleges are divided into five categories: (i) Arts, fine Arts, Social Works, Science, Commerce, (ii) Engineering or technology or Architecture, (iii) Medical, (iv) Education or Teacher Training college and (v) others. Arts, fine arts, social work, science and commerce college takes the prime position in respect of the total economy. It has contributed 54.34%. The percentage distribution of Engineering College is only 9.52%, Medical College is 8.61%, Education and Teacher Training College is 12.72% and other college is 14.82%. In all the states except Haryana and Jammu & Kashmir maximum percentage of institution is contributed by arts, commerce and science colleges. Maximum numbers of education or teacher training colleges exist in Haryana, Jammu & Kashmir Number of arts, science and commerce colleges are more in Bihar (81.46%), Orissa (77.78%), UP(76.06), Chhattisgarh(75%), Rajasthan (68.16%), Assam(61.95%) and MP(60.97%). Compared to this the number of this category colleges are low in Haryana(19.01%), Jammu Kashmir(31.56%), and HP(34.48%). The percentages of Engineering or Technology or Architecture Colleges are high in Tamil Nadu (24.28%), Kerala (21.88%) and Karnataka (15.31%). Compared to this the percentage distribution of this category colleges is low in Bihar (1.00%), Assam (1.29%) and Jammu & Kashmir (1.52%). Percentage distribution of Medical colleges is higher in Karnataka (45.93%), Kerala (27.90%) and Punjab (15.09%). On the other hand, the percentage distribution of Education or Teacher Training colleges is higher in Haryana (60.03%), Jammu & Kashmir (53.23%). Compared to this the percentage distribution of numbers of these category colleges are low in Karnataka (0.00%), Chhattisgarh (0.91%), Orissa (1.56%). Percentage distribution of numbers of other types of colleges are high in Gujarat(30.49%), Assam(28.13%), HP(27.20%) and Uttaranchal(27.15%) and low in Karnataka(1.41%) and Punjab(2.52%).

These all categories colleges are not evenly distributed among all 20 major states of India and our estimates (Table 2) supports it. The values of CV in all the cases are very high indicating disparities in the distributions of total as well as all category colleges in India. Thus all category colleges are not evenly distributed in all the states of India. The value of the CV of Arts, Commerce, Science College (106.43%) is relatively lower than Engineering College (116.24%) and Medical College (111.10%). Thus for skill development Engineering and Medical Colleges should be evenly established in all the states of India.

## Section II: Disparities in enrolment in different under graduate and post graduate courses

In this section we will concentrate on the disparities in enrolment in different Post Graduate and Under Graduate level courses. These Under Graduate and Post Graduate Courses can be divided into ten different courses as: Arts, Commerce, Science, Engineering, Medicine, Agriculture & Allied Studies, Management or Hotel Management or Tourism or Travel, Education or Teacher Training, Law and others. The enrolment in these ten courses can be discussed separately in UG and PG level as follows.

### A) Under graduate courses

**Arts:** Percentage distribution of student enrolment of India in Under Graduate Arts course is 43.23%. Percentage distribution of student in Arts is high in Assam (69.30%), West Bengal (65.92%), Bihar (61.09%), UP(62.14%), Jammu & Kashmir (58.52%) and low in AP (8.83%), Tamil Nadu(25.58%), Karnataka(25.58%), Kerala(26.29%), Gujarat(33.51%), Haryana(39.41%), . In all other states this varies moderately between 40-55%. The value of CV implies high disparities in number of student enrolment in Arts in different states of India.

**Commerce:** Percentage distribution of student enrolment of India in Under Graduate Commerce course is 14.18%. Percentage distribution of students enrolment in Under Graduate Commerce course is high in Maharashtra(22.07%), Gujarat(21.72%), Jharkhand(20.20%), AP(19.33%), Uttaranchal(18.18), low in J&K(1.76%), Assam(7.95%), Haryana(8.11%), HP(8.62%), Bihar(8.75%), Punjab (9.68%), UP(9.67%), medium in MP(17.42%), Chhattisgarh(16.81%), Kerala(11.66%), Karnataka(14.61%), Tamil Nadu(13.33%), Orissa(11.26%), Rajasthan(10.59%) and West Bengal(10.40%).

**Science:** Percentage distribution of student enrolment of India in Under Graduate Science course is 16.89%. Except Haryana(4.28%), Jammu & Kashmir(8.10%), Karnataka(7.89%), Punjab(9.48%), Rajasthan(9.60%) all other states have more than 10% enrolment in under graduate science course.

**Engineering:** Percentage distribution of student enrolment of India in Under Graduate Engineering course is 11.12%. The percentage of enrolment of graduate engineering course is high in Kerala (31.73%), AP (31.73%), Karnataka(28.95%), Haryana (27.74%), Punjab(20.52%), low in Assam(0.87%), Bihar(1.30%), UP(0.09%), Tamil Nadu(0.23%), Gujarat(0.62%), Orissa(0.14%), J&K(2.50%), Uttaranchal(4.94%), West Bengal(5.72%) and medium in Chhattisgarh (10.36%), HP(8.11%), Maharashtra(14.98%), Rajasthan(13.11%), MP(7.62%) and Jharkhand (5.90%).

**Medicine:** Percentage distribution of student enrolment of India in Under Graduate Medicine course is 1.57%. The percentage distribution of students in under graduate medicine is high in

Karnataka(10.28%), Kerala(5.59%) and Punjab ( 3.66% ), low in UP ( 0% ), Tamil Nadu ( 0.08% ), Orissa ( 0.04% ), Gujarat ( 0.25% ), Jharkhand ( 0.31% ) and medium ( 1.38% to 3.66% ) in rest of states.

**Agriculture & Allied Studies:** Percentage distribution of student enrolment of India in Under Graduate Agriculture & Allied Course is 0.47%. except west Bengal(2.47%) and Chhattisgarh(2.03%) the percentage distribution of students in under graduate agriculture & allied courses is very low and less than 1%.

**Management/ Hotel Management/ Travel /Tourism:** Percentage distribution of student enrolment of India in Under Graduate Management course is 1.54%. all the states have a negligible number of enrolment in under graduate management courses except AP(3.92%), Gujarat(3.17%), Haryana(5.04%), HP(1.70%), Karnataka (2.65%), Orissa(2.71%) and Tamil Nadu(4.67%).

**Education/Teacher Training:** Percentage distribution of student enrolment of India in Under Graduate education or Teacher Training course is 3.95%. The percentage distribution of under graduate education or teacher training students are low in Bihar (0.63%), Jharkhand(0.47%) and Orissa(0.25%), West Bengal(0.99%), high in HP(7.06%), Gujarat(8.06%), Rajasthan( 9.64%) Haryana(12.56%), J&K (24.62%) and medium(1-4%) in all rest of the 20 major states of India .

**Law:** Percentage distribution of student enrolment of India in Under Graduate Law course is 1.68%. In all the states the percentage distribution of student in under graduate law courses varies between 0.5% to 4%.

**Others:** Percentage distribution of student enrolment of India in Under Graduate Other course is 1.21%. In all the states except Karnataka (6.56%), Orissa(6.04%), HP(2.84%), Bihar(1.99%), Maharashtra(1.87%), MP(1.15%), the percentage distribution in student enrolment in other courses are negligible.

### B) Post graduate courses

**Arts:** Percentage distribution of student enrolment of India in Post Graduate Arts course is 42.33%. This percentage distribution of student enrolment in this course is high in Chhattisgarh (85.08%) and low in AP(9.91%).

**Commerce:** Percentage distribution of student enrolment of India in Post Graduate Commerce course is 11.85%. This percentage distribution of student enrolment in this course is highest in Jharkhand (30.33%) and lowest in HP(1.31%).

**Science:** Percentage distribution of student enrolment of India in Post Graduate science course is 24.61%. This percentage distribution of student enrolment in this course is highest in AP(64.76%) and lowest in Chhattisgarh(5.61%).

**Engineering:** Percentage distribution of student enrolment of India in Post Graduate Engineering and Technology course is 5.68%.



This percentage distribution of student enrolment in this course is highest in Punjab(19.15%) and lowest in Bihar(0.08%).

**Medicine:** Percentage distribution of student enrolment of India in Post Graduate Medicine course is 1.90%. This percentage distribution of student enrolment in this course is highest in Karnataka(36.88%) and lowest in Chhattisgarh(0.23%).

**Agriculture & Allied Studies:** Percentage distribution of student enrolment of India in Post Graduate agriculture & Allied course is 0.73%. This percentage distribution of student enrolment in this course is highest in Karnataka(5.41%) and lowest in Bihar(0.05%).

**Management/ Hotel Management/ Travel /Tourism:** Percentage distribution of student enrolment of India in Post Graduate Management course is 8.01%. This percentage distribution of student enrolment in this course is highest in HP(19.65%) and lowest in MP(0.21%).

**Education/Teacher Training:** Percentage distribution of student enrolment of India in Post Graduate education or Teacher Training course is 1.57%. This percentage distribution of student enrolment in this course is highest in Jammu & Kashmir (15.42%) and lowest in Gujarat(0.26%).

**Law:** Percentage distribution of student enrolment of India in Post Graduate Law course is 0.68%. This percentage distribution of student enrolment in this course is highest in Jammu & Kashmir (3.49%) and lowest in Bihar(0.21%).

**Others:** Percentage distribution of student enrolment of India in Post Graduate other course is 2.64%. This percentage distribution of student enrolment in this course is highest in Orissa (22.13%) and lowest in MP (0.00%).

Our estimates (Table 4) reveal that the value of CV of engineering, Medical and Law are higher than that of Arts, Science, and Commerce student enrolment. This implies disparities in enrolment of professional education are higher in Indian states than that of general education. Thus for skill development Govt. should take the policy towards even distribution of students enrolment in all states and in all courses.

### Section III: Disparities in total enrolment in higher education by different social groups

In this section we will discuss the disparities in total enrolment in higher education by different social groups in major 20 states of India. Society may be divided into three social group of students: Schedule caste (SC) student, Schedule tribe (ST) student and General (GEN) student. Our estimates (Table 5) reveal that 82.17% of total GEN student, 13.00% total SC students and only 4.83% of total ST students have come for higher education. The percentage distribution of GEN boys(81.51%) and girls(83.22%) in higher education are also high as compared to SC boys(13.33%) &

girls(12.47%) and ST boys (5.16%) & girls(4.31%) enrolment in higher education. For all the states except Chhattisgarh (60.48%) more than 75% students of higher education come from General category. The percentage distribution of total GEN student is highest in Haryana (90.93%) and lowest in Chhattisgarh (60.48%).

But there exist a wide disparity in the enrolment of SC and ST students in higher education in different states of India. The total SC enrolment is high in UP (17.02%), Maharashtra (15.57%), West Bengal (15.44%) and MP (15.27%). In all other states the total SC enrolment in higher education is more than 6.5%. Both SC boys and Girls enrolment are high in the above mentioned states. Compared to this the percentage of total number of ST enrolment is higher in Chhattisgarh (27.57%), Jharkhand (13.21%) and MP (11.33%) and lower in Haryana(0.00%), Punjab(0.02%) and UP(0.25%). In all the cases our estimates (Table 8) reveal higher values of CV indicating higher degree of disparity. But one thing should be noted that the values of CV in case of GEN student enrolment in higher education are less than that in case of SC enrolment and ST enrolment. This will lead to the conclusion that GEN student enrolment in higher education is more evenly distributed among those 20 major states in India than that of SC and ST students.

### Section IV: Disparities in enrolment of different social groups in different higher degree courses

In this section we will discuss the enrolment of different social group of students in different higher degree courses. The higher degree courses are divided into five courses: PhD/ M.Phil, Post Graduate Level, Under Graduate Level, Post School Diploma and Post Graduate Diploma. We discuss the percentage distribution of student enrolment in different courses in respect of total enrolment, SC enrolment and ST enrolment.

#### A) Total enrolment

Percentage distribution of student enrolment in under graduate level is higher in all the states as well as in total. It is followed by Post school Diploma and Post graduate Diploma. The percentage distribution is very low in the enrolment of Post Graduate Diploma and PhD/M.Phil. Out of 20 states the percentage distribution of enrolment in under graduate level course is high in Assam (90.80%), West Bengal(89.85%), Bihar(89.65%). Percentage distribution in Under Graduate Level is more than 75% in all the states as well the country as a whole except Chhattisgarh (67.91%), Gujarat (72.36%) and Maharashtra (74.07%). Compared to this wide disparity is observed in all other higher degree courses. The percentage distribution in Post Graduation Level is high in Chhattisgarh (29.79%), Gujarat (16.83%), Punjab (14.39%), UP (14.01%), Uttaranchal(13.92%), Tamil Nadu (13.53%), MP(11.60%) and Maharashtra (11.39%); low in HP (5.53%), Haryana(2.42%) and Karnataka (2.39%) and medium in Rajasthan(10.56%),

Orissa(9.60%), J&K(9.23%), AP(9.05%), Bihar( 8.10%), West Bengal (7.20%), Kerala(6.87%), Assam(6.37%) . The percentage distribution in Post School Diploma is high in Karnataka (16.46%), Maharashtra(13.62%) , Haryana (13.09%) and AP(11.04%). Compared to this the percentage distribution of enrolment in Post School Diploma is low in Chhattisgarh(1.78%), UP(1.79%), Bihar ( 1 . 8 4 % ) , J & K ( 1 . 8 4 % ) , A s s a m ( 2 . 0 3 % ) , W e s t Bengal(2.26%),HP(3.01%), Jharkhand (3.44%) and MP(4.56%) and medium in Gujarat (9.65%),Rajasthan(6.28%), Orissa(6.49%), Kerala(8.40%), Punjab(6.54%), Uttaranchal(6.23%), and Tamil Nadu(8.80%). The percentage distribution of enrolment in PhD / M. Phil is less than one percent for all the states as well as country except Tamil Nadu(1.74%). Similar trend is followed in enrolment of Post Graduate Diploma also. The values of CV are high for all the cases indicating disparities in enrolment in different higher degree courses in different states of India.

### B) SC enrolment

Percentage distribution of SC student enrolment in under graduate level is higher in all the states as well as in total. It is followed by Post school Diploma and Post graduate Diploma. The percentage distribution of SC enrolment is very low in the enrolment of Post Graduate Diploma and PhD/M.Phil. Out of 20 states the percentage distribution of SC enrolment in under graduate level course is high in Assam (95.24%), West Bengal (90.67%), Bihar(88.88%). Percentage distribution of SC enrolment in Under Graduate Level is more than 75% in all the states as well the country as a whole except, Karnataka (71.94%), Gujarat (69.97%) and Uttaranchal (64.85%). Compared to this wide disparity is observed in all other higher degree courses. The percentage distribution of SC enrolment in Post Graduate Level is high in Uttaranchal (26.26%), Gujarat (19.70%), MP (13.90%) and UP (13.60%); low in Karnataka (1.78%) HP (5.11%), Jharkhand (5.50%) and medium in rest of the states. The percentage distribution of SC enrolment in Post School Diploma is high in Karnataka(25.94%), AP(23.40%), Haryana(16.65%), low in Assam(0.80%), Chhattisgarh(2.23%), UP(2.40%), West Bengal(2.83%), Rajasthan(3.68%), Bihar (2.03%), MP (3.46%), HP(4.05%) and in rest of the states SC student enrolment in Post School diploma level lies between 5-10%. The percentage distribution of SC enrolment in PhD / M. Phil is less than one percent for all states as well as country except HP(2.32%) and Tamil Nadu(1.61%). Similar trend is followed in SC enrolment of Post Graduate Diploma also.

### C) ST enrolment

Percentage distribution of ST student enrolment in under graduate level is higher in all the states as well as in total. It is followed by Post school Diploma and Post graduate Diploma. The percentage distribution of ST enrolment is very low in the enrolment of Post Graduate Diploma and PhD/M.Phil. Out of 20 states the percentage

distribution of ST enrolment in under graduate level course is high in West Bengal (90.93%), Assam (91.70%), Bihar(88.05%). Percentage distribution of ST enrolment in Under Graduate Level is approximately 75% or more in all the states as well the country as a whole except, Tamil Nadu(72.57%), Karnataka (70.46%), Punjab (53.73%) and Uttaranchal (59.72%). Compared to this wide disparity is observed in all other higher degree courses. The percentage distribution of ST enrolment in Post Graduate Level is high in Uttaranchal (34.87%), Punjab(19.40%), Gujarat (16.91%), Chhattisgarh (16.68%); low in Karnataka (1.95%), West Bengal(4.09%), Assam(5.46%), HP (5.57%), Orissa (5.39%) and medium(8-12%) in rest of the states. Compared to this the percentage distribution of ST enrolment in Post School Diploma is high in Karnataka(27.34%), Punjab(20.90%), AP(19.20%), Orissa(18.08%), low in Assam(2.47%), Bihar(0.95%), West Bengal (2.49%), Chhattisgarh (1.06%), UP (2.40%), Rajasthan (3.788%), Bihar (0.95%), and in rest of the states ST student enrolment in Post School diploma level lies between 5-10%. The percentage distribution of ST enrolment in PhD / M. Phil is less than one percent for all states as well as country except HP(2.06%) and Punjab(4.48%). Similar trend is also followed in ST enrolment of Post Graduate Diploma except Punjab(1.49%).

Our estimates (Tables 5-8) reveal that the higher values of CV in all cases. This implies higher degree of disparity in enrolment among the major states of India in respect of total, SC and ST enrolment in different courses of higher education. Thus we can conclude that for inclusive growth education should reach to all the social groups of student. This will lead to increase in numbers of skilled person and improve the employment situation of the economy.

### Section V: Concluding remarks

The Indian economy is widely expected to grow at sustained high rates over the next few decades and emerge as the second largest economy by 2050. Institutional higher education capacities in India are unevenly distributed across the country. There is also a clear dominance of pure science, arts and commerce subjects in both under graduate and post graduate level. The low enrolment in higher education that is post higher secondary level is also an important issue. Not only the overall access to higher education is low, there are regional and inter-social group disparities are also found in Higher Education in India.

All category colleges are not evenly distributed in all the states of India. The values of the CV of Arts, Commerce, Science College is relatively lower than Engineering College and Medical College. Thus for skill development Engineering and Medical Colleges should be evenly established in all the states of India. Higher degree of disparity exist in enrolment among the major states of India in respect of total, SC and ST enrolment in different courses of higher education. Thus we can conclude that for inclusive growth education should reach to all the social groups of student. This

will lead to increase in numbers of skilled person and improve the employment situation of the economy. The value of CV of Engineering, Medical and Law are higher than that of Arts, Science, and Commerce student enrolment. This implies disparities in enrolment of professional education higher in Indian states than that of general education. Thus for skill development Govt. should take the policy towards even distribution of students enrolment in all states and in all courses.

The objective of inclusiveness will be achieved through reduction of regional imbalances; support to institutions located in border, hilly, remote, small towns, and educationally backward areas; support to institutions with larger student population of SCs, STs, OBCs, minorities, and physically challenged; and girl students with special scholarships/fellowships, hostel facilities, remedial coaching, and other measures.

(Sources: All the above data with calculated percentage has been taken from Statistics of Higher & Technical Education 2008-09)

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