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SPATIAL DISTRIBUTION AND CONCENTRATION: A STUDY OF THE HIGHER EDUCATIONAL INSTITUTES IN WEST BENGAL

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Abstract:

The distribution of the higher educational institutions to a great deal affects the access and enrolment of the surrounding population to higher education, whether urban-centric or rural-centric. On the other hand, the concentration gives a picture of the undersupply or oversupply of Higher Educational Institutes of a place. There exist regional inequalities in the development of Higher Educational Institutes of West Bengal which in the long run may come as a blow to the idea of knowledge centric development and detrimental to the once legacy of the state having been the precursor of modern day higher educational institutions. The number of colleges in West Bengal is 1371, with a college density of 13 colleges per lakh population and 25 universities. The paper analyses the spatial distribution and concentration of the Higher Educational institutes with various other indicators and how these indicators together give a specific development pattern to the districts. Accordingly, Kolkata has the highest development pattern and Uttar Dinajpur the lowest. It is also seen that despite the levels of development, the districts still have prospects of growth either in number of institutes or students based of the Average Size of the institutes. The paper is totally based on secondary data from the Census of India, All India Survey of Higher Education Reports and University Directory, University Grants Commission.

Keywords: Density of Higher Educational Institute, Average Size of the Institute, Concentration Ratio, Share of Enrolment, Development Pattern

1.0 Introduction:

Higher Education is the seat of honing the knowledge, ideas and skills of the young adults (18-23 years)¹; the access to nurture the academic know how's is through the Higher Educational Institutions. At the apex of the educational hierarchy, the higher education sector in India has a three-tier structure comprising the university, college and course (Centre for Civil Society, 2018). Higher education is not merely at the apex of the education system, it is also the level which prepares personnel for all other levels of education and expertise for a great variety of jobs that have to be manned in the social, economic and cultural sectors. According to a brief by World Bank higher education institutions prepare individuals not only by providing them with adequate and relevant job skills, but also by preparing them to be active members of their communities and societies². In addition to being at the frontier of knowledge, it plays a crucial role in the generation of new knowledge. Tertiary education is facilitating the absorption of the positive effects of globalisation and enabling India to develop a trillion plus economy through a highly qualified and broad national talent base (Mukherjee, 2020). Therefore, the relation between higher education and

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development is a crucial one. There has been a general increase over the last few years in enrolment in higher education. This increase is partly due to the increase in population and partly because of the entry of larger percentage of school pass-outs in higher education, made possible because of an overall expansion in educational opportunity offered by different kinds of educational institutions (Sengupta, 2019). The access and enrolment in Higher Education depends a great deal on the distribution of the Higher Educational Institutes. As per the AISHE (2018) report, India has a total of 39931 colleges, 993 universities and 10725 Stand Alone Institutes. The highest number of colleges is in Uttar Pradesh. Bangalore Urban district tops in terms of number of colleges with 880 colleges followed by Jaipur with 566 colleges. 60.53% colleges and 39.68% universities are located in the rural area. There are 28 colleges serving one lakh eligible population (population belonging to the age group 18-23 years), varying from 7 in Bihar to 53 in Karnataka compared to the Indian average. According to the AISHE Report (All India Survey on Higher Education, 2018-2019) Uttar Pradesh has the highest number of colleges. India has an average enrolment of 693 students per college. Gross Enrolment Ratio (GER) in Higher education in India is 26.3%, GER for male population is 26.3% and for females, it is 26.4%. A high GER generally indicates a high degree of participation, whether the pupils belong to the official age group or not. According to Martin Trow's classification of stages of development of higher education (Trow, 2006), a country is at an elite stage of higher education when the gross enrolment ratio (GER) is less than 15 per cent; at a stage of massification when the GER is between 15 and 50 per cent and at a stage of universalization when the GER reaches 50 per cent mark. In India Higher Education system remains at the lower end of the massification, but enrolls a larger number of students than the largest country (such as USA) which has universalized higher education (Verghese, 2015). The high enrolment makes it necessary to have sufficient number of higher educational institutions well distributed for proper representation and maintaining quality.

2.0 Study Area:

The nineteen districts of West Bengal (according to the 2011 Census) have been selected for the study. Kolkata has been excluded from the map as it is a metropolitan district and the high range of values works as an outlier. However, the calculations have been done taking Kolkata into consideration. According to AISHE report, West Bengal has 1398 colleges, 45 Universities and 456 Stand Alone Institutes, which comprise 3.50%, 4.53% and 4.25% share respectively of the Higher Educational Institutes of India. The highest number of 179 colleges, as has been calculated from the report, is in the district of Kolkata and lowest in Koch Bihar, 22 colleges. 35.56% of the universities is located in the rural area whereas 64.44% are located in the urban area. In case of the colleges 61.02% are rurally located and 38.98% are in the urban area. There are 13 colleges per lakh population, with an average enrolment of 1170 students per college (AISHE, 2018). Gross Enrolment Ratio (GER)³ in Higher education of West Bengal is 19.3%, GER for male population is 20.0% and for females, it is 18.7%.

3.0 Objectives:

- To find out the spatial distribution and concentration of Higher Educational Institutes in West Bengal.
- To study the development pattern of the higher educational institutions of West Bengal.

4.0 Data and Method:

The study is completely based on quantitative secondary data, information on the Higher Educational Institutes has been collected mainly from the All India Survey on Higher Education Reports (AISHE), 2018-2019 and the population related data has been estimated from the Census of India, 2011. The indicators used have been standardised with the help of Composite Index⁴ to

find out the overall performance of the various districts of West Bengal, this further helps in determining the development pattern of the Higher Educational Institutes. The expansion of the higher educational institutes most of the time are dependent on the socio-economic condition in the residents of the districts and also the fund allocation by the various government bodies. The oversupply and undersupply of the HEI's determine the overall development of Higher Educational facilities of a place which can be determined by various indicators. The pattern of the distribution of HEI's in the various districts help understand the existing regional balance within the state. The indicators used in the study are however the quantitative aspects that does not venture into the complexities of qualitative and the social aspects of the growth and development of Higher Education. The indicators used in the study are:

- X1: Concentration Ratio
- X2: Share of Eligible Population (18-23)
- X3: Share of Enrolment
- X4: Density of Higher Educational Institutes
- X5: Higher Educational Institutes per thousand square kilometres
- X6: Average Size of the HEI's
- X7: Literacy Rate

The share of enrolment in HEI's has been derived as percentage of number of HEI's in a district/ total number of HEI's in the state of West Bengal*100. Similarly, the share of Eligible population has been computed as percentage of population of the eligible age group in the district/ total population of the eligible age group*100.

- **Concentration Ratio (CR)** = $\frac{\text{Share of HEI's in the locality}}{\frac{\text{Share of eligible population(18-23year) in the locality}}{\text{Number of HEIs}}} * 100000$
- **HEI density** = $\frac{\text{Number of HEIs}}{\text{Total eligible population(18-23years)}} * 100000$
- **HEI/1000 sq. km** = $\frac{\text{Number of HEIs}}{\text{Total area}} * 1000$
- **Average Size of The HEIs (AS)** = $\frac{\text{Total population attending HEIs (18-23year) in a locality}}{\text{Total Number of HE 's in the locality}}$
- **Composite Index** = $\frac{\sum(\text{Development Score of n indicators})}{n}$ (here, n is the number of indicators)

The results have been used to map the different aspects of the study. Choropleth maps have been prepared in Arc GIS using Equal Class Interval method.

5.0 Result and Discussion:

According to the Draft Education Policy (MHRD, 2019), “an education system built on the premises of quality and equity is considered central to sustainable development, achieving success in the emerging knowledge economy and society, for socio-economic mobility and building an equitable, just and humane society” and also mentions how Higher Education is a critical contributor to sustainable livelihoods and economic development of the nation. This however is not possible if the population is not represented well with sufficient number of higher educational institutions regionally. In the absence of effective public policy interventions, the locations of higher education institutions become concentrated in certain locations only, like the pressure to expand higher education facilities is more in the urban areas given the relatively larger pool of secondary education graduates. The infrastructural and transportation facilities are better in urban areas for attracting a larger number of students to any institution (Varghese et al, 2018). The transitional behaviour of high school leavers if explained in terms of individual characteristics (Sá, Rietveld, and Florax, 2004) tend to be drawn by the urban light provided there is a socio-economic stability in the family. The students of the urban places tend to be drawn towards other bigger urban areas so is the tendency of the students in the rural places.

5.1 Concentration Ratio:

According to the CPRHE⁵ research paper, Concentration Ratio gives us an idea of the oversupply and undersupply and the degree of compactness of the Higher Educational Institutes in the various districts of West Bengal. The lowest concentration ratio is in the district of Uttar Dinajpur and highest is in Darjiling as is seen in Table 1. Dakshin Dinajpur is the only district with moderate values in North Bengal, the other districts that fall in the same category are located in the southern part of the state: East Medinipur, Hugli, Bankura, Bardhaman, Birbhum, Nadia, Murshidabad and North 24 Parganas. The remaining districts have low Concentration Ratio: Jalpaiguri, Koch Bihar, Uttar Dinajpur, Maldah, Puruliya, West Medinipur, Haora and South 24 Parganas (Fig. 2).

The question could be why should there be rethinking of the places the educational institutions should come up, the answer is the idea of growth centres has reborn, with higher educational institutions as the fulcrum (Arbo and Benneworth, 2007). This is made possible because of the coming up of the high technology centres, which are examples of organised research being transformed into commercial products and new thriving industries. Typically, the companies are not located on the basis of transport costs, access to markets or access to raw materials and energy, but on the basis of knowledge resulting in a Technopolis concept (Castells and Hall, 1994). It can be said everything in a shrinking world is not industry oriented, similar is in case of West Bengal which is seen in the later part of the study.

5.2 Share of Eligible Population (18-23 years) and Share of Enrolment:

According to the Indian standards the formal age of the population attending Higher Education is 18-23 years old as has been mentioned in Section 1, the population in this age cohort are the eligible population which is calculated from the Census data. The share of eligible population is calculated in terms of the total population of the state. It is seen in Table 1 that the share of eligible population is highest in North 24 Parganas and lowest in Dakshin Dinajpur district. While discussing about the proportion of eligible population present, the actual scenario is depicted by the proportion of enrolment that actually takes place in the higher educational institutes. The spatial distribution of the HEI's is always related to accessibility, however there exist a very complex gamut of decision making about who should attend which HEI and where. The Indian Education System still is largely dependent on the grades of students to access the educational institutes and facilities, and then comes in the economic and social hierarchy of the students. The children enter colleges when they become adults and commuting distances. If transportation facilities are available, is not a major problem among the youth and adults. The grown-up children have the option to stay away from parents and they could stay in hostels to pursue their studies, if financial resources support such decisions (Varghese et al., 2018). These quantitative and qualitative factors together form a complex structure of decision making regarding the choice of enrolling into a Higher Educational Institute. The share of population enrolling is mostly lower than the share of eligible population because there are various factors that determines who would have access to Higher Education. There are however places which are exceptions to this, like Darjiling and Kolkata with high amount of movement of the student population. The growth in the number of institutions to a large extent determines the growth in the share of enrolment, which however is more viable to be measured institution wise. The students enrolling into an institute may or may not be from the same district or even from the place of study. In case of education there is constant movement and migration of the student population. Lately, Educational success, measured by achievement on standardized tests, has become the central focus (Roscigno et al., 2006). The share of enrolment is the percentage of students enrolled in the HEI's of each district depending on the total enrolment in the whole of West Bengal, which is highest in Kolkata and lowest in Dakshin Dinajpur as shown in Fig. 3. This however does not give us a clear idea of the

disparity or the lack of higher educational infrastructure in each of the district as an individual factor.

5.3 Higher Educational Institute (HEI) Density:

Density of Higher Educational Institutes gives us an idea if the districts have sufficient higher educational institute to represent the eligible population. As mentioned earlier in Section 2, the density of Higher Educational Institute in India is 28 institutes per lakh population and for West Bengal it is 13 institutes per lakh population. In the state, the lowest density is in Uttar Dinajpur, 5 colleges per lakh population and highest in the district of Darjiling, i.e. 24 colleges per lakh population (Table 1). The districts: Jalpaiguri, Koch Bihar, Maldah, Uttar Dinajpur, Haora, Puruliya, West Midnapore and South 24 Pargana have low density of Higher Educational Institutes. On the other hand, Bardhaman, Nadia, Birbhum, Bankura, Hugli, East Medinipur, North 24 Parganas and Murshidabad have moderate density.

Table 1: District-wise statistic of selected indicators in West Bengal

Districts	Concentration Ratio	Share of Eligible Population (18-23)	Share of HEI enrolment	HEI Density	HEI/1000 sq. km	Average Size of HEI	Literacy Rate
Darjiling	1.737	2.034	2.843	24	16	897.118	79.56%
Jalpaiguri	0.584	4.394	3.700	8	6	1609.676	73.25%
Koch Bihar	0.491	3.247	2.988	7	7	2090.739	74.78%
U. Dinajpur	0.386	4.492	2.176	5	8	1400.800	59.07%
D. Dinajpur	0.938	1.994	2.037	13	12	1214.259	72.82%
Maldah	0.555	5.619	3.640	8	12	1301.867	61.73%
Murshidabad	0.968	9.309	6.138	13	24	759.908	66.59%
Bardhaman	1.175	7.842	7.748	16	19	937.722	76.21%
Nadia	1.151	5.299	6.064	16	22	1109.227	74.97%
Birbhum	1.175	4.070	3.363	16	15	784.507	70.68%
Bankura	0.983	3.876	2.981	13	8	872.473	70.26%
Hugli	0.968	5.154	5.585	13	23	1248.569	81.80%
Haora	0.750	4.802	4.064	10	35	1258.096	83.31%
Kolkata ⁶	3.669	3.608	14.227	50	1032	1198.953	86.31%
N. 24 Parganas	1.244	9.526	12.030	17	42	1132.310	84.06%
S. 24 Parganas	0.710	9.375	6.755	10	10	1132.625	77.51%
Puruliya	0.794	3.490	3.001	11	6	1207.625	64.48%
E. Medinipur	1.083	5.504	5.071	15	18	949.140	87.02%
W. Medinipur	0.686	6.367	5.511	9	6.742	1408.063	78.00%

(Source: Computed by the authors)

5.4 Higher Educational Institute (HEI)/1000 sq. km.:

There is an attempt made to find out the density of HEI's as per the area of the various districts, which gives an idea about the spatial distribution of the higher educational institutes in the districts of West Bengal. As seen in Fig. 5 North 24 Pargana district has the highest number of institutes per thousand square km and the lowest is in the district of Jalpaiguri with only six institutes per 1000 square kilometre. The values also show the high level of disparity that exist in the various districts of West Bengal with North 24 Pargana and Haora district being ahead of the other districts. AISHE computes the density of Higher Educational Institutes only in terms of the population but it is also important to see how the institutions are distributed in terms of area, which gives us a detailed idea about the availability of the higher educational institutions.

5.5 Average Size of the Higher Educational Institute:

The average size is an indicator that brings out if the institutions are over or under populated, higher the value means the institutes tend to be over populated and the numbers of higher

educational institutes are less compared to the population of enrolled students. The Average Size of the Higher Educational Institutes in Koch Bihar is 2090.739 and lowest in Murshidabad 759.908. If seen Koch Bihar is one of the districts with low concentration ratio 0.491, second lowest after Uttar Dinajpur and also there are only 7 institutes per 1000 square kilometres second lowest after Jalpaiguri. These facts make it evident enough why the average size of the Higher Educational Institutes is high in Koch Bihar district. The smaller number of institutes make them overcrowded with high number of enrolled students. The role of Average Size of Higher Educational Institutes is discussed in details later in the paper.

5.6 Literacy Rate:

Literacy is one of the basic indicators of development, so when talking about higher education literacy becomes one of the very important aspects as the slogan of P & G Shiksha goes “Padhega India Tabhi toh Badhega India”. The slogan though was in promoting and upholding school education, the slogan stands apt for education in all levels. Literacy rate forms the basis of who in future would have chance to enter into the domain of attaining higher educational institutes, making it an important attribute to consider while discussing about education. Having discussed the other indicators, it is seen that the district which has the highest literacy rate, East Medinipur and Uttar Dinajpur being the district with lowest literacy rate has weak representation of the important indicators. Participation in knowledge economy requires people to have higher qualifications and to be capable of greater intellectual independence. Literacy Rate even though a formulating factor does not necessarily indicate a rise in the economy.

The changing political and scientific discourse has influenced the engagement of HEIs in regional development in general and sustainable development in particular. HEIs have developed and continue to develop from their “traditional” role as mere educational infrastructure and research institutions, to “new” roles as drivers for innovation and as stakeholders in public and private partnerships, as well as in planning processes (Chatterton and Goddard, 2000). The focus by the Indian Government is laid towards a liberal education approach in the HEI’s encouraging collaboration across departments to tackle local issues relating to clean water, energy, environmental sustainability, gender equality, preservation of endangered languages, preservation of local arts etc. (MHRD, 2019).

However, when we talk about local issues there is requirement for the involvement of the local population, the presence of Higher Educational Institutions in the local level helps in saving human resource mobility from elsewhere and also adding to the knowledge economy by involving the students of the place. Building Higher Educational Institutes to represent the local population with quality education can be one of the major developmental area in sustainability and adding man force in solving local problems with public and private investments. As the concept of sustainability alone, confronts considerable complexity and emphasizes the need for systemic, multi-dimensional and trans-disciplinary approaches (Radinger-Peer and Pflitsch, 2017). There seems to be much attention being given to equity, quality and access in the field of Higher education but there exists under representation in Post Graduate level of study and in the Elite and Prestigious Institutions. Despite improvement in Gross Enrolment Ratio these kinds of loopholes remain because of the regional and locational disparities along with the socio-economic factors. Geographical hurdle becomes as prominent as socio-economic hurdle in the access of Higher Education.

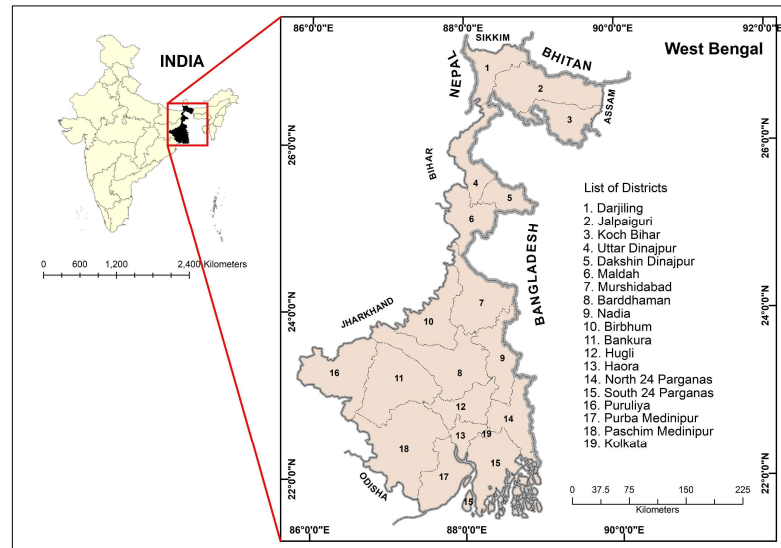
Table 2: District-wise development scores of Higher Educational Institutes

Districts	Development Score							CI	Ranks
	X1	X2	X3	X4	X5	X6	X7		
Darjiling	0.412	0.005	0.066	0.412	0.01	0.103	0.733	0.2487	12
Jalpaiguri	0.060	0.319	0.136	0.06	0.000	0.639	0.507	0.2459	13
Koch Bihar	0.032	0.166	0.078	0.032	0.001	1.000	0.562	0.2673	11
Uttar Dinajpur	0.000	0.332	0.011	0.000	0.002	0.482	0.000	0.1181	19
DakshinDinajpur	0.168	0.000	0.000	0.168	0.006	0.341	0.492	0.1678	17
Maldah	0.052	0.481	0.131	0.052	0.006	0.407	0.095	0.1749	15
Murshidabad	0.177	0.971	0.336	0.177	0.018	0.000	0.269	0.2783	10
Bardhaman	0.240	0.776	0.469	0.240	0.013	0.134	0.613	0.3550	4
Nadia	0.233	0.439	0.330	0.233	0.016	0.262	0.569	0.2974	8
Birbhum	0.240	0.276	0.109	0.24	0.009	0.018	0.415	0.1868	14
Bankura	0.182	0.25	0.077	0.182	0.002	0.085	0.400	0.1683	16
Hugli	0.177	0.42	0.291	0.177	0.016	0.367	0.813	0.3230	6
Haora	0.111	0.373	0.166	0.111	0.029	0.374	0.867	0.2902	9
Kolkata	1.000	0.214	1.000	1.000	1.000	0.330	0.974	0.7883	1
North 24 Parganas	0.261	1.000	0.82	0.261	0.035	0.280	0.894	0.5072	2
South 24 Parganas	0.099	0.980	0.387	0.099	0.004	0.280	0.660	0.3584	3
Puruliya	0.124	0.199	0.079	0.124	0.000	0.336	0.194	0.1508	18
East Medinipur	0.212	0.466	0.249	0.212	0.012	0.142	1.000	0.3276	5
West Medinipur	0.091	0.581	0.285	0.091	0.001	0.487	0.677	0.3162	7

(Source: Computed by the authors)

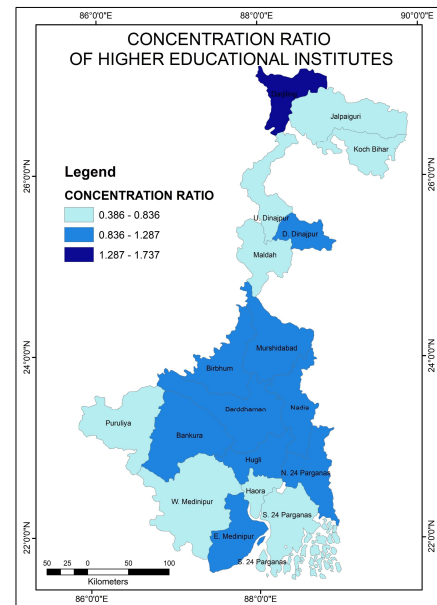
The growth of Higher Educational Institutes is not uniform throughout the state with certain districts showing high development pattern and certain districts low development pattern as seen in Table 2. Making higher education accessible, rapid and chaotic expansion is usually the result of underfunding of public institutions and private sector meeting market driven needs than implement quality programmes (World Bank Group, 2000). The existing development pattern of higher educational institutions in the various districts of West Bengal has been determined with the help of Composite Index which is a standardised value of the development scores of each of the indicator in the districts. Considering the development scores Kolkata has high development scores in most of the cases and also has the highest Composite Index value, 0.7920 and the lowest Composite Index value 0.1181 is in the district of Uttar Dinajpur. The districts have been ranked according to their Composite Index value with the top three districts located in the Southern part of the state: Kolkata, North 24 Parganas and South 24 Parganas respectively. Kolkata being the state capital and a functional region has high levels of development regarding higher education, the North 24 Parganas and South 24 Parganas being in close vicinity share a considerable portion of their area under the Kolkata Metropolitan area. Many important Higher Educational Institutes fall in the Kolkata Metropolitan area but are not situated in the Kolkata district. As seen earlier in Table 1 that despite having very small share of eligible population Kolkata has the highest share of enrolment, this is because there are a large number of students commuting to the Higher Educational Institutes in Kolkata districts from the districts nearby alongside the in migration of students from the other districts from where commutation is not possible. Similar situation is prevalent in the northern part of West Bengal where Siliguri Metropolitan area is made up of parts of Darjiling and Jalpaiguri districts. The Higher Educational Institutes that are scattered in the Siliguri Metropolitan area enrol students from both the districts. As higher educational institutes battle to cope with ever increasing student numbers responding to the problem without diluting the quality is a major challenge (World Bank Group, 2000).

Fig. 1: Location map of the study area



(Source: Prepared by the authors)

Fig. 2. Concentration ratio of the Higher Educational Institutes in West Bengal



(Source: Prepared by the authors)

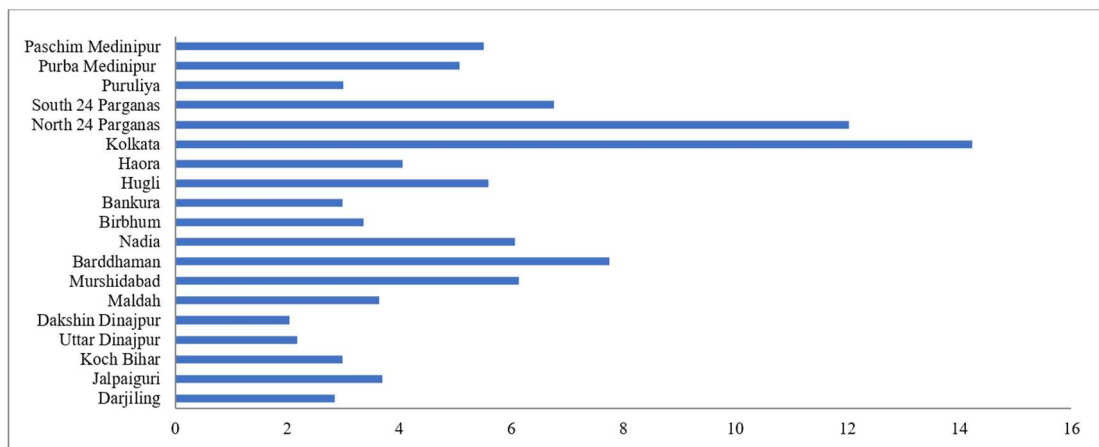
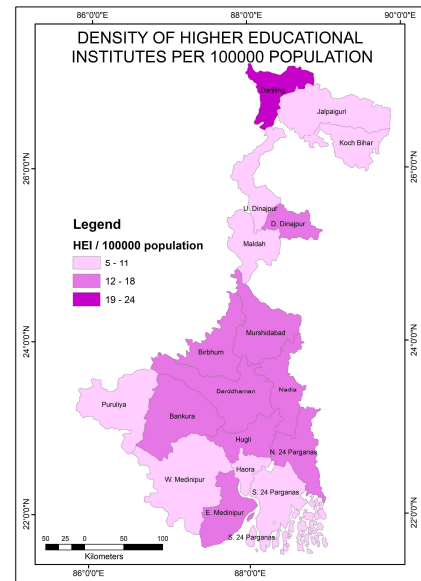


Fig. 3. District-wise Share of Enrolment in the Higher Educational Institutes of West Bengal

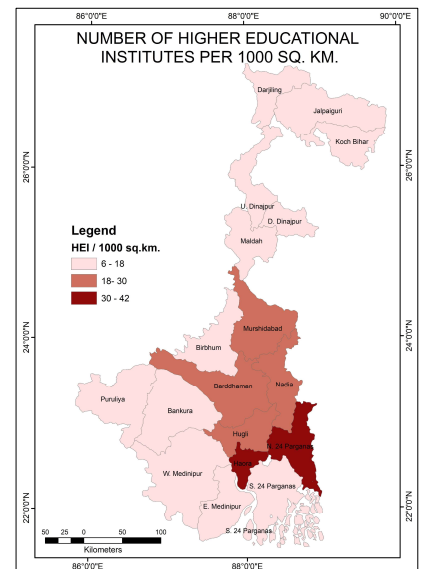
(Source: Prepared by the authors)

Fig. 4: Density of the Higher Educational Institutes per lakh population in West Bengal



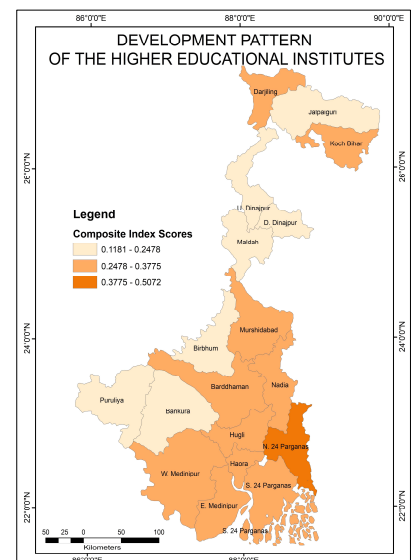
(Source: Prepared by the authors)

Fig. 5: Number of Higher Educational Institutes per 1000 sq. km. in West Bengal



(Source: Prepared by the authors)

Fig. 6: Developmental pattern of the Higher Educational Institutes in West Bengal



(Source: Prepared by the authors)

Fig. 6 shows the development pattern of the HEI's and has been categorised into three different groups:

- *Low Development Pattern (0.1181-0.2478)*: Uttar Dinajpur, Dakshin Dinajpur, Maldah, Birbhum, Bankura, Puruliya, Jalpaiguri
- *Medium Development Pattern (0.2478-0.3775)*: Darjiling, Koch Bihar, Murshidabad, Barddhaman, Nadia, Hugli, Haora, East Medinipur, West Medinipur, South 24 Parganas.
- *High Development Pattern (0.3609-0.7920)*: North 24 Parganas.

The availability and development of the HEI's determine the future accessibility, participation and attainment of Higher Education of the future eligible population in the area. Expansion development produced a variety of consequences, in many instances; existing institutions grow in size transforming themselves into overcrowded spaces or in depletion of the existing institutions due to lack of students. Development does not always mean growing in number of one factor, in the case of this study there is either requirement of increasing the number of institutions to do away with the problem of overcrowded institutions or to increase the number of students so that each of the existing institutions are well represented. Having found the development pattern depending on the spatial distribution and concentration of the Higher Educational Institutions, it becomes important to find out if there is any further scope of development in each of the districts. This is where the Average Size (AS) of the Higher Educational Institutes plays a very important role. The AS of the HEI's in West Bengal is calculated as 1115(State Average), so if the district has: $AS > \text{state average}$, means there is overcrowding in the institutes so more Higher educational Institutes need to be established. $AS < \text{state average}$, means there is a need of expansion so the enrolment has to be increased. (CPRHE Research Paper 11, 2018)

Table 3: Table showing districts with need of establishing HEI's and need of expansion.

Categories	Name of Districts
AS> 1115	Koch Bihar, Jalpaiguri, West Medinipur, Uttar Dinajpur, Maldah, Puruliya, Haora, Hugli, Dakshin Dinajpur, Kolkata, South 24 Parganas, North 24 Parganas.
AS< 1115	Nadia, Darjiling, East Medinipur, Barddhaman, Bankura, Birbhum, Murshidabad.

Source: Computed by the authors

Note: The above table has been computed according to the average size of the HEI's in each district compared to the state average.

Endnotes:

¹ The age group mentioned by Young Adult Development Project in 'Changes in Young Adulthood' (<https://hr.mit.edu/static/worklife/youngadult/changes.html>). The students of the age group enrolled in higher education (AISHE Report, 2018)

² The age group mentioned by Young Adult Development Project in 'Changes in Young Adulthood' (<https://hr.mit.edu/static/worklife/youngadult/changes.html>). The students of the age group enrolled in higher education (AISHE Report, 2018)

³ The age group mentioned by Young Adult Development Project in 'Changes in Young Adulthood' (<https://hr.mit.edu/static/worklife/youngadult/changes.html>). The students of the age group enrolled in higher education (AISHE Report, 2018)

⁴ A composite index is a function of variables and weights that maps attainments in a variety of attributes into a single real number, which may have cardinal meaning or be merely ordinal (Santos and Santos, 2014).

⁵ The CPRHE Research Paper 11 has been published by the Centre for Policy Research in Higher Education, NIEPA.

⁶ Excluded from the analysis as Kolkata is a metropolitan district having 1032 number of Higher Educational Institutes per 1000 sq. km. of area which is extremely high compared to the other districts of West Bengal.

6.0 Conclusion:

Amidst all the attention given to the quality of the Higher Educational Institutions, its governance and curriculum the discussion about where and how Higher Educational Institution should be set up and expanded is very important. In the study as it is seen how there exists regional differences in the concentration and number of Higher Educational Institutions representing the eligible population. This leads to some districts being highly represented and some being under represented, which in turn affects the overall development of the area. So like that of primary and high schools, higher educational institutes should also find its place in policy making in regard to the expansion based on location. Focus on primary and secondary education led to neglect in tertiary education. The state shares boundary with three other countries, the longest being with Bangladesh (2217 km), so there is a need to give special attention regarding infrastructural development of Higher Education in the Border areas, the Border Area Development Programme (BADP) finds no mention about schemes or projects that can be formulated for the growth of Higher Educational Institutes in these areas. Like the country, West Bengal is rurally dominated with 68.11 percent population living in the rural areas, thus making it important for policy makers to consider how Higher Educational Institutions should be set up in the rural areas, despite laying all focus on urban areas, with equality and quality education being provided. Opportunity is intertwined with geography, there should be proper location analysis before the establishment of Higher Educational Institutes in the area where there is overcrowding of the student population.

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