Doctoral Research Output in Social Sciences in India during 2010-2014 : A Study

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ABSTRACT

Presents a trend of doctoral research activities undertaken in social sciences across the institutes of higher learning in India. The study is based on the secondary data compiled from the bibliography of doctoral dissertations, published on an annual basis by the Association of Indian Universities in India, in the field of social sciences during 2010-2014. The study revealed that in all, 5788 doctoral degrees were awarded across 171 institutes of Higher Learning in India in as many as 17 different social science subject disciplines, with an average of 340.47 doctoral degrees in each subject field. On an average, each individual, institution has awarded 33.84 doctoral degrees. Education, commerce and economics are the three leading subject disciplines, in which maximum doctoral degrees were awarded, while as Tourism stands at the bottom. Similarly, at the state level, the maximum doctoral degrees were awarded from Gujarat, which is followed by Maharashtra and Andhra Pradesh, while as at institutional level; Dr B.R. Amedkar Marathwada University, Jawaharlal University and Maharishi Dayanand University are the three leading institutes across the country, which awarded the maximum number of doctoral degrees.

Keywords: India; Higher education; Social science research; Doctoral research output; AIU

1. INTRODUCTION

India is a very vast country having over 1.25 billion population, spread across 36 states and union territories, having more than 759 universities[1] and over 35,500 affiliated colleges with an enrollment capacity of over 20 million students, speaks itself about the vastness and the magnanimity of Indian higher education system[2]. The majority of the students enrolled in these higher education institutions pursue their bachelor's degree courses and less than 01 percent of these enrolled students pursue their doctoral degrees.

The popularity of any given subject discipline gets assessed by the amount of doctoral research undertaken by the research scholars in a particular subject discipline over a period of time. It is a common practice among researchers in general and library and information science researchers in particular to assess the doctoral research output in subject disciplines at an individual level. The trend of assessing the doctoral research output at the collective level in the subject disciplines falling under social sciences, humanities or pure sciences is very uncommon. Accordingly, in the present study an attempt has been made to assess the doctoral degrees awarded in the social sciences in India during 2010 to 2014.

Research undertaken in the subject disciplines of social sciences has got a direct bearing on the overall well being and betterment of a society. The greater the amount of research conducted in any social sciences disciplines, higher will be its impact on the society in general and the end users in particular. It is always imperative that scholars undertaking research in any social science subject should produce quality results and the doctoral degree awarded should not be mere degree sake. And so have got research supervisors an important role to play in grooming the budding scholars as serious researchers[3]. The research supervisors own experience can help a great deal in inspiring researchers to handle a real time problem and in undertaking quality research to overcome it.

The present study is purely undertaken on the secondary data, compiled from the annual bibliographies published in the social sciences by the Association of Indian Universities, New Delhi. Here an attempt has been made to reflect the overall doctoral research scenario of the social science subject disciplines in India. The study simply reflects the research trends in the social sciences as the figures reflected are not exhaustive in nature.

2. LITERATURE REVIEW

Undertaking research at the doctoral level is a very common practice among the scholars all across the globe it so holds true of evaluate and assess the research output at different levels to reflect the strengths and weaknesses in the research activities undertaken by the research scholars of any given institutions, in any given subject disciplines or in any given country. The doctoral dissertations have their own importance in creating new academic knowledge, be it about disciplinary tradition, trends or research techniques[4].Researchers in Turkey evaluated the doctoral dissertations in Music awarded between

1986 and 2009 across 15 universites[5]. Gazi and Marmara Universities were found the leading research universities in the Turkey in music education. In a similar study conducted at the Turkish Universities to assess the doctoral degrees awarded in economics from 1990-2011, the researchers found that 1906 doctoral degrees were awarded by the universities, supervised by as many as 617 professors[6]. Here again the researchers observed Marmara as 01 of the leading universities of Turkey to award the doctoral degrees.

With the view to the future of doctoral research in logistics and supply chain management, 609 doctoral dissertations were evaluated by the researchers published from 2005-2009[7]. The researchers identify the emerging areas of research in the given subject discipline and found the future of the given subject discipline quite promising.

Library and information science is 01 of the leading subject disciplines in the field of social sciences in which a good number of studies have been conducted to assess the doctoral research output. Of the total doctoral degrees awarded in the field of library and information sciences during 2007-2011 in the North-Eastern Region of India, 38.09 per cent doctoral degrees were al01 awarded in the Meghalaya[8]. A growing trend was observed in the award of doctoral degrees in the library and information science in India from 1952 to 1999[9]. The researcher observed that the maximum 98 doctoral degrees were awarded in LIS during 1980's. Of the 198 doctoral degrees awarded in library and information science India during the period 1997-2003, 51 degrees were awarded from the northern region of the country, 72 from the southern region, 22 from east and 19 from the western region of the country[10]. From 2003 to 2008, 171 doctoral degrees were awarded in library and information science across 20 states, 49 Universities in India[11].

Similarly, researchers studied the doctoral dissertations awarded in the field of internet communication facilities in Spain, awarded during 1997-2012[12]. The aspects like, language, research output, research growth, distribution of dissertations awarded, faculties, etc., were studied. Researchers quantified the six popular social science subjects, business, economics, psychology, sociology, library & information science, history and philosophy[13] by evaluating their research output at the global level by evaluating ISI indexed journals. The US, UK and Canada were found as the leading social science research countries in the world. Propensity among the research scholars of Belgium to attain doctoral degrees from the five largest universities of Flanders was studied on the basis of FWO and IWT fellowships, whereby research fellows are supposed to complete their doctoral work with a time limit viz., four year period[14]. To assess the contribution of economics to the tourism, 118 doctoral dissertations awarded in the US, Canada, Australia, and the New Zealand during 2000-2010 in the subject discipline of tourism were evaluated[15].

The researchers observed that compared to researchers from Thailand, the researchers from US were more ethical in their research activity[16]. To undertake the study, the researchers analysed the 10 qualitative doctoral dissertations awarded in the Thailand and the US during 2001-2010. The difference was owed to lack of knowledge among the researchers of Thailand towards research ethics. Similarly, it was revealed that a total

of 253 doctoral degrees awarded in the Social work in Sweden during 1970 to 2009[17].

In the United States from 1953 to 1962 across 181 universities, 93977 doctoral degrees were awarded in the field of humanities, biological sciences, social sciences, and physical sciences[18]. The California and the Colombia universities were found to be the leading universities to award the maximum number of doctoral degrees, 5644 and 5024 respectively. Two-third (58150) doctoral degrees were awarded by the leading 30 institutes in the United States. To assess the growth of doctoral degrees awarded on five year period basis from 1880-1984 in the subject fields like natural sciences, social sciences, arts literature, library science, information science, computer science and health science, the researchers searched the Dissertations Abstracts database and observed a steady growth in the award of doctoral degrees. During 1880-84, only 29 doctoral degrees were awarded in social sciences in the US and the number kept on steadily increasing through the century, as 68710 doctoral degrees were awarded in social science during 1980-1984[19].

3. OBJECTIVES

- To present an overview of the research output in the field of social sciences in India and the research distribution across different states of the country during the period 2010-2014.
- To workout the distribution of doctoral research output and to identify the leading research institutes across India in the field of social sciences.
- To analyse the subject wise distribution of doctoral research output in the field of social sciences along with popularity of each individual subject both at the state and institutional level.

4. METHODOLOGY

The present study has been undertaken on the secondary data collected and compiled from the annual bibliographical directories, published by the Association of India University (AIU), in the field of social sciences for the period (2010-2014)[20]. An attempt has been made to reflect the average number of doctoral degrees awarded

5. LIMITATIONS

Although the study is limited to the territorial jurisdiction of India, but can prove of great help to researchers all across the globe while generalising the doctoral research output in a particular subject discipline in general and social sciences in particular. The directory of doctoral research output published by the AIU by no means can be considered as an exhaustive compilation, as against 759 universities fully functional and actively involved in research and academic activities across the length and breadth of India, only 171 (22.23 per cent) universities have reported their doctoral research output record to the AIU. There is no reason to consider, that the other universities in the county were not actively involved with the research activities or may not have awarded doctoral degrees in the field of social sciences during the last five years. Given the fact, the present study simply reflects a doctoral research

trend across different subject disciplines in the field of social sciences in India.

6. RESULTS

In all 5788 doctoral degrees were awarded in the field of social sciences across India from 2010 through 2014 by 171 institutes in 17 different subject fields. In the year 2014 doctoral degrees were awarded in 16 different subject fields, while as in the remaining years of study the degrees were awarded in 17 different subject fields. On average 340.47 doctoral degrees were awarded in each subject field during the period of study as shown in Table 1.

On average 33.84 doctoral degrees were awarded by each individual contributing institution in each year. A maximum 1598 (27.60 per cent) doctoral degrees were awarded in the year 2011, however a steady decline can be observed in the

number of doctoral degrees awarded as we move towards the year 2014. On average 1157.6 doctoral degrees were awarded during each year with an average of 6.76 degrees by each individual institution in each year, which constitutes less than 01 doctoral degree in each subject discipline.

Education is the leading subject field in which maximum 983 (16.98 per cent) doctoral degrees were awarded, with an average 196.60 doctoral degrees in each year. Education is followed by commerce and economics with a share percentage of 13.52 per cent and 11.57 per cent doctoral degrees respectively. On average 156.60 and 134 doctoral degrees were awarded in the field of commerce and economics each year respectively. A minimum of 8 doctoral degrees were awarded in the field of tourism during the period of study with less than two doctoral degrees each year. On an average 68.09 doctoral degrees were awarded in each individual subject each year as shown in Table 2.

From the analysis, it emerges that there is no uniformity in the pattern of doctoral degrees awarded across the country. The subject disciplines like education, commerce, economics, management and political science enjoy a fair amount of popularity across the country and are being widely pursued by scholars at the doctoral level.

Out of 36 states and union territories of the country, 30 (83.33 per cent) states and union territories were found, from where doctoral degrees were awarded during the period of study. On average 192.93 doctoral degrees were awarded from each state. Gujarat leads the table with a maximum 742, (12.81 per cent) doctoral degrees awarded during the period. Maharashtra, Andhra Pradesh, and New Delhi are the other leading states to award doctoral degrees in social sciences. On average,

Table 1.   Year wise doctoral research output in social sciences in India during 2010-14

Year	Degrees awarded (Share %)	No. of Institutions (Average degrees awarded per institution)	No. of subject fields (Average degrees awarded in each subject discipline)
2010	1415 (24.44)	99 (14.29)	17 (83.23)
2011	1598 (27.60)	98 (16.30)	17 (94.00)
2012	993 (17.15)	68 (14.60)	17 (58.41)
2013	883 (15.25)	61 (14.47)	17 (51.94)
2014	899 (15.53)	76 (11.82)	16 (56.18)
Total	5788	171* (33.84)	17** (340.47)

*Total Unique Institutions   **Total Unique Subjects

Table 2. Subject wise research output (higher to lower)

Year→ Subject↓	2010 (Share %)	2011 (Share %)	2012 (Share %)	2013 (Share %)	2014 (Share %)	Total (Share %)	Avg.
Education	244 (17.2)	267 (16.70)	171 (17.22)	151 (17.10)	150 (16.68)	983 (16.98)	196.60
Commerce	191 (13.4)	208 (13.01)	113 (11.37)	137 (15.51)	134 (14.90)	783 (13.52)	156.60
Economics	157 (11.0)	189 (11.82)	138 (13.89)	96 (10.87)	90 (10.01)	670 (11.57)	134.00
Management	160 (11.3)	171 (10.70)	109 (10.97)	92 (10.41)	114 (12.68)	646 (11.16)	129.20
Political Science	97 (6.8)	195 (12.20)	101 (10.17)	67 (7.58)	65 (7.23)	525 (9.07)	105.00
Psychology	95 (6.71)	98 (6.13)	88 (8.86)	56 (6.34)	42 (4.67)	379 (6.54)	75.80
Sociology	76 (5.37)	116 (7.25)	64 (6.44)	55 (6.22)	66 (7.34)	377 (6.51)	75.40
Law	110 (7.77)	86 (5.38)	62 (6.24)	54 (6.11)	50 (5.56)	362 (6.25)	72.40
Phy. Edu. & Sports	59 (4.16)	60 (3.75)	35 (3.52)	49 (5.54)	47 (5.22)	250 (4.31)	50.00
Library & Inf. Sc.	47 (3.32)	50 (3.12)	25 (2.51)	27 (3.05)	28 (3.11)	177 (3.05)	35.40
Public Adm.	24 (1.69)	22 (1.37)	14 (1.40)	38 (4.30)	50 (5.56)	148 (2.55)	29.60
Home Science	50 (3.53)	54 (3.37)	13 (1.30)	13 (1.47)	02 (0.22)	132 (2.28)	26.40
Jour. & Mass. Com.	24 (1.69)	15 (0.93)	18 (1.81)	11 (1.24)	24 (2.66)	92 (1.58)	18.40
Anthropology	24 (1.69)	21 (1.31)	22 (2.21)	09 (1.01)	11 (1.22)	87 (1.50)	17.40
Social Work	27 (1.90)	30 (1.87)	15 (1.51)	13 (1.47)	-	85 (1.46)	17.00
Business Adm.	29 (2.04)	13 (0.81)	03 (0.30)	14 (1.58)	25 (2.78)	84 (1.45)	16.80
Tourism	01 (0.07)	03 (0.18)	02 (0.20)	01 (0.11)	01 (0.11)	8 (0.13)	1.60
Total	1415	1598	993	883	899	5788	1157.60

148.40 doctoral degrees were awarded from Gujarat each year. Maharashtra, Andhra Pradesh, New Delhi and Karnataka are the other states from where more than 100 doctoral degrees were awarded each year. Sikkim is the only state where from only 01 doctoral degree has been awarded during the last five years. Only one (3.33 per cent) states awarded less than one doctoral degree in a year, while as 8 (26.66 per cent) states awarded 1 to 10 doctoral degrees each year, 16 (53.33 per cent) states awarded 11 to 83 doctoral degrees and 5 (16.66 per cent) states awarded more than 100 doctoral degrees each year. In terms of percentage share, 10 states have awarded less than 1 per cent doctoral degree, 8 states have awarded 1 to 2 per cent doctoral degrees, while as, 12 states have awarded doctoral degrees with a share percentage between 2 to 13 per cent each as shown in Table 3.

Of the 759 universities listed on the UGC website, 47 (6.19 per cent) are Central Universities, 350 (46.11 per cent) State Universities, 123 (16.20 per cent) Deemed Universities and 239 (31.48 per cent) are private Universities. The doctoral research output under analysis has been recorded from 171 universities of the country, which also means that only 22.23 per cent universities are actively engaged with the doctoral research activities as shown in Table 4.

More than 60 per cent of the doctoral degrees were awarded by the twenty leading universities of India, while as the remaining 40 per cent doctoral degrees were awarded by 151 universities/institutes across India. Dr B.R. Ambedkar Marthwada University, Maharashtra Jawaharlal Nehru

Table 3. State wise distribution of doctoral degrees awarded in India

Year→ Name of the State↓	2010 (Share %)	2011 (Share %)	2012 (Share %)	2013 (Share %)	2014 (Share %)	Total (Share %)	Avg. deg. awarded per year	No. of Uni.	Avg. per Uni.
Gujarat	183 (12.93)	219 (13.70)	111 (11.17)	91 (10.30)	138 (15.35)	742 (12.81)	148.4	58	12.79
Maharashtra	145 (10.24)	267 (16.70)	152 (15.30)	86 (9.73)	28 (3.11)	678 (11.71)	135.6	49	13.83
Andhra Pra	121 (8.55)	141 (8.30)	63 (6.34)	125 (14.15)	121 (13.45)	571 (9.86)	114.2	25	22.84
New Delhi	113 (7.98)	170 (10.63)	128 (12.89)	64 (7.24)	66 (7.34)	541 (9.34)	108.2	22	24.59
Karnataka	139 (9.82)	142 (8.88)	105 (10.57)	84 (9.51)	64 (7.11)	534 (9.22)	106.8	52	10.26
Madhya Pra	124 (8.76)	98 (6.13)	78 (7.85)	62 (7.02)	52 (5.78)	414 (7.15)	82.8	45	09.20
Haryana	86 (6.07)	76 (4.75)	66 (6.64)	58 (6.56)	81 (9.01)	367 (6.34)	73.4	40	9.17
Orissa	86 (6.07)	97 (6.07)	22 (2.21)	32 (3.62)	26 (2.89)	263 (4.54)	52.6	20	13.15
West Bengal	49 (3.46)	69 (4.31)	43 (4.33)	34 (3.85)	03 (0.33)	198 (3.42)	39.5	35	5.65
Uttar Pradesh	38 (2.68)	36 (2.25)	48 (4.83)	31 (3.51)	44 (4.89)	197 (3.40)	39.4	64	3.07
Himachal Pra	49 (3.46)	19 (1.18)	16 (1.61)	10 (1.13)	41 (4.56)	135 (2.33)	27.0	22	6.13
Chhattisgarh	18 (1.27)	11 (0.68)	05 (0.50)	38 (4.30)	60 (6.67)	132 (2.28)	26.4	22	6.00
Jharkhand	24 (1.69)	29 (1.81)	26 (2.61)	23 (2.60)	12 (1.33)	114 (1.96)	22.8	16	7.15
Punjab	11 (0.77)	29 (1.81)	42 (4.22)	25 (2.83)	02 (0.22)	109 (1.88)	21.8	25	4.36
Meghalaya	17 (1.20)	21 (1.31)	17 (1.71)	22 (2.49)	28 (3.11)	105 (1.81)	21.0	09	11.66
Chandigarh	42 (2.96)	12 (0.75)	-	46 (5.20)		100 (1.72)	20.0	02	50.00
Assam	40 (2.82)	13 (0.81)	12 (1.20)	15 (1.69)	04 (0.44)	84 (1.45)	16.8	18	4.66
Tamil Nadu	25 (1.76)	29 (1.81)	06 (0.60)	-	18 (2.00)	78 (1.34)	15.6	52	1.50
J & K	14 (0.98)	21 (1.31)	-	14 (1.58)	20 (2.22)	69 (1.19)	13.8	10	6.90
Manipur	13 (0.91)	09 (0.56)	17 (1.71)	-	21 (2.33)	60 (1.03)	12.0	03	20.00
Rajasthan	30 (2.12)	04 (0.25)	02 (0.20)	03 (0.33)	17 (1.89)	56 (0.96)	11.2	73	0.76
Pondicherry	08 (0.56)	24 (1.50	14 (1.40)	-	-	46 (0.79)	9.2	02	23.00
Kerala	10 (0.70)	05 (0.31)	03 (0.30)	01 (0.11)	26 (2.89)	45 (0.77)	9.0	16	2.81
Mizoram	06 (0.42)	13 (0.81)	07 (0.70)	02 (0.22)	13 (1.44)	41 (0.70)	8.2	02	20.50
Arunachal Pra	08 (0.56)	12 (0.75)	02 (0.20)	08 (0.90)	07 (0.77)	37 (0.63)	7.4	09	4.11
Bihar	07 (0.49)	14 (0.87)	06 (0.60)	04 (0.45)	01 (0.11)	32 (0.55)	6.4	19	1.68
Nagaland	03 (0.21)	10 (0.62)	01 (0.10)	05 (0.56)	-	19 (0.32)	3.8	03	6.33
Tripura	04 (0.28)	04 (0.25)	-	-	04 (0.44)	12 (0.20)	2.4	03	4.00
Uttarakhand	01 (0.07)	04 (0.25)	01 (0.10)	-	02 (0.22)	08 (0.13)	1.6	25	0.32
Sikkim	01 (0.07)	-	-	-	-	01 (0.01)	0.2	06	0.16
Others	-	-	-	-	-	-	-	22	-
Total	1415	1598	993	883	899	5788	192.9	769	7.52

Table 4. Research output of the twenty leading universities in India against the subjects

Subject→ University↓	Education	Commerce	Economics	Management	Political Science	Psychology	Sociology	Law	Physical Edu & Sports	Library and information Sc	Public Administration	Home Science	Journalism & Mass comm.	Anthropology	Social Work	Business Administration	Tourism	Total (Share %)	Average
Dr B.R. Ambedkar Marat. Uni	51	65	46	28	18	44	06	03	41	15	11	04	05	-	03	01	02	343 (5.92)	21.43
Jawaharlal Nehru University	06	11	48	09	164	01	69	12	-	01	-	-	01	02	-	01	-	325 (5.61)	27.08
Maharishi Dayanand University	63	27	15	39	08	27	11	51	19	-	09	-	05	-	-	-	-	274 (4.73)	24.90
Osmania University	33	20	20	64	18	09	12	28	20	03	30	02	02	-	03	04	-	268 (4.63)	17.86
Saurashtra University	47	51	29	20	-	30	22	21	09	02	01	10	02	-	07	-	-	251 (4.33)	19.30
Hemchandra North Gujarat Uni	51	13	20	19	-	19	10	28	24	13	01	07	-	-	04	-	-	209 (3.61)	17.41
Karnataka University	43	20	41	05	20	08	11	12	-	12	-	01	04	09	04	-	-	190 (3.28)	14.61
Utkal University	46	21	24	19	12	06	08	09	04	02	04	02	-	03	01	14	-	175 (3.02)	11.66
University of Calcutta	21	28	18	10	04	42	04	10	-	07	01	06	03	04	-	-	-	158 (2.72)	12.15
Andhra University	23	36	18	24	01	10	-	10	05	05	04	-	08	03	04	-	-	151 (2.60)	11.61
Dr Harisingh Gour University	18	24	09	04	18	16	26	05	02	08	-	07	-	06	-	-	-	143 (2.47)	11.91
Shivaji University	37	36	31	-	11	-	10	01	-	04	-	-	-	-	09	-	-	139 (2.40)	17.37
Himachal Pradesh University	18	34	16	14	10	07	03	12	05	-	02	-	08	-	-	-	-	129 (2.22)	11.72
Jamia MilliaIslamia	38	11	03	11	21	15	08	06	-	-	01	-	02	-	06	-	-	122 (2.10)	11.09
University of Lucknow	13	05	09	01	07	06	16	03	04	-	23	01	06	05	19	02	-	120 (2.07)	8.00
AcharyaNagarjuna University	24	46	11	08	02	-	04	14	04	-	06	-	-	-	01	-	-	120 (2.07)	12.00
Kurukshetra University	22	13	07	27	01	04	02	12	09	03	08	01	01	-	-	-	02	112 (1.93)	8.00
North East Hill University	38	05	12	05	17	-	06	-	-	04	-	-	-	18	-	-	-	105 (1.81)	13.12
Punjab University	25	04	06	21	03	09	03	07	14	-	06	-	-	01	-	-	-	99 (1.71)	9.00
North Maharashtra University	23	12	14	12	06	12	02	08	03	01	-	-	-	-	02	01	-	96 (1.65)	8.00
Rest of Universities	343	301	273	306	184	114	144	110	87	97	41	91	45	36	22	61	4	2259 (39.02)	132.92
Total (Share %)	983 (16.9)	783 (13.5)	670 (11.5)	646 (11.1)	525 (9.0)	379 (6.5)	377 (6.5)	362 (6.2)	250 (4.3)	177 (3.0)	148 (2.5)	132 (2.2)	92 (1.5)	87 (1.5)	85 (1.4)	84 (1.4)	08 (0.1)	5788	340.47

University, New Delhi and Maharishi Dayanand University, Haryana are the three leading universities, which have awarded the maximum number of doctoral degrees. Dr B.R. Ambedkar University, Maharashtra awarded the maximum 343 doctoral degrees, with an average of 68.6 degrees in each year at an average of 21.43 doctoral degrees in each subject discipline. Jawaharlal Nehru University, New Delhi on average awarded 65 doctoral degrees each year, with an average of 27.08 doctoral degrees in each subject discipline. Similarly, Maharishi Dayanand University, Haryana on average awarded 24.9 doctoral degrees in each subject field with an overall average of 54.8 doctoral degrees each year. On average 340.47 doctoral degrees were awarded in each subject field during the period of study.

Subject disciplines like Commerce, Psychology, Physical Education & Sports, Library and Information Science and Tourism enjoy maximum popularity in Dr B.R. Ambedkar Marathwads University, while as Economics, Political Science and Sociology enjoy their stronghold in Jawaharlal Nehru University. Maharishi Dayanand University awarded the maximum degrees in Education & Law and Osmania University in Management and Public Administration. Similarly, subjects like, Education, Psychology, Law, Library & Information Science & Home Science are popular in Gujarat, while as Commerce, Economics, Physical Education & Sports and Tourism are more popular in Maharashtra as shown in Table 5.

On average of 49.42 doctoral degrees were awarded in Gujarat in each subject discipline, which is the highest number of average doctoral degrees awarded by any state. Gujarat is followed by Maharashtra and Andhra Pradesh with an average

of 42.37 & 35.68 doctoral degrees in each subject discipline, respectively. Gujarat, Maharashtra, Andhra Pradesh, New Delhi, Karnataka, Madhya Pradesh, Haryana, Orissa, West Bengal and Utter Pradesh are some of the leading states of the country which offer research opportunities to scholars in almost 95 per cent subject fields. Education, commerce, Economics, Management Studies, Political Science, Psychology, Sociology and Law are the popular subject field, as most of the states have awarded doctoral degrees in these subject fields as shown in Table 5.

7. DISCUSSION AND CONCLUSIONS

Conventional subject disciplines like Education, Commerce, Economics, and Political Science are still quite popular and preferred subject disciplines in social sciences in India, given the number of doctoral degrees awarded in these subject disciplines during the period of study. Management Studies, Psychology, Sociology and Law are the other leading subject disciplines being pursued with great interest by scholars at the doctoral level. However, less than 100 doctoral degrees have been awarded in the subject disciplines like Tourism, Business Administration, Social Work, Anthropology and Journalism and Mass Communication which is an area of concern. These subject disciplines need to promote the doctoral research activities among students. Subject disciplines which fail to add new knowledge to the existing lot are bound to suffer and may ultimately find no takers. Subject disciplines like Physical Education and Sports, Library and Information Science, Public Administration and Home Science need to equally promote the research at the doctoral level.

The states having a fair number of universities have

Table 5. Subject wise leading doctoral degrees awarding Institutions and States

Subject	Total doctoral dissertations awarded	Leading doctoral degrees awarding institution		Leading doctoral degrees awarding states	
		Name	Degrees Awarded	Name	Degrees Awarded
Education	983 (16.98)	Maharishi Dayanand University	63 (6.40)	Gujarat	177 (18.00)
Commerce	783 (13.52)	Dr B.R. Ambedkar Marth University	65 (8.30)	Maharashtra	125 (15.96)
Economics	670 (11.57)	Jawaharlal Nehru University	48 (7.16)	Maharashtra	105 (15.67)
Management	646 (11.16)	Osmania University	64 (9.90)	Andhra Pradesh	102 (15.78)
Political Science	525 (9.07)	Jawaharlal Nehru University	164 (31.23)	New Delhi	195 (37.14)
Psychology	379 (6.54)	Dr B.R. Ambedkar Marathwada University	44 (11.60)	Gujarat	67 (17.67)
Sociology	377 (6.51)	Jawaharlal Nehru University	69 (18.30)	New Delhi	77 (20.42)
Law	362 (6.25)	Maharishi Dayanand University	51 (14.08)	Gujarat	66 (18.23)
Phy. Edu. & Sports	250 (4.31)	Dr B.R. Ambedkar Marathwada University	41 (16.40)	Maharashtra	47 (18.80)
Library & Inf. Sc.	177 (3.05)	Dr B.R. Ambedkar Marathwada University	15 (8.47)	Gujarat	29 (16.38)
Public Adm.	148 (2.55)	Osmania University	30 (20.27)	Andhra Pradesh	41 (27.70)
Home Science	132 (2.28)	Maharana Pratap University of Agri & Tech.	15 (11.36)	Gujarat	21 (15.90)
Jour. & Mass. Com.	92 (1.58)	Makhanla lChaturvedi University of J & M	12 (13.04)	Haryana	15 (16.30)
Anthropology	87 (1.50)	North East Hill University	18 (20.68)	Meghalaya	18 (20.68)
Social Work	85 (1.46)	University of Lucknow	19 (22.35)	Uttar Pradesh	19 (22.35)
Business Adm.	84 (1.45)	Guru Jambeshwar University	19 (22.61)	Haryana	28 (33.33)
Tourism	8 (0.13)	Dr B.R. Ambedkar Marathwada University	02 (25.00)	Maharashtra	03 (37.50)
Total	5788	Dr B.R. Ambedkar Marathwada University	343 (5.92)	Gujarat	742 (12.81)

Table 6. Research output of each Indian state against each individual Subject

Subject → State↓	Education	Commerce	Economics	Management	Political Science	Psychology	Sociology	Law	Physical Edu & Sports	Library and information Sc.	Public Administration	Home Science	Journalism & Mass comm.	Anthropology	Social Work	Business Administration	Tourism	Total (Share %)	Average
Gujarat	177	98	79	83	-	67	56	66	41	29	04	21	03	-	13	04	01	742 (12.81)	49.46
Maharashtra	137	125	105	60	36	62	25	14	47	23	11	04	10	-	14	02	03	678 (11.71)	42.37
Andhra Pradesh	89	103	53	102	21	21	17	53	29	12	41	05	10	03	08	04	-	571 (9.86)	35.68
New Delhi	54	35	57	42	195	27	77	22	-	07	02	10	03	02	07	01	-	541 (9.34)	36.06
Karnataka	98	65	76	46	36	34	50	31	25	17	10	08	08	10	18	-	02	534 (9.22)	33.37
Madhya Pradesh	47	85	41	25	68	16	35	19	06	26	12	12	13	06	03	-	-	414 (7.15)	27.60
Haryana	70	31	22	53	09	27	11	56	26	03	15	01	15	-	-	28	-	367 (6.34)	26.21
Orissa	66	23	30	38	22	06	10	15	04	11	05	06	01	09	01	16	-	263 (4.54)	16.43
West Bengal	21	34	27	10	07	42	08	13	05	12	01	06	03	04	-	05	-	198 (3.42)	13.20
Uttar Pradesh	18	09	17	15	08	14	19	13	05	04	24	04	08	05	19	15	-	197 (3.40)	12.31
Himachal Pradesh	18	34	17	14	10	07	03	12	05	-	02	05	08	-	-	-	-	135 (2.33)	11.25
Chhattisgarh	28	18	10	16	10	07	15	04	13	04	-	08	-	-	-	-	-	132 (2.28)	12.00
Jharkhand	-	42	13	17	19	08	-	-	-	-	-	07	-	08	-	-	-	114 (1.96)	16.28
Punjab	17	09	13	25	06	09	02	08	08	02	05	05	01	-	-	-	-	109 (1.88)	8.38
Meghalaya	38	05	12	05	17	-	06	-	-	04	-	-	-	18	-	-	-	105 (1.81)	13.12
Chandigarh	25	04	06	22	03	09	03	07	14	-	06	-	-	01	-	-	-	100 (1.72)	9.09
Assam	16	08	18	02	09	-	12	-	-	-	-	-	03	08	-	08	-	84 (1.45)	9.33
Tamil Nadu	07	06	06	25	03	02	07	10	02	03	-	06	-	-	-	01	-	78 (1.34)	6.50
Jammu & Kashmir	11	11	12	04	06	-	05	07	-	06	-	03	04	-	-	-	-	69 (1.19)	6.90
Manipur	06	09	11	04	11	-	-	-	-	08	-	-	-	11	-	-	-	60 (1.03)	8.57
Rajasthan	05	03	-	12	04	01	04	01	06	-	02	15	01	-	02	-	-	56 (0.96)	4.66
Pondicherry	-	08	09	09	03	-	01	01	14	-	-	-	-	-	-	-	01	46 (0.79)	5.75
Kerala	06	03	14	08	-	04	02	07	-	-	-	-	01	-	-	-	-	45 (0.77)	5.62
Mizoram	08	03	04	03	04	05	-	-	-	06	08	-	-	-	-	-	-	41 (0.70)	5.12
Arunachal Pradesh	15	04	06	-	07	-	02	-	-	-	-	-	-	02	-	-	01	37 (0.63)	5.28
Bihar	01	03	07	01	04	06	01	03	-	-	-	-	06	-	-	-	-	32 (0.55)	3.55
Nagaland	05	03	02	-	05	-	-	-	-	-	-	-	-	-	-	-	-	19 (0.32)	4.75
Tripura	-	01	05	02	02	-	02	-	-	-	-	-	-	-	-	-	-	12 (0.20)	2.40
Uttarakhand	-	01	-	02	-	05	-	-	-	-	-	-	-	-	-	-	-	08 (0.13)	2.66
Sikkim	-	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-	-	01 (0.01)	1.00
Total	983	783	670	646	525	379	377	362	250	177	148	132	92	87	85	84	8	5788	

awarded more doctoral degrees for obvious reasons. However, a disproportionate trend can be observed in the number of doctoral degrees awarded by each individual institution. There is a need to look into the reasons, as why some universities are more actively involved with research activities, while as others are not so, given the number of doctoral degrees awarded by these institutions during the same period. The disproportionate research trend among institutions leave enough scope for further study in this direction. Nevertheless, availability of supervisory staff, infrastructure, and research grants etc. can be inferred as the primary reasons for these existing differences. A strong correlation was being observed between the library resources and the doctoral degrees awarded across American universities[21].As per ACE Summary nearly two third of the doctoral degrees awarded across 120 universities of the America during 1957-66 came from 38 per cent such institutions, which had a library collection over a million volumes each[18]. Richness and Resourcefulness of an

institutional library can be considered as an important factor to support the research activities and so should emphasis be laid on creating the research infrastructure among institutions which is imperative for undertaking quality research. Modern day libraries play a very significant and more proactive role in accomplishing doctoral degrees in any academic or research institution. Similarly emphasis should be laid on establishing good labs, IT infrastructure, supervisory staff to promote research environment.

States like, Assam, Tamil Nadu, Jammu & Kashmir, Manipur, Rajasthan, Pondicherry, Kerala, Mizoram, Arunachal Pradesh, Bihar, Nagaland, Tripura, Uttarakhand and Sikkim have awarded less than 100 doctoral degrees during the period of study. The universities and other higher education institutions established in these states need to seek out ways and means whereby they can improve the state of research in their respective states. What is more worrisome about these states is that they have recorded a disproportionate doctoral research output given the number of subject disciplines studied. The Uttarakhand and the Sikkim stand at the bottom by awarding 08 and 01 doctoral degrees respectively.

Expansion of higher education is important for the overall growth and development of the country, along with provision of easy accesses and bringing higher education at the doorsteps of the public. Private Universities are emerging as 01 of the strongest pillars of Indian Higher Education System. As on date, nearly 32 per cent universities across India are private and these universities are doing very well in their respective fields.

The Association of Indian Universities is compiling the bibliography of doctoral dissertations awarded in social sciences in India, but given the total number of universities functioning in India and the number of universities, which have contributed their doctoral research output details to the AIU, the bibliography of doctoral Dissertations cannot be considered as comprehensive. A total of 171 (22.23 per cent) universities reported their doctoral research output to the AIU, which doesn't mean the remaining 77 per cent universities in India did not award any doctoral degree from 2010-2014. The case is simply that either these universities did not award any doctoral degree during the period of study or these universities or institutions did not report their doctoral output to AIU. It would be appropriate, if AIU in consonance with UGC will make it mandatory and binding upon all the Higher Education Institutions in India, to file the bibliographical details of their doctoral research output with AIU. This will help in creating a comprehensive, exhaustive and authoritative national record of the doctoral degrees awarded in the country.

Gujarat proved its research prowess by emerging as a hot destination of social science research in India. Nearly 13 per cent of doctoral degrees in India were awarded by the universities and other higher educational institutions of Gujarat.

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