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Social Science Research in India, China and Brazil—A Comparative Study

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ABSTRACT

The paper compares the status of social science research in India, China and Brazil using various indicators. It particularly focuses on the analyses of annual average publication rate vis-à-vis global publication share; similarity in research profile of different countries; research priorities of countries as measured in terms of national publications output by sub-fields; relative share of international collaborative papers in the national output; distribution of research output by geographical regions within each country; and characteristics of high productivity institutions and highly cited papers computed on select measures.

Keywords: Comparative study, India, China, Brazil, social science research

1. INTRODUCTION

Social science research in India is largely a state-funded activity, mainly by Government of India (GOI) and its agencies such as Indian Council of Social Science Research, University Grants Commission, etc. The UGC has introduced several funding programs such as Special Assistance Program, Centres of Advanced Studies, doctoral fellowships for creation and expansion of social science faculties in universities, deemed universities and postgraduate colleges. In addition, UN agencies, aid agencies of foreign governments, international financial agencies, and private foundations also fund social science research. However, this share is small compared to that of the GOI. There are at present more than 400 social science institutions in the country such as specialised universities under the academic sector (190 institutions); governmental institutions under government sector (67); autonomous research institutions under agencies of the government (27); and NGOs, international agencies, individuals in the private sector (133). The GOI spends nearly Rs 600 crore (2004-05) per annum on maintaining these social science institutions. Over the years, these institutions have built up strong research capacity and capability for research in social sciences. Their aim is knowledge generation by advancing our understanding of socio-economic processes, knowledge application by undertaking public-policy-centric studies and such other studies for catalysing socio-economic development and knowledge utilisation by evaluating the impact of governmental programmes, etc. The ICSSR Review Committee reports that social science research is mainly driven by two forces: interest in knowledge about the functioning of society in its diverse social, cultural, political and economic aspects and in understanding the factors that shape them, and the practical needs of the policy-makers and managers in government, civic society and the private sector for reliable data and professional analysis[1].

In the past some bibliometric studies have been done on the status of social science research in India[2-5].The ICSSR Review Committee Report also assessed status of social science research in India based on bibliometric analysis of sample data as published during 2004-05 in eight select journals and on publications data on books and monographs as published on social science themes by eight select publishers. Findings from such a study could be biased. For building a more reliable and objective picture on the status of social science research in India and understanding how this picture has changed overtime, it is important to analyse total research output

on social science themes published over the last 10 years or more and not just limit such an important study to a select group of journals. Secondly, it would be more useful if we plan such a study on comparative basis, and study how India has been performing in social sciences vis-à-vis China and Brazil, the other leading economies in the developing world. Hence, the need to undertake this study.

2. OBJECTIVES

The main objective of this study is to compare the status of social science research in India, China and Brazil by using measures such as (i) annual publication rate vis-à-vis global publication share; (ii) similarity in research profile of different countries; (iii) research priorities of countries as measured in terms of national publications output by sub-fields, (iv) relative share of international collaborative papers in the national output, (v) distribution of research output by geographical regions within each country, and (vi) characteristics of high productivity institutions and highly cited papers computed on select measures.

3. METHODOLOGY AND DATA SOURCE

The present study uses SCOPUS international database for capturing publication data of India, China, and Brazil in the areas of social sciences. Scopus is an international multidisciplinary database covering around 15000 peer-reviewed international journals, of which around 4,000 are in social sciences. The study uses 12-years publication data from 1996 to 2007 on India, China and Brazil. In addition, it uses citation data for qualitative analysis of research output. The quality of research output has been compared on average citations received per paper during first three years since the publication of the research paper in the journal. Three years citations window has been used for comparing quality of research published from 1996 to 2004. Two years and one year citations window have been used for papers published in 2005 and 2006.

4. ANALYSES

4.1 India's Publication Share in Social Sciences and World Rank

In social sciences, India ranks 13th among the top 26 productive countries with 1 per cent global publication share. Overall, the top 26 productive countries in social sciences have shown wide disparity in their global publications share, between 0.35 per cent and 29.17 per cent of the cumulative world publications output during 1996-2007. The United States tops the list with 29.17 per cent global publications share, followed by the United Kingdom with 9.84 per cent share. The countries that ranked at 3rd to 14th positions have shown disparity in their global publications share but on a narrow band, between 1 per cent and 4.07 per cent. The developed countries falling in this band are Canada, Germany, Australia, Netherlands, China, and France (global

Table 1. Global publication share and world rank of select top productive countries, 1996-2007

Country	Publication Output, 1996-2007			Country	Publication output, 1996-2007		
	Total papers	Global publication share	World rank		Total papers	Global publication share	World rank
World	1,356,877			Israel	13,560	1.00	14
USA	395,829	29.17	1	Taiwan	10,836	0.80	15
UK	133,455	9.84	2	Switzerland	10,804	0.80	16
Canada	55,227	4.07	3	Belgium	10,398	0.77	17
Germany	48,515	3.58	4	Finland	8,204	0.60	18
Australia	38,949	2.87	5	South Korea	7,895	0.58	19
Netherlands	29,555	2.18	6	Denmark	6,644	0.49	20
China	29,282	**2.16**	7	**Brazil**	6,472	**0.48**	21
France	28,896	2.13	8	Mexico	6,403	0.47	22
Japan	21,973	1.62	9	Russia	6,229	0.46	23
Italy	19,570	1.44	10	Turkey	5,956	0.44	24
Spain	18,473	1.36	11	Austria	5,754	0.42	25
Sweden	13,943	1.03	12	Poland	4,786	0.35	26
India	13,596	**1.00**	13				

publication share between 2.13 per cent and 4.07 per cent). The other countries falling in this band are Japan, Italy, Spain, Sweden, India and Israel; they rank at 9th to 14th positions but disparity in their global publication shares varies between 1 per cent and 1.62 per cent (Table 1).

4.2 Shifts in the Global Share of Developed Countries

The top 26 productive countries in social sciences have shown shift in their global publications share over time. In particular, some select developed world countries have shown decline in their global publication share over 10 years. These include the United States (its global share declining from 36.17 per cent to 24.71 per cent during 1996 to 2007), Japan (from 1.73 per cent to 1.47 per cent), Russia (from 0.38 per cent to 0.29 per cent), and Poland (from 0.31 per cent to 0.30 per cent). On the other hand, other countries like the UK, Spain, Australia, Italy, Netherlands, Turkey, Belgium, and Switzerland have shown marginal rise in their global share, varying between 0.17 per cent and 1.58 per cent during the same period (Table 2).

4.3 Shifts in the Global Share of Developing Countries

The developing world countries ranking in the list of top 26 productive countries in social sciences, except Israel, have shown rise in their global publication share ranging between 0.10 per cent and 2.78 per cent. China

Table 2. Shifts in the global publications share of top 26 productive countries in social sciences in 10 years from 1997 to 2007

Country	World share			World rank			Shift trend
	1997	2002	2007	1997	2002	2007	
USA	36.17	31.16	24.71	1	1	1	?
UK	9.43	9.33	11.01	2	2	2	?
Canada	4.16	3.79	4.34	3	3	3	?
Germany	3.29	3.74	3.57	4	4	5	?
Australia	2.70	2.78	3.39	5	5	6	?
Netherlands	2.03	2.06	2.61	6	7	7	?
China	0.85	1.09	3.63	13	11	4	?
France	2.01	2.10	2.20	7	6	8	?
Japan	1.73	1.60	1.47	8	8	11	?
Italy	1.23	1.30	1.82	9	9	10	?
Spain	0.85	1.27	1.90	14	10	9	?
Sweden	0.96	0.98	1.16	11	14	13	?
India	0.91	1.05	1.01	12	12	15	?
Israel	1.07	0.99	0.99	10	13	17	?
Taiwan	0.56	0.69	1.21	17	16	12	?
Switzerland	0.68	0.70	1.04	15	15	14	?
Belgium	0.60	0.65	1.01	16	17	16	?
Finland	0.49	0.61	0.71	18	19	21	?
South Korea	0.47	0.53	0.75	19	20	20	?
Denmark	0.33	0.48	0.60	22	21	22	?
Brazil	0.27	0.38	0.82	25	24	18	?
Mexico	0.42	0.43	0.54	20	22	23	?
Russia	0.38	0.61	0.29	21	18	26	?
Turkey	0.23	0.34	0.75	26	25	19	?
Austria	0.29	0.39	0.46	24	23	24	?
Poland	0.31	0.31	0.30	23	26	25	Same

showed the largest rise, 2.78 per cent (from 0.85 per cent to 3.63 per cent), whereas India's rise has been small and insignificant, 0.10 per cent (from 0.91 per cent to 1.01 per cent) during the same period between 1997 and 2007.

4.4 Publication Growth Rate

India achieved an average annual publication growth rate of 10.9 per cent during 1996 to 2007. In comparison, China and Brazil posted much higher growth rate, 36.75 per cent and 24.79 per cent, respectively during the same period. Brazil leads India and China in citations performance. Its average rate of citations per paper is 1.66 as against 0.82 by India and 0.52 by China. This data reveals that high productivity is a not a necessary indicator of high quality research or excellence in research. Brazil which posted least publications output amongst three select countries has shown best performance in citations per paper (Tables 3 and 4).

4.5 Similarities in Research Prioritisation of India, China, Brazil

China has shown close similarity with India in its research priorities in social sciences. Both have shown business, management and accounting as their top productive areas of research, together contributing the largest share in the national output (i.e. 52.61 per cent share by China and 41.12 per cent share by India), with general social sciences as their second priority area (with 30.06 per cent share by China and 39.41 per cent share by India) followed by decision sciences (with 14.53 per cent share by China and 14.2 per cent by India), economics, econometrics and finance (with 4.22 per cent share by China and 9.08 per cent by India), and psychology (4.14 per cent share by China and 6.47 per cent by India). Brazil, in contrast has shown different order of priorities in the social science sub-disciplines. Its largest share (25.74 per cent) is in psychology, 14.29 per cent in decision sciences, 9.53 per cent in economics, econometrics and finance, and 9.22 per cent in business, management and accounting (Table 5).

4.6 Collaborative Research Profile of India, China, Brazil

Brazil registered the highest share of collaborative publications (27.7 per cent) in its national output in social sciences during 1996-07, followed by China (16.8 per cent share), and India (14.9 per cent). However, it has been found that collaborative research activity of India, China

Table 3. Publications growth of select countries in social sciences

Year	Publications output			Year	Publications output		
	China	India	Brazil		China	India	Brazil
1996	606	706	212	2004	2861	1223	505
1997	701	751	220	2005	4619	1267	655
1998	847	808	281	2006	5978	1869	1417
1999	1184	904	296	2007	5307	1475	1200
2000	1200	992	432	96-07	29282	13596	6472
2001	3023	1132	366	1996-98	2265	2154	713
2002	1225	1188	432	2004-06	4611	15904	3272
2003	1731	1281	456	1996-2007	29282	13596	6472
Average Annual Publications Growth Rate				1996-2007	36.75	10.9	24.79

Table 4. Citations performance of India, China, and Brazil

Country	No. of papers	No. of citations	Avg citation per year
India	13596	11198	0.82
China	29282	15111	0.52
Brazil	6472	10741	1.66

Note: Scopus classifies papers in one or more subject fields and as such sum of papers by subject is always more than the actual output by the country.

Table 5. Distribution of publications output by sub-fields in social sciences, 1996-2007

Broad Subject	National publications output, 1996-2007			Per cent share of national output, 1996-2007		
	India	China	Brazil	India	China	Brazil
Social Science-General	5358	8803	3371	39.41	30.06	52.09
Business, Management & Accounting	5590	15404	597	41.12	52.61	9.22
Psychology	880	1212	1666	6.47	4.14	25.74
Economics, Econometrics and Finance	908	1237	617	6.68	4.22	9.53
Decision Sciences	1931	4256	925	14.20	14.53	14.29
Total	13596	29282	6472			

and Brazil is not going strong. Both Brazil and China have registered negative shift over time in their collaborative output by 10.6 per cent and 7.6 per cent respectively, whereas India showed marginal rise by 1.5 per cent in 9 years, from 1996-98 to 2005-07 (Table 6). The negative shift in collaborative out put has come to happen despite the fact that China has shown the fastest publication growth rate of 638 per cent over 9 years from 1996-98 to 2005-07, followed by Brazil (638 per cent), and India (103.4 per cent) (Table 7).

4.6.1 International Collaboration Profile of India, China, Brazil

Brazil is leading in international collaboration as it accounts for the largest share of international publications (27.75 per cent) during 1996-07 in the collaborative output in social sciences that it published during 1996-2007, followed by China (15.81 per cent) and India (14.96 per cent). These select countries–India, China, and Brazil have had partnership with more than 20 countries for international collaborative research. The USA and the UK are their major collaborating partners, as individually 12 per cent to 47 per cent of their share of international publications has co-authors from these two countries alone during 1996-07. Their other collaborating partner countries, accounting for 0.10 per cent to 10 per cent share of international output, are Germany, Australia, the Netherlands, Canada, Hungry, Japan, Switzerland, France, Sweden, Denmark, Belgium, South Korea, and Taiwan (Table 8).

4.7 Publication Profile of India, China, Brazil by Geographic Regions

Delhi, Mumbai, Bangalore, Kolkata, and Chennai are the major geographical areas in India who have contributed 5 per cent to 20.9 per cent share individually (together 53.73 per cent) to social science output in the country during 1996-2007. Hyderabad, Pune, Kanpur,

Table 6. Share of collaborative papers in the national output of India, China, Brazil in social sciences

Country	Total Papers			Total Collaborative Papers			Shift
	1996-07	1996-98	2005-07	1996-07	1996-98	2005-07	96-98 to 05-07
India	13596	2265	4611	2034 (14.9 %)	358 (15.8 %)	798 (17.3 %)	1.5
China	29282	2154	15904	4629 (15.81 %)	479 (22.2 %)	2336 (14.6 %)	-7.6
Brazil	6472	713	3272	1796 (27.7 %)	263 (36.8 %)	860 (26.2 %)	-10.6

Table 7. Publications growth and average citation per paper in total social science output

Country	1996-07			Total Papers		
	Total papers	Total citations	Avg. citations per paper	1996-98	2005-07	% Growth from 96-98 to 05-07
India	13596	11198	0.82	2265	4611	103.6
China	29282	15111	0.52	2154	15904	638.3
Brazil	6472	10741	1.66	713	3272	358.9

Chandigarh and Lucknow are other cities with their individual publication share between 1.0 per cent and 3.14 per cent), etc. Mumbai and Pune showed rise in their share in 9 years from 1996-98 to 2005-07, while other major cities showed decline during the same period.

Wuhan, Beijing and Shangai are the major cities in China contributing 17.29 per cent to 21.8 per cent share individually (together 58.35 per cent share) to social science output in the country during 1996-2007. Nanjing, Harbin, Sichuan, Zhejiang, and Hubei are the other regions in China contributing to social science output. Wuhan and Beijing showed decline in their share in 9 years, while other areas showed rise during the period from 1996-98 to 2005-07. Sao Paulo and Rio de Janeiro are the major regions in Brazil contributing 20.09 per cent to 30.6 per cent share individually (together 50.75 per cent share) to social science output in the country during 1996-2007. Rio Grande, Brasilia, Minas Gerais, and Parana are the other regions contributing 3 per cent to 7.37 per cent share individually. Rio de Janeiro, Bahia, Para and Amazonas had shown decline in their individual shares over time, but other geographical regions showed rise during 1996-98 to 2005-07 (Table 9).

4.8 High Productivity Institutions in India

Based on analysis of publications data on India, 19 institutions were found as high productivity in social sciences in India. Individually these institutions published 50 or more publications during 1996-2007. Together they contributed 3860 papers, accounting for 28.39 per cent share to Indian output in social sciences. Individually these institutions contributed 59 to 779 publications, with an average of 230 publications per institute. Only 5 institutions published output above the average. Their share showed decline over time by 7 per cent (down from 34.7 per cent to 27.7 per cent) in 9 years, 1996-98 to

Table 8. Share of international collaborative papers in the national output of China, Brazil in social sciences

Country	India			China			Brazil		
	1996-07	1996-98	2005-07	1996-07	1996-98	2005-07	1996-07	1996-98	2005-07
US	929	181	330	2061	240	1000	839	110	431
UK	319	52	131	570	57	328	364	67	158
Canada	197	53	70	444	48	240	168	18	74
Germany	122	15	52	192	21	91	118	12	67
Australia	108	12	39	345	39	192	65	6	31
Netherlands	83	16	33	96	12	48	63	5	35
Japan	78	12	29	425	45	196	38	7	15
China	54	8	29	56	8	31	18	1	8
Switzerland	54	4	29	46	6	23	23	2	12
France	51	5	26	93	10	60	45	4	26
Spain	37	5	16	28	5	14	177	29	79
Belgium	34	5	11	58	10	24	90	7	58
Taiwan	32	3	13	411	33	172	35	5	13
South Korea	31	3	15	114	7	61	7	-	3
Italy	24	3	12	41	6	22	5	1	1
Sweden	22	3	12	23	2	14	62	6	33
Brazil	18	1	8	66	6	35	31	8	16
Russia	11	1	3	23	6	5	17	2	4
Denmark	10	1	3	19	2	4	7	-	4
Poland	5	1	4	14	4	4	2	0	1
Hungary	3	1	1	5	-	4	9	0	6
Total	2034	358	798	4629	479	2336	1796	263	860

Table 9. Publication profile of India, China, Brazil by geographic regions

	India			China				Brazil			
	96-07	96-98	05-07	96-07	96-98	05-07	96-07	96-98	05-07	96-07	96-98
Delhi	2841	473	1057	Wuhan	6384	559	3686	Sao Paulo	1984	221	1042
Mumbai	1659	309	447	Beijing	5641	506	3097	Rio de Janeiro	1300	138	631
Bangalore	1128	150	450	Shanghai	5063	110	2498	Rio Grande do Sul	477	40	273
Kolkata	988	183	417	Nanjing	1264	89	775	Brasilia	410	41	218
Chennai	688	122	270	Harbin	1021	44	621	Minas Gerais	396	40	230
Hyderabad	427	68	154	Sichuan	949	25	632	Santa Catarina	222	21	134
Pune	323	56	101	Zhejiang	603	22	416	Parana	197	8	107
Kanpur	162	31	72	Hubei	598	24	287	Bahia	123	17	60
Chandigarh	186	24	68	Changsha	569	26	393	Para	91	17	46
Lucknow	162	31	72	Shenyang	464	29	338	Ceara	90	10	56
Trivandrum	127	18	43	Hunan	459	23	266	Paraiba	73	5	46
Bhubaneswar	91	15	34	Jiangsu	431	24	263	Goias	59	8	38
				Dalian	421	16	325	Amazonas	40	13	19
Total	13596	2265	4611	Total	29282	2154	15904	Total	6472	713	3272

Table 10. Publications profile of productive social science institutions in India

Affiliation	1996-2007			Papers		
	Papers	Citations	Avg. Citation per paper	96-98	05-07	Growth (%)
University of Delhi	779	531	0.68	149	248	66.44
Indian Statistical Institute, India	478	698	1.46	117	141	20.51
Indian Inst. of Technology, New Delhi	409	530	1.30	56	195	248.21
Jawaharlal Nehru University, New Delhi	377	195	0.52	73	111	52.05
Indian Institute of Technology, Kanpur	239	246	1.03	31	88	183.87
Indian Inst. of Technology, Kharagpur	216	274	1.27	47	73	55.32
Indian Inst. of Technology, Chennai	204	383	1.88	59	59	0.00
Indian Inst. of Technology, Mumbai	157	122	0.78	53	52	-1.89
Institute of Economic Growth, Delhi	132	183	1.39	32	28	-12.50
Indian Inst.of Management, Ahmedabad	119	144	1.21	33	27	-18.18
Indian Inst.of Management, Bangalore	110	153	1.39	16	38	137.50
Indira Gandhi Institute of Development Research, Mumbai	102	125	1.23	36	14	-61.11
Indian Institute of Management, Kolkata	98	114	1.16	22	35	59.09
Tata Institute of Social Sciences, Mumbai	96	67	0.70	19	29	52.63
Indian Inst. of Technology, Roorkee	81	128	1.58	2	54	2600.00
Institute of Social & Economic Change, Bangalore	75	48	0.64	16	26	62.50
National Institute of Science Technology and Development Studies, New Delhi	68	117	1.72	15	13	-13.33
Centre for Policy Research, New Delhi	61	38	0.62	4	30	650.00
Centre for Development Studies, Trivandrum	59	99	1.68	7	20	185.71

2005-07. The average publication growth rate of these 19 institutions in 9 years, 1996-98 to 2005-07, was 62.77 per cent. Only 7 Indian institutions have shown publication growth rate higher than the average growth rate of the 19 institutions. The average citation per paper scored by these 19 institutions was 1.17. Eleven out of 19 Indian institutions registered citation performance higher than the average citation per paper of the 19 institutions (Table 10).

4.9 High Productivity Institutions in China

As seen from publications data on China, 18 institutions were found as high productivity institutions in China in social science, each published 50 or more publications during 1996-2007. Together these 18 institutions contributed 1,32,546 papers, accounting for 45.27 per cent share of the total publications output by China in social sciences. Individually these institutions

Table 11. Publications profile of productive social science institutions in China

Affiliation	1996-2007			Papers		
	Papers	Citations	Avg. citation per paper	96-98	05-07	% Growth in 9 years
Beijing University	3076	3808	1.24	199	1844	826.63
Universty of Hong Kong	1929	4297	2.23	122	816	568.85
Chinese Academy of Science	1818	2440	1.34	210	961	357.62
Nanjing University	1106	1071	0.97	71	693	876.06
South China Normal University	1025	1054	1.03	66	627	850.00
Peking University	764	1242	1.63	66	408	518.18
Zhejiang University	539	690	1.28	18	378	2000.00
Hong Kong Polytechnic University	475	910	1.92	32	221	590.63
East China Normal University	448	402	0.90	37	287	675.68
Chinese University of Hong Kong	415	1118	2.69	22	181	722.73
Beijing Normal University	415	677	1.63	30	236	686.67
City University of Hong Kong	402	911	2.27	28	156	457.14
Fudan University	261	302	1.16	16	153	856.25
Hong Kong University of Science & Technology	186	487	2.62	20	67	235.00
Chinese Academy of Social Science	132	164	1.24	17	74	335.29
Hong Kong Baptist University	107	176	1.64	9	43	377.78
Lingnan University	84	153	1.82	0	41	0.00
Beijing Medical University	74	221	2.99	17	26	52.94

published 74 to 3076 publications during 1996-2007 with an average of 730.6 publications per institute. Only 6 institutions contributed publications output above the average of these total 18 institutions. Their share to national output was 45.50 per cent in 1996-98 which continued to remain static at 45.30 per cent in 2005-07. Their average publication growth was 635.92 per cent over 9 years from 1996-98 to 2005-07. Only 8 Chinese institutions have shown publication growth rate higher than the average of the total institutions. The average citation per paper scored by these 18 institutions was 1.70. Seven out of 18 Chinese institutions have shown citation performance higher than the average of the total institutions (Table 11).

4.10 High Productivity Institutions in Brazil

Seventeen institutions in Brazil have been termed as high productivity institutions in social sciences. Individually these institutions contributed 53 to 1523 publications, with an average of 265 publications per institute. Only 6 institutions published papers above the average of these 17 institutions. Together they contributed 4507 papers, accounting for 69.64 per cent of the total Brazilian social science publications output during 1996-2007. Their share to national output in social sciences in 1996-98 was 60.45 per cent, which increased to 77.63 per cent in 2005-07. Their average publication growth rate in 9 years was 489.33 per cent during the period from 1996-98 to 2005-07. Only 8 Brazilian institutions have shown publication growth rate higher than the average of the total institutions. The average citation per paper scored by these 17 institutions was 1.83. But only six out of 17 Brazilian institutions showed citation performance above the average of the total institutions (Table 12).

5. CONCLUSION

The analysis of publications data on India, China, and Brazil for 1996-2007 reveals that these leading developing world economies are on the growth track; their publications activity in social sciences is growing though at differential rates. India's average annual growth rate is 10.9 per cent, China's 36.75 per cent, and Brazil's is 24.79 per cent. China's global publications share in social sciences is 2.16 per cent, India's 1 per cent, and Brazil's 0.48 per cent. That India lags behind China in terms of publications productivity and publications growth rate in social sciences should a matter of concern to policy makers and planners. These three economies also differ in terms of citations received per paper—an indicator used to measure and compares the quality of research output. Brazil registered an average rate of 1.66 citations per paper, China, 0.52, and India, 0.82. Significantly, Brazil was able to achieve the highest average citations rate per paper despite the fact that its global share was the lowest (0.48 per cent) compared to India (1.01 per cent) and China (2.16 per cent). This goes to demonstrate that high productivity alone is not a necessary indicator of excellence and quality of research. Brazil leads India and

Table 12. Publications profile of productive social science institutions in Brazil

Affiliation	1996-2007			Papers		
	Papers	Citations	Avg. citation per paper	96-98	05-07	Growth (%)
Federal University of Sao Paulo	1523	2544	1.67	150	833	455.33
Federal University of Rio de Janeiro	562	1074	1.91	56	294	425.00
Federal University of Rio Grande do Sul	413	1153	2.79	38	249	555.26
Federal University of Minas Gerais	329	554	1.68	31	187	503.23
University of Brasilia	297	302	1.02	23	172	647.83
Federal University of Santa Catarina	203	233	1.15	21	118	461.90
University of Estadual Campinas	166	153	0.92	17	100	488.24
University of Sao paulo	154	408	2.65	20	87	335.00
Federal University of Pernambuco	139	229	1.65	13	75	476.92
Federal University of sao Carlos	128	103	0.80	11	76	590.91
State University of campinas	127	269	2.12	13	64	392.31
Federal University of Fluminense	118	200	1.69	8	67	737.50
Federal University of bahia	93	120	1.29	11	47	327.27
University of Estadual Paulista	73	58	0.79	8	47	487.50
Hospital de Clinicas de Porto Alegre	66	286	4.33	3	46	1433.33
University of Estado Rio De Janeiro	63	73	1.16	1	47	4600.00
Federal University of Pelotas	53	188	3.55	7	31	342.86

China on productivity through collaborative research. Further, the data shows that on collaboration research activity of these economies, in particular of India, is still not strong and dynamic one. These countries did not register any significant shift over time in their collaborative publications. India showed marginal rise by 1.5 per cent in 9 years, 1996-98 to 2005-07, whereas China and Brazil showed decline by 7 per cent to 10 per cent. The USA and the UK are their major collaborating partners, accounted for 56 per cent to 66 per cent share of total international collaborative publications by each country. Their linkages with other countries are weak, accounting for 1 per cent to 6 per cent share.

At present, high productivity research is confined to barely 19 institutions in India even as country spends over Rs 600 crore per year on social science research and that it commands 400 plus institutions in the country. It appears we are not exploiting full potential of our institutional infrastructure in social sciences. If India has to make a quantum leap and rank amongst top five productive countries in the world, it needs to strengthen the research potential of social science institutions within the country and match them to world leaders in social sciences research such as the United States, the United Kingdom, and Canada.

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