

Report No: AUS17080

# Republic of India

## India: Bihar Higher Education

### **BACKGROUND REPORT ON ACCESS, EQUITY, EXCELLENCE AND FINANCE IN HIGHER EDUCATION IN BIHAR**

May 2015

SASED - HIS

SOUTH ASIA



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**BACKGROUND REPORT**

**ON**

**ACCESS, EQUITY, EXCELLENCE AND FINANCE**

**IN**

**HIGHER EDUCATION IN BIHAR**

Prepared for the Two-Day Conference on Higher Education regarding "Improvement in the Functioning of Universities and Bringing about Professional Approach in Dealing with Different Issues Relating to Overall Academic and Educational Environment", September 21-22, 2013 Raj Bhawan, Patna, Bihar by, in alphabetical order, Venkatesh Kumar, Kurt Larsen, Toby Linden, Soumya Mishra and Soumi Saha from the South Asia Human Development Department - Education, World Bank

Part of the funding for this report was graciously provided by the United Kingdom's Department for International Development.

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## Executive Summary

This Background Report prepared by the World Bank is written at a time when the Government of Bihar (GoB) is launching a number of reforms in higher education. A Private Universities Bill passed the Bihar State Assembly in April 2013 paving the way for opening of private universities in the state. A strong effort to encourage universities and colleges to obtain NAAC accreditation has been initiated. 104 colleges and 2 universities have recently submitted their Letter of Intent to NAAC seeking accreditation. The Education Department expects that about 150 constituent colleges and all state universities will eventually apply for NAAC accreditation. Progress is also expected in filling faculty positions through a merit based transparent process facilitated by the Public Service Commission where the candidates for universities and colleges must have taken the NET/SLET Exams to be qualified for appointment to Assistant Professor in universities and colleges. Furthermore a working group with Prof. N.R. Menon as Chair has been set up to revise the University Act for Bihar over the next few months.

The GoB has furthermore drawn a five-year blue print 2013-2017, “Mission Manav Vikas – Inclusion Through Education” with very ambitious goals for higher education. From 2012 to 2017, the goal is to raise the Gross Enrollment Rate (GER) in higher education from 15 to 30%; to increase the number of NAAC grade A Colleges from 4 to 50; to establish 50 new community colleges; to increase the constituent colleges offering B. Ed. courses from 3 to 60, and the set up 20 new private universities. It is foreseen that these goals would demand a tri-fold increase in the spending on higher education to be largely covered by the budget of the GoB as well as additional private investments.

The objective of this Background Report is to provide policy-makers and stakeholders in higher education in Bihar with an overview of the opportunities and challenges that the State is facing in terms of reaching the ambitious goals in Mission Manav Vikas. The Report analyzes the data and information which is readily available on the access, equity, excellence and finance. It can also be used as a baseline for the State Higher Education Plan in Bihar drafted as part of the RUSA process<sup>1</sup>.

The Report is reflecting what has been possible to do in a short period of time with the available data and information. Some of the key issues that would need to be further examined, are 1) how access and equity issues for women and minorities in higher education can be improved e.g. through cultural, social and educational policies; 2) how public spending can be most effectively used to leverage reform and how the role and size of private financing of higher education in Bihar can be further expanded both in terms of investments from private universities and colleges and families paying student fees; 3) how to get information and data on graduates

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<sup>1</sup> Ministry of Human Resource Development (2013). Rashtriya Uchchatar Shiksha Abhiyan (RUSA). New Delhi.

rates and employment data by academic field and labor market demand by sectors that could inform how best to develop the planned expansion of higher education enrollment in Bihar; and 4) what governance or institutional reforms are needed to promote better quality.

### **Education and Labor Market Status and Outcomes of Young People**

The population in the age group of 18-23 in Bihar is estimated to be around 7.4 million, comprising 7% of the total population of the state. Historically Bihar has fared well below the national average in India in terms of literacy and educational attainment. 47% of the 15 years and above are not literate in Bihar compared with 32% for all India. This is despite significant progress over the last couple of decades in female literacy which improved from 33% in 2001 to 53% in 2011. Almost 33% of the young people in Bihar between 18-23 years old never attended an education institution compared to the national average of 13%. Strikingly, almost half of the women between 18-23 years have never been enrolled in an education institution.

It has not been possible to collect data on higher education outcomes except on labor market data presented below. For example, there is no information about graduation rates. In Bihar, overall unemployment rates are very low, at 3.3% for those who are not literate and 9.9% for graduates, which is not surprising since most people cannot afford not to work regardless of their educational attainment. For all India the comparable unemployment rates are however somewhat lower at 1.7% for not literate and 7.5% for graduates. The Labor Force Participation of people in the age group 18-23 is relatively low at 36% compared to 44% at the national level. For the age group of 18-23 the unemployment for graduates in Bihar is very high at 84% indicating that for the newly graduated it takes time to find an occupation (but also they can afford to wait to get a suitable job).

Males and females with higher education qualifications have also quite different labor market force participation rates. Overall, 60% for males but only 8% of females are participating in the labor force. About 45% of the boys below 30 years of age and with a degree are in the labor force while the percentage is only 24% for girls. Even more astonishing is the fact that 51% of the women under 30 years with a degree are neither working nor studying; while for boys this figure is only 12%. It seems that there are non-educational issues preventing many women from working.

### **Access and Equity to Higher Education**

Bihar's higher education GER is one of the lowest in the country at 10.5% and is significantly lower than the national GER of 19.4%. The state has a very low median age and a rapidly increasing number of students are projected to graduate from higher secondary schools in the coming years. While the current higher education enrolment stands at 1.04 million students, it is estimated that Bihar will need to increase its enrollment capacity by 2.5 to 4 times by 2018 and up to 4 to 6 times by 2023, in order to reach the national average GER.

The student enrolments in Bihar are overwhelmingly in the streams of Arts, Science and Commerce with 78% of the total higher education enrollment. More professionally-oriented studies in medicine, polytechnics and engineering represent only about 5% of the total enrollments. There seems to be an urgent need to increase the quantity and quality in these fields as the economy of Bihar increasingly will demand technical and professional expertise. The state has furthermore an insufficient number of teacher training colleges and Government B. Ed. Colleges to meet the demand for well-qualified teachers in primary and secondary education. Finally, access to post-graduate and doctoral level education is extremely low in Bihar as about 93% of all the students in 2010-11 were undergraduates. This compares with Madhya Pradesh, where the percentage of students enrolled in post-graduate studies was 19% in 2010-11. Building high-quality research-based post-graduate studies will take time and it would be important to tap into the possibilities that the RUSA Scheme will provide as well as the different research funds managed by UGC.

Bihar does not perform well in terms in access for higher education for women and the minority communities compared with other states. The gender parity index for the state is the third lowest in India; only 42% of the students in higher education are women. Similar patterns are seen in faculty across the state with low proportion of females and disadvantages groups. Enrollment of women is particular low in medical and engineering education, and it falls across disciplines as students move from undergraduate to post graduate and doctoral studies. There is also high inequality for various disadvantaged groups' access to higher education institutions. In Bihar, Scheduled Castes (SCs) and Other Backward Classes (OBCs) have very limited access to higher education. The GER for SCs and for OBCs in Bihar (at 2.5% and 8.6%) are the lowest and second lowest in the country, respectively. Poor attendance in earlier phases of education is an important factor in explaining low enrolment in higher education of women and disadvantaged groups. It would be important to look further into the reasons why Bihar is doing poorly compared to other states in providing access to higher education for women and minorities.

There are nine General State Universities in Bihar and 616 affiliated and constituent colleges; the average size of the colleges, roughly 1840 students, is larger than the average size of colleges in India but low by international standards. To improve access to higher education, the GoB can either increase institutional density (create a higher number of colleges that are geographically spread out) or it can increase the average size of institutions (by adding to the infrastructure, facilities, faculty etc. of existing institutions). While many small institutions do make higher education more accessible geographically, they might not give access to good quality education. Larger institutions have the advantage of economies of scale and they can offer inter-disciplinary learning, more exposure to diverse student population often in an urban setting, and better labor market interactions. The GoB could support students from rural areas to enroll in an urban area, which would have the advantage that young people from rural areas would study in larger, better-equipped institutions. In practice, the GoB would most likely both have to build more and create larger institutions to meet the demand for higher education (this balance needs further exploration).

## **Excellence in Higher Education**

With the available data in Bihar, there is no straightforward way of measuring excellence or quality of teaching and research in higher education. There are however a number of indicators that can be evidence of quality. An important indicator is the number and qualifications of the teaching faculty. The student teacher ratio in Bihar is 39:1 which is substantially higher than the national average of 16:1. University colleges and local bodies have particularly high ratios at 47:1 and 63:1, respectively. It underpins the need for the GoB to proceed with the planned filling of the faculty positions under the auspices of the Public Service Commission in the fields where there are severe faculty shortages as well as high student demand. The division of teachers across various grades also shows that lecturers, tutors and temporary teachers form 71% of the teaching staff in Bihar. Faculty at junior levels often does not have enough expertise in their field to properly supervise Masters and Ph.D. students. As universities and colleges in Bihar are expanding their post-graduate capacity, it would be important to fill in more senior faculty positions.

Another way of looking at quality of higher education is the number of institutions or departments that have cleared quality parameters set by national bodies such as UGC and have been recognized for their excellence. Very few institutions from Bihar qualify for criteria-based grants given by UGC. Bihar has only 6 colleges and no universities that qualify for “institutions with potential for excellence”. The comparable figures for Andhra Pradesh, Madhya Pradesh and Uttar Pradesh are 26, 8 and 24, respectively. Moreover, Bihar has only 3 major research projects supported by UGC whereas Andhra Pradesh, Madhya Pradesh and Uttar Pradesh have respectively 134, 9 and 63 such projects.

Good infrastructure is another requirement for providing good quality education. While most universities and colleges are equipped with libraries and sport facilities; laboratories are not available in as many as 21% of the institutions. About 44% of the colleges and 20% of the universities do not have computer centers. Other facilities that are essential for the quality of student life such as health centers and cafeterias are not available in the large majority of institutions. It should be underlined that these figure report the availability of infrastructure, not its quality.

## **Financing Higher Education**

Bihar’s expenditure on higher education as a proportion of total public education expenditure in 2008-09 was relatively high at 15% compared to the all India average of 10%. On the other hand the per capita expenditure on higher education in Bihar in 2010-11 at Rs. 1221 is less than a third of the all India level at Rs. 3865. Three factors can be put forward to explain this apparent paradox. Firstly, the GDP per capita in Bihar is about half of India’s GDP per capita; secondly the relative number of students enrolled in higher education in Bihar is significantly lower than the national GER in India; and thirdly the annual amount that each higher education

student paid on higher education fees, etc., in Bihar is also significantly lower in Bihar (Rs. 4665 in 2007-08) than at the national level (Rs. 7360 in 2007-08).

A sizeable source of finance for colleges is student fees. In 2010-11, the colleges in Bihar received 19% of their financial income from student fees. As the annual expenditure per student in higher education in Bihar is lower than most other states, the colleges in Bihar most likely derive less of their income from student fees than it is the case in other states.

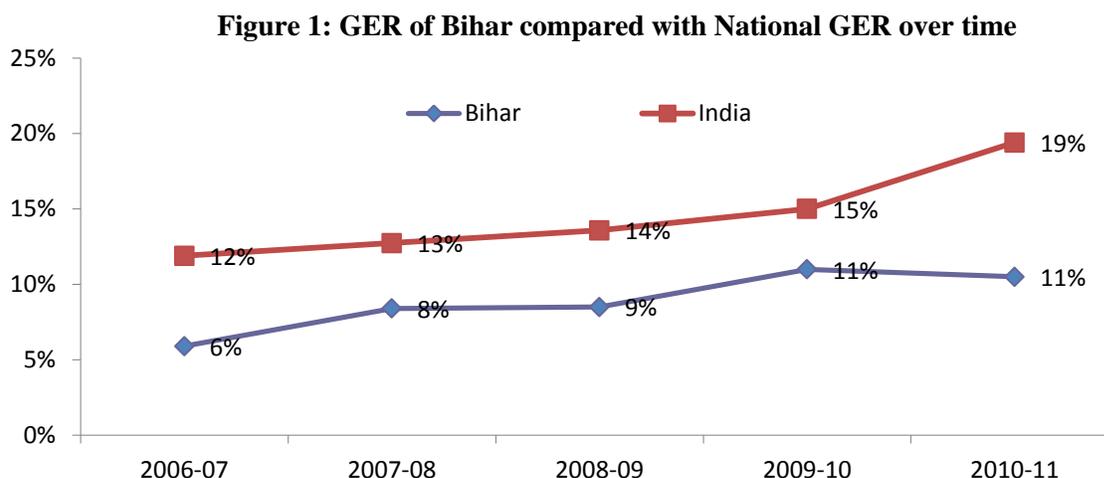
The proportion spent by universities and colleges in Bihar on salaries was 77% in 2010-11, which is significantly lower than e.g. the 90% spent on salaries in Madhya Pradesh. This is encouraging in terms of there being resources for quality improvement. In the short term, as the state is in the process of recruiting more teachers to fill its vacant posts, it is likely that expenditure on salaries will increase. However, it is advisable that spending on the non-salary component also increases proportionately.

In order to meet the ambitious goal raising the GER in higher education in Bihar to 30% by 2017 significant additional resources from the GoB, from the Government of India through RUSA, and not at least from investments from private universities and families will have to be identified and spent in an way that would improve the quality and relevance of higher education. It is not only more resources that is needed, but also new higher education institutions such as community colleges, which offer 2-year college studies with a combination of skills courses and a wide range of work-relevant activities including internships in a working place. Furthermore, new methods of curriculum delivery, especially student centered learning, and greater use of contemporary knowledge resources would need to be expanded. The learning environment of universities and colleges needs be modernized to enable technology-intensive pedagogy and learning. It would be crucial to build capacity in Bihar both at the state and institutional level to monitor and evaluate the higher education reforms. Finally, there will be a series of governance and institutional reforms necessary to meet this challenging agenda. The World Bank will be exploring these issues in more detail during the next phase of its support to the GoB.

## Access

The GER for Bihar is 10.5%, i.e., only 10.5% the population in the age group of 18-23 years is enrolled in institutions of higher education (Figure 1). India's GER stands at 19.4%<sup>2</sup> and Bihar's GER is above only that of Jharkhand, Daman & Diu, Dadra & Nagar Haveli.

By 2026 Bihar is expected to have the third lowest median age at 29 years,<sup>3</sup> making it the state with the youngest and possibly largest workforce after Uttar Pradesh and Madhya Pradesh. Unless enough capacities are created in the vocational and higher education system to accommodate the large number of students that will be exiting the schools, Bihar will fail to use the potential of this human resource.



Source: Selected Education Statistics, MHRD 2006-07 to 2010-11. The methods of data collection on the basis of which MHRD calculates GER have changed from 2010-11 onwards. The data from the past years may not be comparable to the data in 2010-11 on all parameters.

### Young People in Bihar

There are approximately 7.4 million people in the age group of 18-23 in Bihar. The composition of the young population of Bihar shows that 32.6% of 18-23 year olds have never had access to any educational institution and 42.5% of the young people have some education but are currently not engaged in higher education. Only 15.6% people of this age group have finished school, the number of graduates and post graduates is 8.2% and 0.5%, respectively. SCs and STs are the weakest groups in the population; when compared with others as their access to higher education is far more limited than their access to school education.

<sup>2</sup> All India Survey of Higher Education, 2010-11, MHRD

<sup>3</sup> Office of the Registrar General & Census Commissioner (2006). Population projections for India and States 2001-2026. New Delhi.

**Table 1: Education Status of Young People in Bihar 2009-10**

Age 18-23 yrs	Total	Male	Female	Rural	Urban <sup>4</sup>	ST	SC	OBC	Others
Population estimate '000	7410	3945	3466	6459	952	165	1553	4359	1321
<b>Education status</b>									
Never attended educational institution %	32.6	20.2	46.3	35.6	12.7	8.2	52.7	31.4	15.9
Ever attended but currently not attending %	42.5	44.4	40.4	42.9	39.8	83.8	32.2	43.8	44.7
School %	15.6	22.5	7.9	14.4	23.1	8.0	12.5	16.0	18.9
Graduate %	8.2	10.8	5.4	6.4	20.3	0.0	2.5	7.8	17.7
Diploma or certificate (below grad. Level) %	0.5	1.0	0.02	0.1	3.0	-	-	0.8	0.1
Diploma or certificate (graduate and above) %	0.6	1.0	0.1	0.5	1.1	-	-	0.1	2.8
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Work</b>									
LFPR (usual status) %	35.8	60.0	8.3	36.3	32.8	34.5	42.7	35.9	27.6
WPR (usual status) %	31.8	53.1	7.7	33.4	21.0	24.8	38.4	31.8	24.9
Unemployment (usual status) %	11.1	11.6	7.4	7.8	36.0	28.1	10.1	11.3	9.8
Neither studying nor in labour Force %	39.7	5.6	78.3	42.0	24.1	57.1	41.5	40.1	34.2

Note: LFPR=Labour Force Participation Rate; WPR= Worker Participation Rate

Source: National Sample Survey, 66<sup>th</sup> round

## Future Demand for Higher Education

In 2010, 592,196 students passed out of higher secondary education system (both CBSE and the Bihar State Board)<sup>5</sup>. In the same year, about 348,100<sup>6</sup> students entered the higher education system in undergraduate and diploma courses. This implies (keeping in mind variations caused by the students migrating in and out of the state for higher education), the transition rate from higher secondary to higher education was close to 58%.

As of 2009, the national average of transition rate from school to college stood at 67.55%<sup>7</sup>. Considering that, like the rest of the country, Bihar will be looking at higher transition rates in the future as well as higher number of students passing out of higher secondary schools, enough capacities will have to be created in higher education to accommodate these students. From 2005 to 2010, the CAGR (compounded annual growth rate) of students passing out of Bihar Education Board has been about 14.6%. Depending upon the growth rate of students passing out of school and the transition rates from higher secondary to higher education, the student intake in higher education may vary from .8 mil to 1.3 mil by 2018 (2.5 to 4 times current capacity) and 1.1 mil to 2.0 mil by 2023 (4 to 6 times). This will call for substantial

<sup>4</sup> The lists of census villages as published in the Primary Census Abstracts (PCA) constitute the rural areas, and the lists of cities, towns, cantonments, non-municipal urban areas and notified areas constitute the urban areas

<sup>5</sup> Includes students under the Bihar Education Board and the Central Board of Secondary Examination, 2010

<sup>6</sup> Estimated using total enrolment figures across disciplines from All India Survey of Higher Education, 2010-11

<sup>7</sup> Selected education Statistics, MHRD, 2009-10

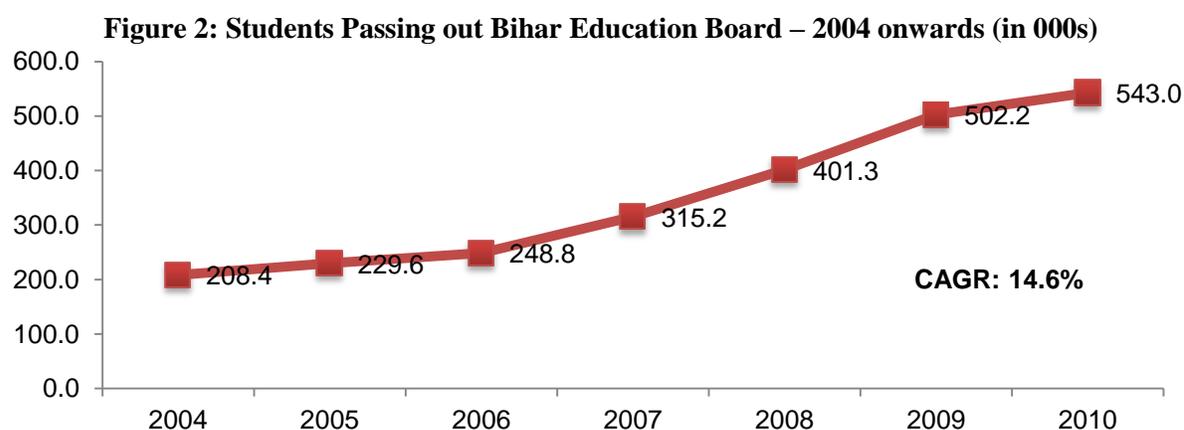
increase in the capacity of higher education institutions in the state. These system-level projections will also need to be broken down into discipline-wise enrolment capacities.

**Table 2: Estimates for Student Intake in Higher Education<sup>8</sup>**

Assumption				Estimate			
CAGR 2018	CAGR 2020	Transition Rate 2018	Transition Rate 2020	School Pass-Outs (mil)		Higher Education Intake (mil)	
				2018	2023	2018	2023
14.7%	11.7%	58.0%	61.0%	1.62	2.28	0.94	1.39
13.2%	10.2%	58.0%	61.0%	1.46	1.91	<b>0.85</b>	<b>1.17</b>
16.2%	13.2%	58.0%	61.0%	1.80	2.71	1.04	1.65
14.7%	11.7%	67.5%	70.5%	1.62	2.28	1.09	1.61
13.2%	10.2%	67.5%	70.5%	1.46	1.91	0.99	1.35
16.2%	13.2%	67.5%	70.5%	1.80	2.71	1.21	1.91
14.7%	11.7%	73.0%	76.0%	1.62	2.28	1.18	1.73
13.2%	10.2%	73.0%	76.0%	1.46	1.91	1.07	1.45
16.2%	13.2%	73.0%	76.0%	1.80	2.71	<b>1.31</b>	<b>2.06</b>

Notes: CAGR=Compounded annual growth rate.

Source: Authors' calculations using data from Bihar State Board Number



Source: Bihar Education Board, Annual Statistics

## Enrolments and Institutional Spread

In 2010-11, Bihar had a student enrolment of about 1.05 million students in 20 universities and 631 colleges, across all levels of higher education. The average enrolment of a college in Bihar was 1858, the third highest after Delhi, Arunachal Pradesh and Chandigarh (and it is worth noting that Delhi and Chandigarh are exceptions as both areas are educational hubs that attract a large student population, especially the large institutions of national importance). The institutional size varies a lot; there are four colleges in Bihar with enrolments between 10,000 and 16,000, and there are also many institutions that are very small, notably Sanskrit colleges with an average enrolment of only 237 students. On the whole, constituent colleges are

<sup>8</sup> Scenarios based on current CAGR, 1.5% higher and lower CAGRs, current transition rate (58%), current national average transition rate (67.5%), high transition rate (73%). Base year 2010.

25-30% larger in size than affiliated colleges in Bihar. As can be expected, the size of rural colleges is smaller than urban colleges. Looking at colleges under various managements, private aided institutions have the largest average enrolments while private unaided institutions are considerably smaller. The average enrolments need to be seen in conjunction with factors such as availability of land, infrastructure and faculty to assess the quality of these institutions. The size of existing institutions and the resources at their disposal can be valuable inputs for the expansion of the higher education system in the state.

**Table 3: Average Enrolment in Colleges**

Constituent College	2046	Local Body Managed	1839
Affiliated College	1629	Private Aided Managed	2966
Rural College	1619	Private Unaided Managed	1134
Urban College	2066	State Government Managed	2092
Women's College	1831	University Managed	1839

Source: Constructed from All India Survey of Higher Education, 2010-11. Data pertains to 517 (out of 630) colleges for which complete information was available:

To improve access to education, the State can either increase institutional density (create more number of colleges that are geographically spread out) or it can increase the average size of institutions (by adding to the infrastructure, facilities, faculty etc., of existing institutions). While a large of small institutions do make higher education more accessible physically, they might not necessarily give access to good quality. Large institutions have the advantage of economies of scale; they offer inter-disciplinary learning, exposure to diverse student population, urban environment, better labour-market interaction etc. More importantly, in a state like Bihar, physically creating institutions from scratch will require heavy investments; the same investments may yield greater returns if applied in strengthening existing institutions.

**Table 4 Enrolments across levels in Bihar**

Level	Enrolment	% Of Total Enrolment
<b>Excluding Engineering and Medicine</b>		
Ph.D	1,629	0.16%
Post Graduate	68,113	6.59%
Under Graduate	959,312	92.88%
PG Diploma	746	0.07%
Diploma	1,086	0.11%
Certificate	1,187	0.11%
	<b>1,032,871</b>	
<b>Engineering</b>		
Undergraduate	9,592	100.00%
<b>Medicine</b>		
Post Graduate	620	16.92%
Under Graduate	2754	75.16%
PG Diploma	290	7.91%
<b>Grand Total</b>	<b>1,046,127</b>	

Source: All India Survey of Higher Education, 2010-11

Out of the 1.05 million students studying in Bihar, 92.8% are enrolled in undergraduate education. This indicates that a large number of students do not opt for higher education after an undergraduate level. The reasons for this need to be explored, but could be because of a variety of reasons such as the perceived lack of value added by post graduate or doctoral studies, poor quality of teaching at higher levels, lack of resources to pursue further education, limited capacity of institutions to support PG studies. There are also a very small proportion of students opting for diploma and PG diploma courses. Usually, such courses are designed for shorter periods of time and provide skills that are relevant in the job market. Lack of enrolments in such courses gives an indication towards the level of job-orientation of the higher education system and the flexibility provided to students.

The situation in engineering and medical education is not very different from other fields in higher education. Engineering institutions do not have any students enrolled in masters or PhD level education. Medical colleges do have a higher proportion of students in masters and PhD level studies, which is expected, given the research-based nature of these disciplines.

Out of the 20 Universities in Bihar, 16 institutions are funded by the State. Of these, only 9 are State Universities dedicated to general higher education, 7 others are uni-disciplinary. These include a Medical University and 2 Agricultural Universities both of which have constituent colleges; the National Law University, the recently constituted Technical University, the open University and the Urdu University which do not have any attached colleges. Apart from this, there are 4 centrally funded institutions in Bihar; IIT Patna, NIT Patna, Central University Bihar and Nava Nalanda Mahavihar.

**Table 5: State Universities in Bihar - General Higher Education**

University	Male	Female	Total Enrolment	Constituent Colleges	Affiliated Colleges	Total	Average Enrolment per College <sup>9</sup>
Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur	90,804	70,620	161,424	39	29	68	2,388
B.N Mandal University, Madhepura.	61,609	40,143	101,752	27	43	70	1,481
Jai Prakash University, Chhapra.	66,512	48,581	115,093	21	26	47	2,947
Kameshwar Singh Darbhanga Sanskrit University, Darbhanga.	15,557	11,535	27,092	31	31	62	237
Lalit Narayan Mithila University, Darbhanga.	104,173	69,198	173,371	43	41	84	1,894
Magadh University, Bodh Gaya.	83,548	52,049	135,597	44	102	146	2,120
Patna University, Patna	10,597	15,369	25,966	10	3	13	1,414
Tilka Manjhi Bhagalpur University, Bhagalpur.	67,589	51,282	118,871	29	24	53	2,889
Veer Kuwar University, Arrah	74,705	52,961	127,666	17	56	73	1,907
	<b>575,094</b>	<b>411,738</b>	<b>986,832</b>	<b>261<sup>10</sup></b>	<b>355</b>	<b>616</b>	<b>1,880</b>

Source: All India Survey of Higher Education, 2010-11.

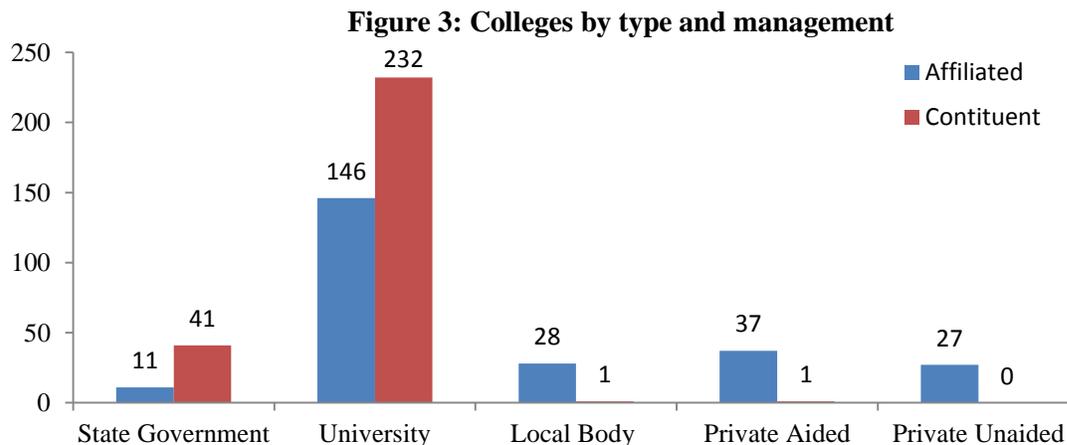
The 630 colleges include 275 Constituent Colleges and 355 affiliated colleges. Constituent colleges are those teaching institutions that are maintained and controlled by the University itself. Thus, their financial costs including the salaries for teaching and non-teaching staff are a responsibility of the state government. In addition, the state and university have a high

<sup>9</sup> Constructed from All India Survey of Higher Education, 2010-11. Data pertains to 517 (out of 630) colleges for which complete information was available, direct enrolments of the university are not included.

<sup>10</sup> Total number of constituent colleges in Bihar is 275, of the remaining 14, 12 colleges are under the two agricultural universities in Bihar and 2 under the medical university. Enrolments in technical/medical/agricultural institutions have not been included.

degree of administrative control over such institutions. The affiliated colleges, on the other hand, have different ownership and often receive very little or no funding from the state government. They are dependent on the affiliating university only for academic and examination related matters.

Most other states have the system of constituent colleges/government colleges and affiliated colleges. However, usually the number of affiliated colleges far exceeds the constituent colleges. In Bihar, the numbers of institutions under state or university management (430) far exceed the numbers under local body, private aided or unaided management (94). This shows the extent of state control in the higher education sector. There are also many governance and autonomy related implications of this kind of institutional spread. Constituent colleges are under the control of the university/government, the decision-making process regarding various (academic, financial, administrative) matters is often slower as one more layer of authority is added, these colleges are also less autonomous in many ways. Affiliated institutions are relatively faster in arriving at some of these decisions and hence more responsive to changes.



Source: Authors' calculations using data from All India Survey of Higher Education, 2010-11.

Note: Data pertains to 524 (out of 630) colleges for which complete information was available, remaining 106 are affiliated colleges.

The following diagram looks at the general make-up of the student population of Bihar in terms of the type of institutions and physical location across gender. This table has been constructed using the information from All India Survey of Higher Education; it includes enrolments of 517 colleges out of the 630 colleges in Bihar. Almost all the institutions for which the information is not available are affiliated colleges. Thus, it would be safe to assume that the enrolments for affiliated colleges as mentioned in the table can be 15%-25% higher. Having said that, the number of students enrolled in constituent and affiliated colleges might roughly be equal.

**Table 6: Distribution of Students**

	<b>Total Students</b>	<b>Constituent Colleges</b>	<b>Affiliated Colleges</b>	<b>Rural</b>	<b>Urban</b>
<b>Males</b>	558,103	323,457	234,646	247,197	310,907
	<i>59%</i>	<i>34%</i>	<i>25%</i>	<i>26%</i>	<i>33%</i>
<b>Females</b>	385,510	214,562	170,948	165,554	219,956
	<i>41%</i>	<i>23%</i>	<i>18%</i>	<i>18%</i>	<i>23%</i>
<b>Total</b>	943,613	538,019	405,594	412,751	530,863
	<i>100%</i>	<i>57%</i>	<i>43%</i>	<i>44%</i>	<i>56%</i>

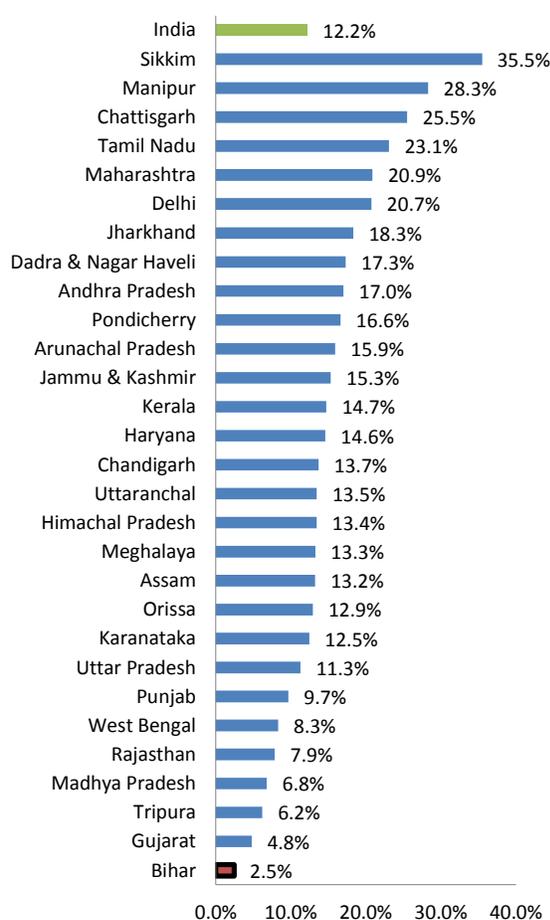
Source: Authors' calculations using data from All India Survey of Higher Education, 2010-11.

Note: Data pertains to 524 (out of 630) colleges for which complete information was available, remaining 106 are affiliated colleges.

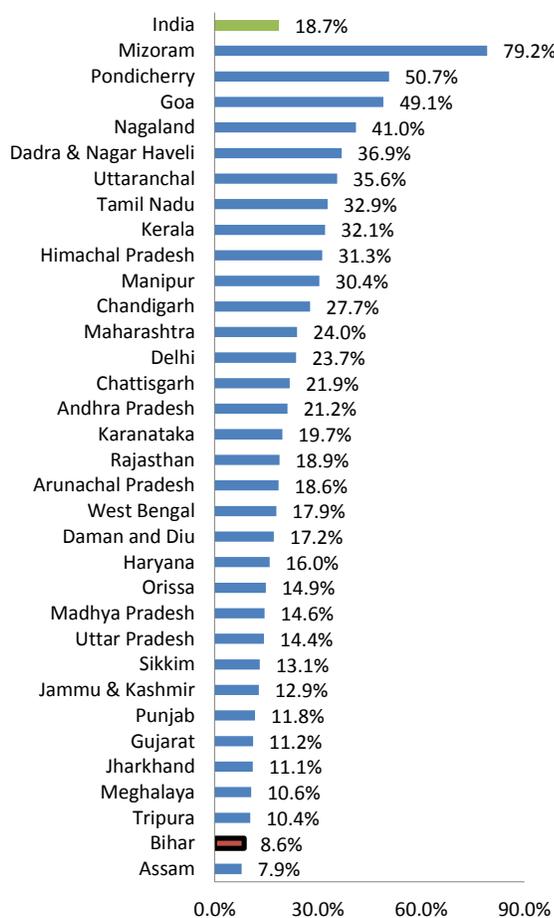
## Equity

Equal access to higher education is another important perspective of looking at higher education. Bihar does not fare very well in terms of access to higher education for women and the minority communities. While the overall GER of Bihar is 10.5%, the GER for SCs and OBCs stands at 2.5% and 8.6%<sup>11</sup>, well below the national average and some of the lowest scores for these indicators. Indeed Bihar is unusual in doing poorly with all types of disadvantaged groups. Given states' different experiences in enabling access of disadvantaged groups, this is an area where Bihar can learn from other states (and will be explored further).

**Figure 4: GER for Scheduled Castes**



**Figure 5: GER for Other Backward Classes**



Source: Education Statistics, MHRD 2010-11

<sup>11</sup> Population of Scheduled Tribes in Bihar is extremely low, thus very detailed data about their higher education status is not available. Sampling for such a small and thinly spread group is statistically unreliable, thus estimates have not been included in the analysis.

The distribution of faculty members across categories in Bihar tells a similar story. While the participation of OBCs in teaching is comparatively higher, the number of SC teachers is extremely low (despite existing quotas). For greater inclusion at the faculty level, it is an imperative to get more students from the disadvantaged groups into the fold of higher education and more importantly, promote their participation at post-graduate and doctoral levels.

**Table 7: Faculty Across Categories**

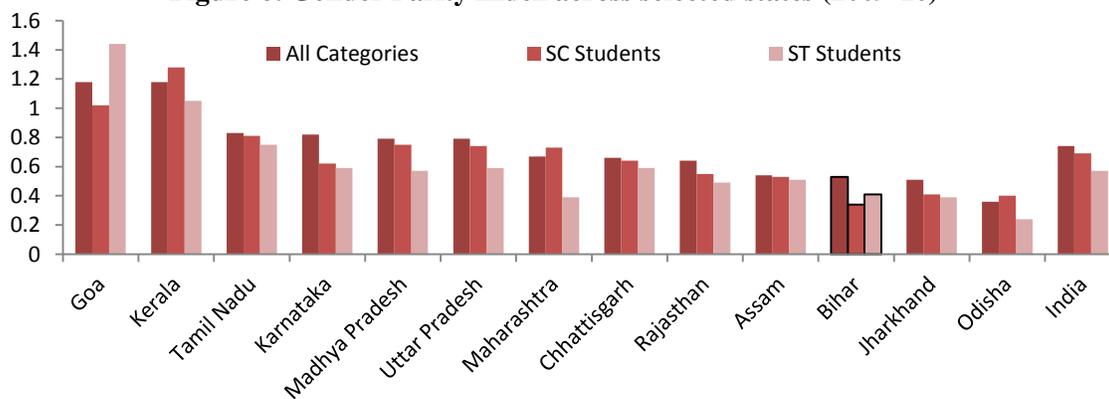
Category	Male	%	Female	%	Total
SC	315	87.3%	46	12.7%	361
ST	41	70.7%	17	29.3%	58
OBC	5,273	86.7%	809	13.3%	6,082
PWD	60	72.1%	15	27.9%	75
Muslim	1,182	84.4%	169	15.6%	1,351
Other Minority Communities	31	87.3%	12	12.7%	43
<b>Total Faculty (including general category positions)</b>	<b>21,179</b>	<b>70.7%</b>	<b>3,921</b>	<b>29.3%</b>	<b>25,100</b>

Source: National Sample Survey, 66<sup>th</sup> round

Across the categories, for students as well as faculty, the gender disparity is very obvious. The gender parity index for Bihar is 0.53, as compared to a national average of 0.74. Bihar's performance is better than that of only Jharkhand and Odisha. In terms of the GPI for Scheduled Caste category students, Bihar is at the absolute bottom (GPI of 0.34).

As seen in Table 1 earlier, in Bihar the proportion of women (in 18-23 year age group) who have never attended education institutions (at 46.3%) is 26.1% points higher than the men who have never attended any educational institutions. Out of the 53.7% who have ever attended educational institutions, 13.3% are attending any today while for men, out of the 79.8% who ever attended educational institutions, 35.4% are still attending institutions. This means that the rate of women attending educational institutions as well as them not continuing their education is far higher than men. A similar trend is seen in the labor market, with the labor force participation rate of women is very low and high rates of women who are neither studying nor working. This paints a rather grim picture; it is obvious that the coverage of the existing education system and the labour market it contributes to, is very limited and excludes many women. It brings to fore the question whether bringing girls into the fold of the education system is enough when no efforts are made to increase their participation in the labor force.

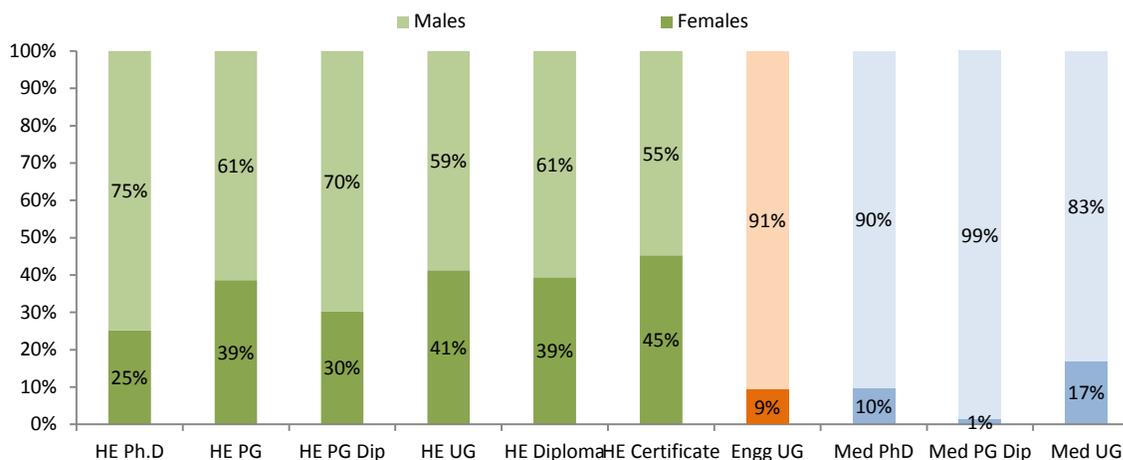
**Figure 6: Gender Parity Index across selected states (2009-10)**



Source: Selected Education Statistics, MHRD, 2009-10. Note: Gender Parity Index (GPI) is a socio-economic indicator which measures the relative access to education of males and females. The calculation of the GPI in the source is not explained.

As of 2010-11, in terms of enrolments, out of the 1.04 million students, 620,202 students are males while 425,925 students are female. The disparity in the enrolments of males and females increases as the level of studies increases. A very sharp difference is seen across gender lines in the medical and engineering enrolments, with very small proportion of female students.

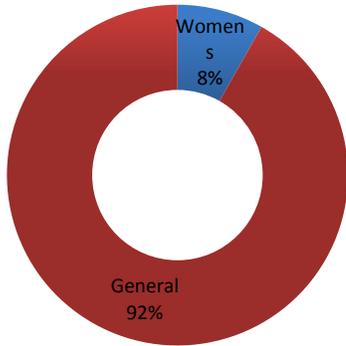
**Figure 7: % Level wise Enrolments across Gender**



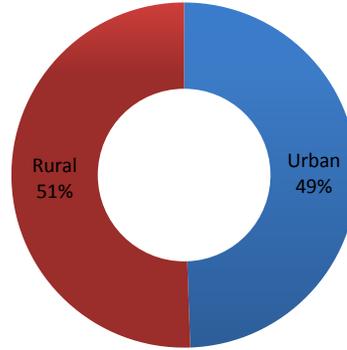
Source: All India Survey of Higher Education, 2010-11.

Bihar does not have any women’s university. According to the All India Survey of Higher Education, amongst the colleges, only 43 (out of the 524 colleges covered) are women’s colleges (as illustrated in the diagram below). However, the impact of creation of more women’s institutions on women’s enrollments needs to be investigated further.

**Figure 8: % of Women's Colleges**



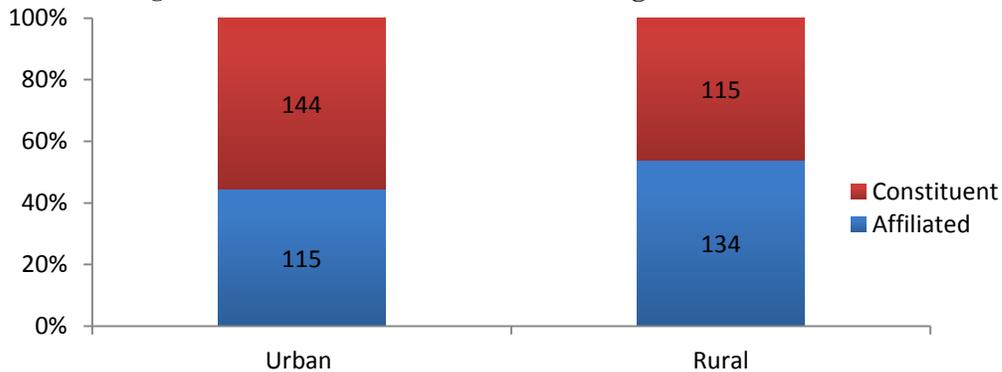
**Figure 9: Rural and Urban Colleges**



Source for both figures: Authors' calculations using data from All India Survey of Higher Education, 2010-11.  
Note: Data pertains to 524 (out of 630) colleges for which complete information was available, remaining 106 are affiliated colleges.

In terms of geographical distribution of institutions, 51% of the colleges in Bihar are situated in rural<sup>12</sup> areas; this might partly be explained by the fact that the urbanization level is lower in Bihar than many other states in India. Surprisingly, the reach of affiliated colleges is deeper in the rural areas than that of constituent colleges. There are more constituent colleges in urban areas than affiliated colleges. Since most affiliated colleges are private institutions, it is interesting to see their participation in rural areas, as in most other states private players are reluctant to establish institutions in rural parts of states. Understanding further why this is the case in Bihar would be important.

**Figure 10 Affiliated and Constituent Colleges across Urban and Rural Areas**



Source: Authors' calculations using data from All India Survey of Higher Education, 2010-11.  
Note: Data pertains to 524 (out of 630) colleges for which complete information was available, remaining 106 are affiliated colleges.

<sup>12</sup> For the AISHE survey, rural/urban status of an institution depends on the location of the administrative unit of the college and the way district administration designates said area

## **District-wise spatial Distribution**

The institutional density of colleges differs across districts in Bihar. There are some districts with very low density such as Sheohar, Pashchim Champaran, Purba Champaran, Supaul, Kishanganj, Kaimur, Banka etc., (0 to 3.5). On the other hand there clearly are districts with high concentration of institutions such as Darbhanga, Nalanda, Patna, Saran and Jehanabad (density of 10 to 26 institutions). Districts with low institutional density are also the institutions with lower higher education enrolments compared to total population. In terms of absolute enrolments, Patna, Darbhanga and Saran attract the largest number of students. The districts with low density of institutions and low absolute enrolments are largely rural and many are located at the border of the state with Nepal and Bangladesh.

In about 40% of the districts, more than half the students are enrolled in rural institutions. Arwal, Samastipur, Nawada and Banka have more than 74% students in rural areas. In Kishanganj, Purba Champaran, Jehanabad and Bhojpur, girls form less than one third of the student population. The average institution size again varies widely: Kishanganj and Siwan have less than 1000 students on an average in a college, while Nawada, Saran, Bhagalpur and Vaishali have institutions with more than 3000 students on an average.

In order to have a more balanced development, Bihar must aim to get more students from the backward and rural districts into the higher education system.

**Table 8: District wise Distribution of Institutions<sup>13</sup>**

District	Number of Universities	Constituent Colleges	Affiliated Colleges	College Population Index (No of Colleges per 1000 sq kms)	Enrolment in Higher Education*	HE Enrolment as a % of Population*	% of Girl Students*	Average Enrolment in Institutions*	Student Teacher Ratio in Institutions*	% of Enrolments in Rural Institutions*
Sheohar	0	0	0	0	0	0	0	0	0	0
Kishanganj	0	2	4	3.2	4,449	0.26%	<b>28.7%</b>	742	153	30.3%
Siwan	0	7	7	6.3	10,427	0.31%	41.3%	802	39	45.8%
Purba Champaran	0	7	2	2.3	19,578	0.38%	41.2%	2175	96	21.5%
Supaul	0	3	4	2.9	9,489	0.43%	<b>33.2%</b>	1356	102	71.7%
Jamui	0	2	2	1.3	7,687	0.44%	37.2%	2562	185	2.0%**
Sitamarhi	0	6	5	5	17,213	0.50%	36.6%	1565	90	17.9%
Lakhisarai	0	2	3	4.1	5,051	0.50%	50.0%	1684	146	<b>52.4%</b>
Araria	0	2	8	3.5	14,307	0.51%	38.6%	1431	274	<b>68.1%</b>
Katihar	0	4	7	3.6	15,988	0.52%	<b>33.0%</b>	1599	110	28.9%
Khagaria	0	5	0	3.4	8,708	0.52%	49.4%	1742	123	<b>56.0%</b>
Pashchim Champaran	0	4	7	2.1	20,844	0.53%	55.7%	1895	67	32.0%
Nawada	0	4	5	3.6	12,091	0.54%	50.9%	3023	148	<b>74.7%</b>
Aurangabad	0	5	8	3.9	13,904	0.55%	47.9%	2317	64	<b>62.4%</b>
Banka	0	2	7	3	11,424	0.56%	45.1%	2285	78	<b>76.2%</b>
Nalanda	1	6	20	11	16,291	0.57%	39.3%	1481	34	44.7%
Purnia	0	6	10	5	20,533	0.63%	52.0%	1467	80	<b>52.2%</b>
Jehanabad	0	3	7	10.7	7,111	0.63%	<b>31.1%</b>	1422	97	<b>63.0%</b>
Begusarai	0	6	4	5.2	19,098	0.64%	45.8%	1910	83	39.3%
Gaya	1	7	22	5.8	29,499	0.67%	35.8%	1844	50	22.8%
Saharsa	0	9	4	7.6	14,371	0.76%	40.5%	1198	63	18.6%

<sup>13</sup> Constructed using All Indian Survey of Higher Education, 2010-11

\* Data pertains to 517 colleges out of 630 colleges in Bihar for which complete information was available

\* Enrolments and faculty information takes into account only the Colleges and not Universities

\* All institutions including engineering and medical colleges for which complete information was available, have been included for the analysis

\* Basic unit of analysis and aggregation is the college

\* Rows marked grey have some of the lowest College Population Index while those marked green have some of the highest.

\*\*Out of the 4 colleges in Janui, only 1 is rural, it is a Sanskrit college with a very small enrolment, thus the number is skewed.

Madhubani	0	18	14	9.1	37,834	0.84%	39.2%	1182	62	48.4%
Gopalganj	0	5	4	4.4	23,786	0.93%	45.6%	2973	213	<b>70.9%</b>
Kaimur (Bhabua)	0	2	7	2.7	17,443	1.07%	43.4%	1938	72	13.9%
Madhepura	1	5	8	7.3	21,863	1.09%	36.7%	1682	77	<b>60.7%</b>
Muzaffarpur	1	19	12	9.8	52,937	1.10%	43.4%	1825	74	<b>55.3%</b>
Sheikhpura	0	2	2	5.8	7,061	1.11%	38.5%	2354	125	<b>62.2%</b>
Patna	8	38	46	26.2	69,445	1.19%	41.8%	1615	52	15.4%
Buxar	0	5	11	9.9	20,461	1.20%	40.5%	1364	82	51.9%
Darbhanga	3	21	22	18.9	47,535	1.21%	35.3%	1132	38	23.8%
Arwal	0	1	3	6.3	8,629	1.23%	36.2%	2876	66	<b>100.0%</b>
Samastipur	1	15	12	9.3	55,278	1.30%	41.3%	2303	87	<b>85.1%</b>
Vaishali	0	7	9	7.9	48,864	1.40%	40.2%	3054	96	<b>68.8%</b>
Munger	0	7	2	6.3	20,674	1.51%	51.2%	2297	169	29.4%
Bhojpur	1	6	14	8.1	45,199	1.66%	<b>29.5%</b>	2379	80	40.3%
Rohtas	0	8	25	8.6	53,328	1.80%	43.4%	1667	100	37.1%
Bhagalpur	2	13	11	9.3	56,295	1.85%	39.5%	3128	124	12.0%
Saran	1	12	17	11	78,918	2.00%	40.6%	3035	109	<b>51.6%</b>
<b>Bihar</b>	<b>20</b>	<b>276</b>	<b>355</b>		<b>943,613</b>	<b>0.91%</b>	<b>40.9%</b>	<b>1843</b>		<b>43.7%</b>

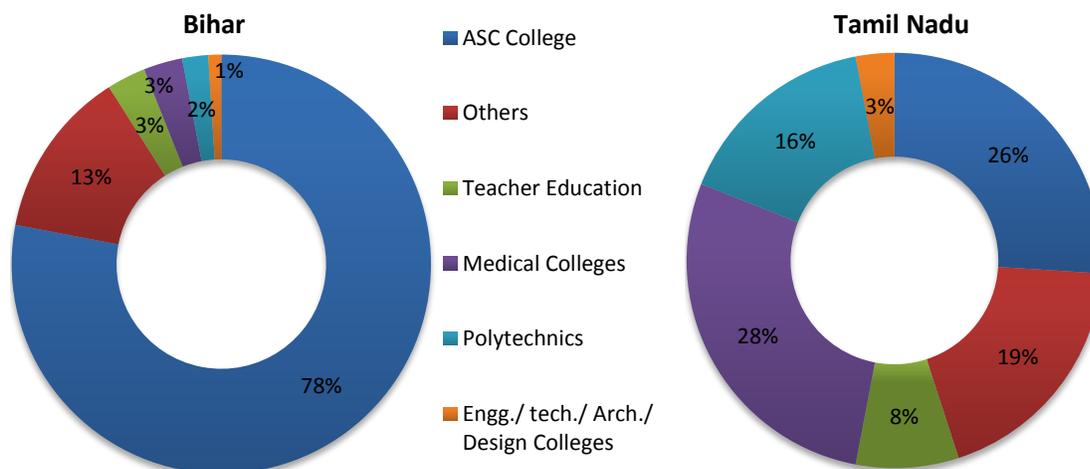
## Excellence

Quality of the higher education system can be looked at from multiple perspectives. The preferable means of assessing the quality include measurement of the learning outcomes, labor market outcomes etc. In case of Bihar, the available data only relates to some very basic indicators such as job orientation of the courses, student teacher ratio, infrastructural availability and performance of the state institutions against certain defined quality parameters.

### Subject-wise distribution of students

The student enrolments in Bihar are overwhelmingly in the streams of Arts, Science and Commerce. 78% of the enrolments are in these courses, while engineering and medical only form 5% of the total enrolments. The other end of the spectrum is a state like Tamil Nadu that has a very diverse mix of disciplines being pursued by the students. Bihar must look at the future needs of its economy and consider which fields of education would benefit it the most. Trends show an increasing demand for skill-based education from the labor markets. According to EY-FICCI (Higher Education in India: Twelfth Five Year Plan 2012-2017 and beyond), out of the 455 million jobs currently in the country, 89.7% are skill-based ((Sales, Service, Production, Farmers and related workers), 9.3% Knowledge Based (Professional, Administrative, Clerical) and 1% Knowledge + Skill Based (Architects, Engineers etc.). It suggests that out of the 75 to 80 million jobs that will be created in the 5 years (2012-17), about 75% would require vocational training. It also mentions that industry reports across the country indicate that around 20% of the graduates in general streams (BSc/ BA) are perceived to be unemployable as they lack specific skills while 25% of technical graduates and 10%–15% of other graduates are considered employable by the IT/ITES industries.

**Figure 11: Enrolments across Disciplines in Bihar and Tamil Nadu**



## Labor Force Participation of Young People

The unemployment levels in any state can give a partial indication towards the quality of higher education in the state. As can be noticed from the tables below, unemployment and idleness levels are very high in the 18-23 year age group in Bihar. The levels jump a lot higher for graduates. This is an indication of the fact that either graduates are unable to find employment that fits them or they are unsuitable for the employment opportunities that exist in the labour market. Often, students with graduation degrees are unwilling to do jobs that they consider to be “low paying” or not fit for their level of education, they choose to stay unemployed instead. It implies that if higher education does not keep up with the external environment, it becomes counter-productive. The important aspect to consider here is the fact that there is a gap between the expectations of the labor market and the resources that the higher education system is producing. In order to justify its cost, the system must be able to impart skills that improve earning capacity of the students. Institutions Bihar urgently need to align their curriculum and mode of instruction to the changing needs of the market. Despite their education status, women’s participation in the labour force is low in Bihar, thus they also add to the idle population. Efforts must be made by the institutions to prepare greater proportion of women for the labour markets.

**Table 9: Unemployment by Education Level 2009-10**

	<b>Unemployment % (All)</b>	<b>Unemployment % (18-23 yrs)</b>
Not literate	3.3%	7.3%
Literate w/o formal schooling	-	-
Below primary	3.5%	12.3%
Primary	1.8%	4.2%
Middle	4.1%	8.7%
Secondary	1.5%	7.5%
H.Secondary	3.1%	26.1%
Dip./Cert. below grad.	-	-
<b>Graduate</b>	<b>9.9%</b>	<b>84.1%</b>
<b>PG and above</b>	<b>1.4%</b>	<b>35.4%</b>

Source: Constructed using the National Sample Survey, 66<sup>th</sup> round

**Table 10: Unemployment by Education Level 2009-10**

18-23 yrs	Labour Force Participation	Studying	Neither
Total	35.7%	24.6%	39.7%
Male	59.9%	34.6%	5.6%
Female	8.4%	13.3%	78.3%
Rural	36.8%	21.2%	42.0%
Urban	28.4%	47.5%	24.1%
ST	34.9%	8.0%	57.1%
SC	43.6%	15.0%	41.5%
OBC	35.3%	24.6%	40.1%
Others	27.8%	38.0%	34.2%

Source: Constructed using the National Sample Survey, 66<sup>th</sup> round

A very small proportion of students engage in post graduate or doctoral studies. This has many implications on the system in terms of quality. Firstly, it points towards the lack of research done at college and university levels, by teachers as well as students. Secondly, it points to the small pool of students that the system is producing for the future consumption of the academic institutions in the form of faculty, teaching aids etc. Limited postgraduate studies are also an indication of the quality (or lack thereof) of faculty that is currently teaching at institutions of higher learning.

### **Faculty and Student-teacher Ratio**

The quality and number of teachers is a very critical determinant of the quality of teaching, learning and research that happens in any institution. High student teacher ratios may exist because the number of positions as compared to the number of students are less, the existing positions are vacant or both. States throughout India face challenges with faculty recruitments. Bihar's situation is a lot worse than many other states. The information regarding faculty vacancies is not available; however, it is known that the student teacher ratio in Bihar is 39:1. This ratio is lower than the national average of around 25:1 in 2009-10. The situation in Local Body Colleges and University colleges are of particular concern. It is important to note that we only have information about the faculty in terms of sufficiency but assessments of quality of the faculty, their qualification and training are elusive. Following are the student teacher ratios in Bihar across various categories of institutions:

**Table 11: Student teacher ratio across institution types**

Institution Type		Number	Student Teacher Ratio
<b>University</b>	State Public University	9	26.9
	Institute of National Importance	1	4.9
			<b>8.2</b>
<b>College</b>	State Government	52	20.8
	Local Body	29	63.2
	University	378	47.4
	Private Un-Aided	27	8.2
			<b>44.4</b>
<b>Stand Alone Institution</b>	State Government	47	12.4
			<b>12.4</b>
<b>Bihar</b>			<b>38.9</b>

Source: All India Survey of Higher Education, 2010-11

**Table 12: Student teacher ratio across selected states and institution types**

State	State Public University	State Government College	Local Body College	University College	Total
Karnataka	18.9	19.5	19.4	18.2	12.9
Andhra Pradesh	41.1	25.9	11.7	11.7	13.2
Himanchal Pradesh	17.6	41.2	17.7	-	19.3
Haryana	21.7	51.4	10.6	-	24.2
Chhatisgarh	18.3	50.0	21.3	22.7	34.3
Uttar Pradesh	-	33.4	42.6	49.3	45.2
Bihar	26.9	20.8	63.2	47.4	38.9

Source: All India Survey of Higher Education, 2010-11

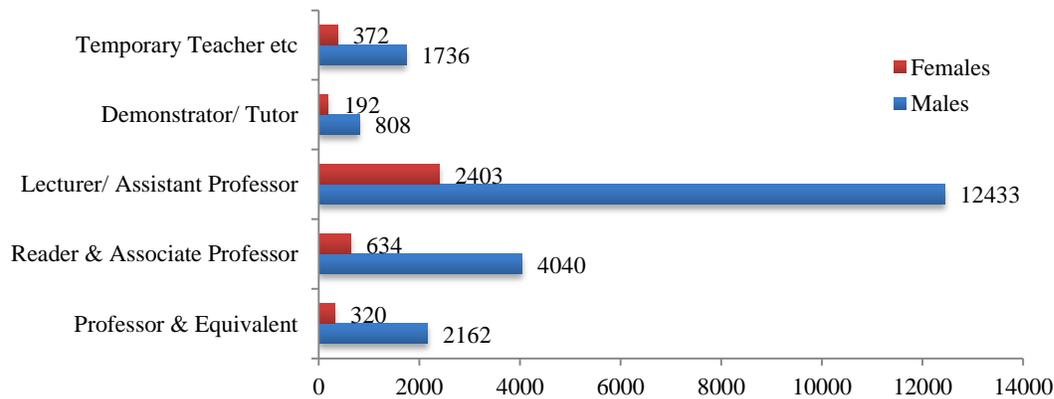
**Table 13: Faculty wise growth of Enrolment at UG and PG**

<b>Faculty</b>	<b>2007-08 (UG+PG)</b>	<b>2009-10 (UG+PG)</b>	<b>Growth (%)</b>
Arts	3,61,454	6,12,929	69.57
Commerce	97,326	72,276	-25.74
Science	1,24,257	1,56,309	25.79
Eng/Tech/Arch	8,879	8,883	0.05
Medicine	6,279	10,341	64.69
Agriculture	2,526	1,438	-43.07
Management	1,430	3,925	174.48
Teacher Education	3,893	7,749	99.05
Law	10,857	14,830	36.59
Others	3,834	37,832	886.75
<b>Total</b>	<b>6,20,735</b>	<b>9,26,512</b>	<b>49.26</b>
Post School Diploma	11,924	17,829	49.52
Post Graduate Diploma	474	956	101.69

Source: Statistics of Higher and Technical Education, MHRD, 2006-07 and 2009-10

The division of teachers across various grades shows that the teaching staff in Bihar is bottom heavy. Lecturers, tutors and temporary teachers form 71% of the faculty. Given the existing faculty vacancies, this trend is a matter of concern. Faculty at junior levels do not attain enough expertise in their field to ably handle masters or PhD level students, there is also a shortage of PhD and post-doctoral advisors in such cases. Consequently, research work by the faculty also suffers. As years pass, institutions could be left with a bloated middle or senior faculty body; this is bound to cause imbalances in teaching loads, management and leadership of institutions. Institutions need to consciously recruit faculty at all levels to maintain the balance between various levels of faculty, even if it costs less to recruit junior or temporary faculty.

**Figure 12: Faculty across grades**



Source: All India Survey of Higher Education, 2010-11

### Accreditation and UGC Grants

Another way of looking at the quality of institutions across the state is to look at the number of institutions or departments that have met quality parameters set by national bodies such as UGC, and have been recognized for their excellence. Bihar does not have any Universities with Potential for Excellence while there are 6 Colleges with Potential for excellence (Table 14).<sup>14</sup> An area where many states have excelled, especially the southern states is the Minor and Major research projects. Bihar can claim to have only a couple of these grants. Such grants depend as much on the quality of the institutions and proposals as on the timely availability of information regarding such opportunities. Efforts need to be made to increase the orientation of students and faculty towards research and make them aware of the resources for which they can apply.

Accreditation is an important measure of quality. As of now, only 13 colleges in Bihar have received accreditation, this is about 2% of the total number of colleges in the state. NAAC awards accreditation through a fairly robust process that considers multiple aspects of an educational institution such as infrastructure, quality of teaching learning processes, research activities etc. Even in the process of preparing and applying for accreditation, institutions often improve their quality significantly. Thus, more institutions must be encouraged and enabled to go through this process. Bihar has already begun efforts in this direction whereby 51 institutions are being prepared for accreditation.

<sup>14</sup> The eligibility criteria for University with Potential for Excellence include accreditation of NAAC 'A' grade, functional Quality Assurance Cell, continuing efforts for quality sustenance and enhancement and at least one Centre for Advance Study CAS or two Departments of Special Assistance (DSA) in any subject. The status is granted for a minimum of 5 years and maybe be extended to a maximum of 10 years. The eligibility criteria for College with Potential for Excellence are that the college should be 10 or more years old, only abled Government/constituent college can apply and accredited one by NAAC/with a minimum of 'B' Grade

**Table 14: Number of Institutions across States**

States and UTs	Department Research Support	Department of Special Assistance	Center for Advanced Studies	University with Potential for Excellence	Centers with Potential for Excellence in Particular Area	College with Potential for Excellence	Major Research Project	Minor Research Project	Faculty Development Programs	Autonomous Colleges	Academic Staff College
Andhra Pradesh	89	16	14	2	2	24	134	12	15	78	6
Arunachal Pradesh	2				1	1					
Assam	35	1	1			10	28	5	2	1	1
<b>Bihar</b>	<b>8</b>					<b>6</b>	<b>3</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>2</b>
Chandigarh					3	1					
Chhattisgarh	8					7	15	1	3		2
Delhi	44	9	12	1			42	2	2		3
Goa	5					1	1	1	1		1
Gujarat	28	5	7		1	5	30	2	8	2	3
Haryana	29					9	29	3	6	1	3
Himachal Pradesh	5				1	3	4		1	5	1
Jammu & Kashmir	20	1				1	14	2	4	2	2
Jharkhand	16		2			4	24	1	3		1
Karnataka	39	7	18	2	3	19	36	3	10	49	3
Kerala	29	5	1		1	13	22	1	6		3
Madhya Pradesh	8	3			1	7	9		9	35	4
Maharsashtra	44	6	15	2		49	120	11	10	28	5
Manipur	4		1			2	4				1
Meghalaya	6	3	1	1		1	4	1			1
Mizoram	1					1	1				1
Nagaland	1					1	2			1	
Odisha	18	2	4			12	9	1	7	37	2
Puducherry	20					1	12	2		2	1
Punjab	34	3	13	1	2	12	76	8	4	4	3
Rajasthan	22	4	3	1	1	12	25	10	5	3	3
Sikkim							1				
Tamil Nadu	75	9	8	2	5	17	214	2	12	155	4
Tripura	2						2	1			
Uttar Pradesh	56	5	18	1	1	23	63	1	13	11	5
Uttarakhand	6	1	1			2	7	1	2	4	1
West Bengal	58	9	23	2	1	18	54	6	11	7	4

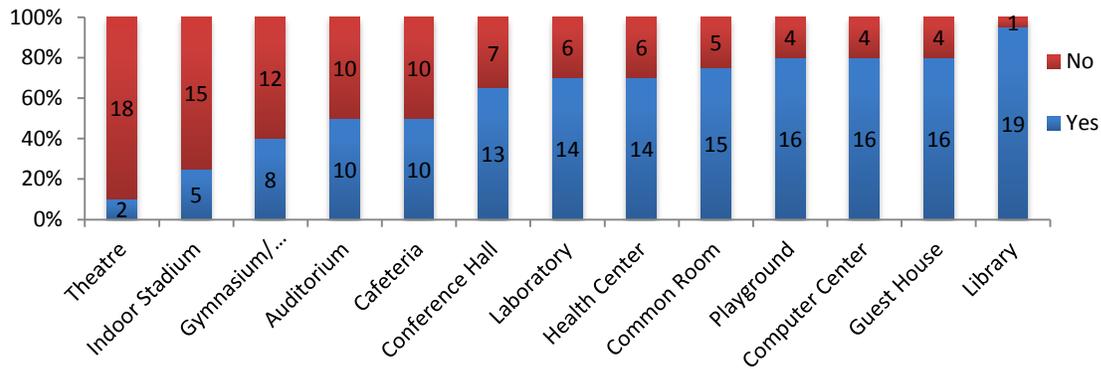
Source: Compiled from University Grant Commission Annual Report, 2011-12

Note: Andaman & Nicobar Islands, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep don't have any such institutions

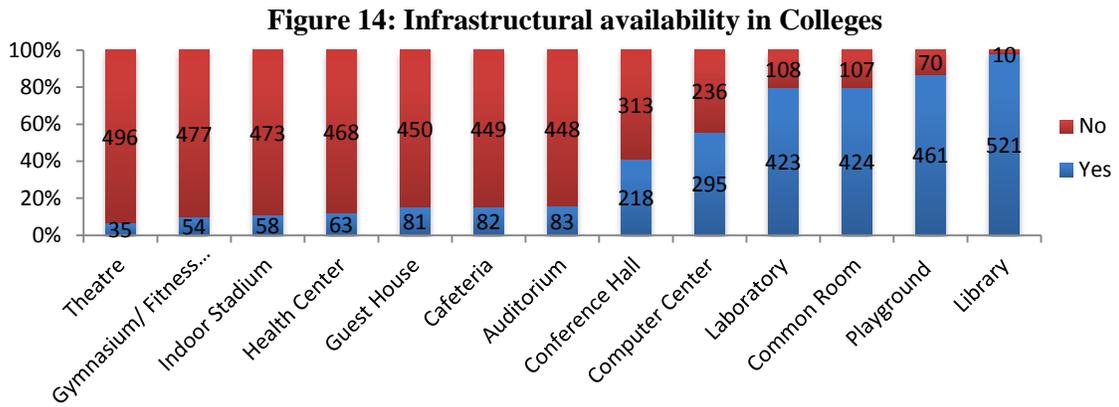
## Infrastructure

Infrastructure is one of the requirements for providing good quality education. Certain basic infrastructural facilities along with important inputs such as qualified teaching staff, teaching aides, resources for research etc. can go a long way in creating an environment conducive for better teaching and learning experience. The status of availability of various infrastructural components in universities and colleges in Bihar is varied. While most universities and colleges are equipped with libraries and playground, laboratories are not available with as many as 21% of the institutions. About 44% of colleges and 20% of the universities do not have computer center. This points towards the kind of teaching methods that may be used for instruction in such institutions as well as the exposure of students to technology. Other requirements that are essential to the quality of student life on campus such as health centers and cafeterias are not available in a large majority of institutions. The data only points towards the availability of infrastructure; it is very likely that there are further inadequacies as regards the quality and sufficiency given student enrollment at different institutions of this infrastructure.

**Figure 13: Infrastructural availability in Universities**



Source: All India Survey of Higher Education.



Source: All India Survey of Higher Education.

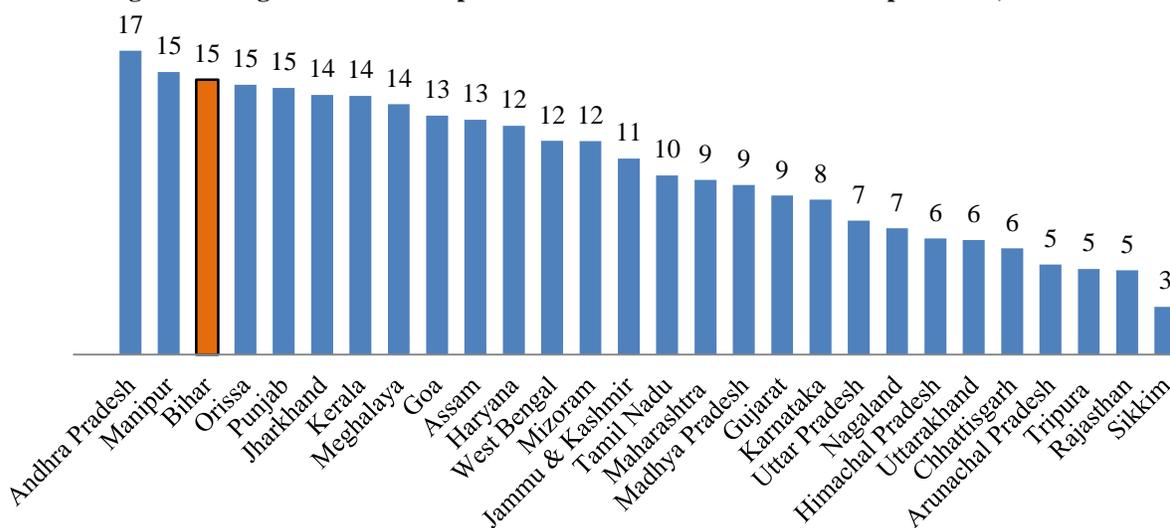
## Financing

This section discusses how the higher education system in Bihar is financed. It analyzes the public financing of general higher education in the state and draws comparisons with other states in India both in terms of contributions from the GoB and from UGC grants from the national government to the state universities and colleges. Furthermore, there is a brief analysis of information on private expenditure on higher education in terms of fees from students which forms an important source of funding in higher education.

### Public Spending

In 2008-09, Bihar's expenditure on higher education as a proportion of total education expenditure at nearly 15% was higher than the all India average of 10%. Leaving out Manipur, which shows an unusually high proportion spent on higher education (Figure 15) due to low total expenditure, Bihar ranked second highest among all other states, the highest being Andhra Pradesh at nearly 17%. Among the neighboring states, the proportion spent by Orissa and Jharkhand was quite close to that of Bihar, while West Bengal and Uttar Pradesh spent lower on higher education, at around 12% and 7% respectively.

**Figure 15: Higher education expenditure as % of Total Education Expenditure, 2008-09**



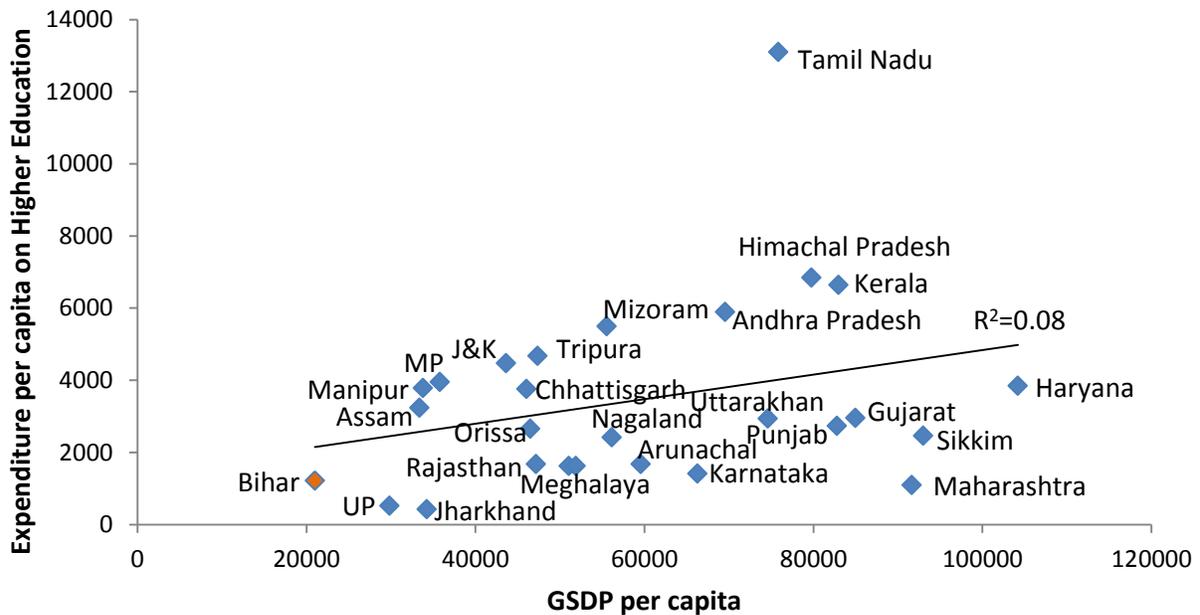
Source: Constructed from MHRD

Per capita expenditure on higher education is however low in the state. Recent figures from 2010-11 reveal Bihar to be the fourth lowest ranked among all states at a per capita expenditure of Rs. 1221 on higher education; the all-India average being Rs. 3865. Three factors can be put forward to explain this apparent paradox. Firstly, the GDP per capita in Bihar is about half of India's GDP per capita; secondly the relative number of students enrolled in higher

education in Bihar is significantly lower than the national GER in higher education in India; and thirdly the average annual amount that each higher education student pursuing higher education is paying on fees etc. in Bihar is also significantly lower in Bihar (Rs. 4665 in 2007-08) than at the national level (Rs. 7360 in 2007-08).

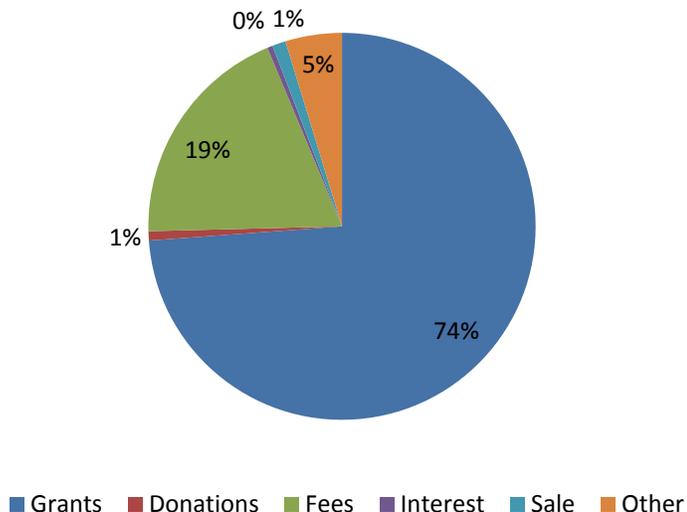
As seen in (Figure 16), there is not a very strong relationship between GSDP per capita and expenditure per capacity on higher education. However, the line of correlation rises upwards, indicating that generally richer states spend a higher amount on higher education, but the gentle slope of the line signifies that this relation is not very strong. If Tamil Nadu would not be included in the calculation, there might not be any correlation.

**Figure 16: GSDP per capita and expenditure on higher education per capita (in Rs.)**



In the section below, we look at details of receipts and expenditure of the constituent colleges of universities of Bihar. After grants, the major source of finance for colleges is fees from students. In 2010-11, colleges of Bihar received 19 per cent of its financing from fees (Figure 17) amounting to more than Rs. 110 cr. This is indicative of the amount of private expenditure on higher education in the state.

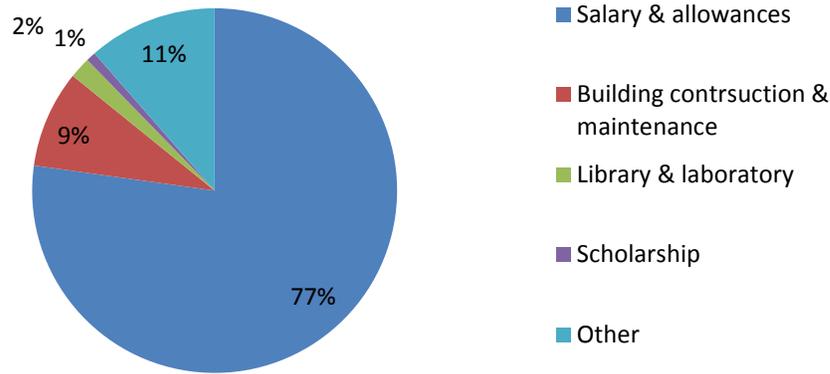
**Figure 17: Receipts of colleges in 2010-11**



*Source: AISHE*

Break up of college expenditure shows that the highest proportion of nearly 77% is spent on salaries (Figure 18). Based on our observation of other states, such as Madhya Pradesh where salaries constituted nearly 90% of expenditure on higher education from 2004-05 onwards, the proportion spent by Bihar on salaries is lower. In the short term, as the state is in the process of recruiting more teachers to fill its vacant posts, it is likely that expenditure on salaries will increase. However, it is advisable that the share of non-salary component also increase proportionately. Expenditure on construction, repair and maintenance and infrastructure such as library and laboratory constitute another 11 per cent of non-plan expenditure. Colleges of Bihar spent a total of Rs. 5 cr on scholarships in 2010-11, accounting for 1% of overall expenditure in the year.

**Figure 18: Expenditure of colleges in 2010-11**

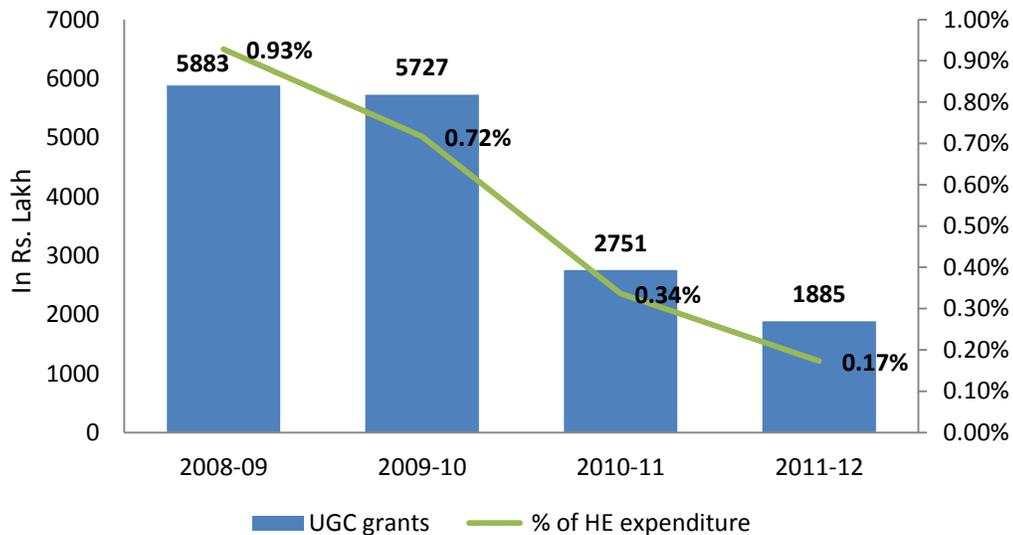


Source: AISHE

### UGC Funding

UGC grants have been less than 1 per cent of total expenditure on higher education in the state (Figure 19). Also, the quantum of grants has dropped significantly from 2008-09 onwards. This is mainly due to reduction in plan grants by UGC, illustrated in (Figure 20). Moreover, UGC has not been providing any funds for non-plan expenditure for state universities and colleges of Bihar since 2010-11. Though even before that, the non-plan grant amount was quite low (Rs. 64 lakh and Rs. 17 Lakh in 2008-09 and 2009-10 respectively).

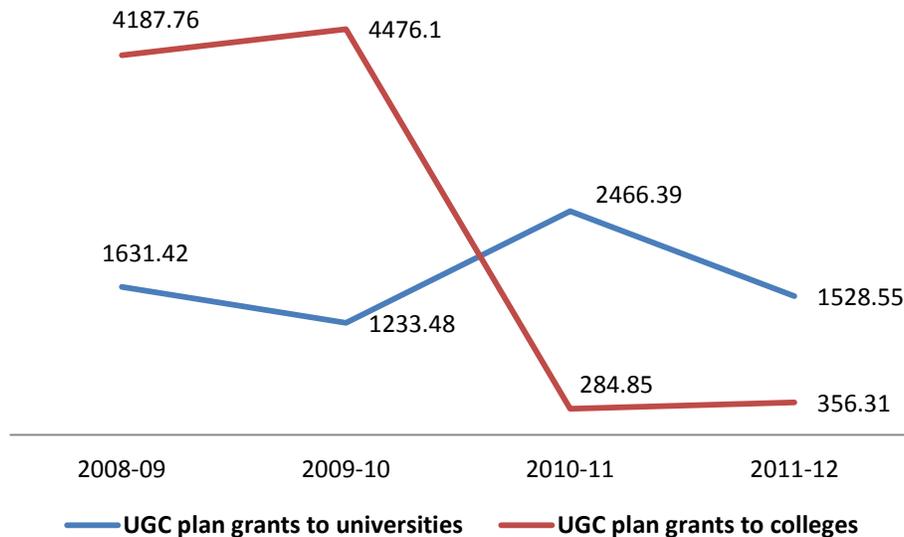
**Figure 19: UGC grants as % of expenditure on HE**



Source: Constructed from UGC Annual Reports and Education Department Budget

UGC grants for plan expenditure to colleges of State Universities of Bihar has declined drastically from 2009-10 onwards (Figure 20). Grants for this purpose are provided to the UGC regional offices and Head office. UGC is no longer providing any funds to its regional offices for plan expenditure of colleges, whereas funding to the head office has also decreased. Plan grants under UGC to state universities has also shown an erratic pattern from 2008-09, it increased significantly in 2010-11, but fell again in 2011-12, though at a level higher than that in 2009-10.

**Figure 20: UGC Plan Grants to Bihar (in Rs. Lakh)**



Source: Constructed from UGC Annual Reports

## Student Expenditure

The average annual expenditure that each student paid on general higher education (tuition fee, exam fees and other payments, books, and transport) in 2007-08 is lower in Bihar than any other state exempt Chattisgarh, Goa and Uttarakhand Students pursuing general higher education in Bihar paid on average Rs. 4665 in 2007-08, which was significantly lower than comparable states such as Andhra Pradesh, Madhya Pradesh as well as Uttar Pradesh (Please see Table 15). It should be noted that these figures on student expenditure do not only include payment of fees to the higher education institutions but also for books and transport. It is however very likely that the largest part of the Rs. 4665 would be paid to these institutions.

**Table 15: Average annual expenditure (Rs.) per student pursuing higher education in 2007-08**

	<b>Post-secondary general education</b>
Andhra Pradesh	7973
<b>Bihar</b>	<b>4665</b>
Madhya Pradesh	7031
Uttar Pradesh	5567
All India	7360

Source: National sample Survey 64<sup>th</sup> round.

## **Bibliography**

Education Department Bihar (2013): *“Mission Manav Vikas – Inclusion Through Education”*. Patna

National Survey Sample Organization (2011): *“National Sample Survey, 66<sup>th</sup> round”*. New Delhi.

Office of the Registrar General & Census Commissioner (2006). *Population projections for India and States 2001-2026*. New Delhi.

Ministry of Human Resource Development (2012). *All India Survey of Higher Education, 2010-11*. New Delhi.

Ministry of Human Resource Development (2013). *Rashtriya Uchchatar Shiksha Abhiyan*. New Delhi.

University Grant Commission (2012). *Annual Report, 2011-12*. New Delhi.