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Webometric Analysis of ICSSR Sponsored Research Institutions in India

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ABSTRACT

The main objective of this paper is to evaluate the websites of social science research institutions in India; especially Indian Council of Social Science Research (ICSSR) sponsored institutions and ranked them accordingly. Using various online SEO tools websites of these institutes have been analysed. Gujarat Institute of Development Research holds the numero uno status on the basis of Simple Web Impact Factor (0.6736) and Internal-link Web Impact Factor (0.6551). Institute for Studies in Industrial Development holds the rank one position on the basis of External-link Web Impact Factor of 0.0404. Centre for Policy Research with 53 Domain Authority score and Page Authority score of 49 tops the list in both cases and signifies the website's good rank on search engine result pages. Search engines often display the meta description in search results where they can highly influence user click-through rates but it is really unfortunate that out of the 29 institutes only 6 have used meta tags in their websites. Giri Institute of Development Studies and Centre for Development Studies hold the top ranks in SEO score and speed score categories respectively. Centre for Policy Research with the GPR of 3,52,513 tops the list among all the institutes. Link topology of the websites reflects that Giri Institute of Development Studies (gids.org.in) is linked with 5 other research institutes.

Keywords: Webometric analysis, Web impact factor, SEO, Indian Council of Social Science Research, ICSSR

INTRODUCTION

The website of a research organization is the main window of information to its users. Research in the field of social sciences has reached a new height in the 21st century. In India social science research is predominantly monitored by Indian Council of Social Science Research (ICSSR) through its affiliated or sponsored institutions. In this era of Internet all information and intellectual output is visible on the websites of that institution. Through the hyperlinked webpages of those research institutions different types of social science related information are available to the target community (i.e. the researchers, students, faculties) as well as to the common people all over the world. It only intensifies the importance of hyperlinks in the web dominated world. Different types of weblinks i.e. inlink, external link, backlink etc. with their respective functions like connecting the internal webpages of a website; connecting the outer world to establish research collaboration, project collaboration, institutional link-ups, authorship consortium information collaboration (situated in other websites/ outer websites) and coming back to one's own website from any other outer source, establish the higher rank of a website on all major search engines and intensify the quality of a webpage. Through link analysis one can find out numerical score based on collective recommendations of millions of people. The score indicates the quality of a document i.e. higher the score, the higher is the quality or authority of a document.[1] Webometric study on the basis of WIF (web impact factor) as the strong indicator of this metrical analysis, doubtlessly help this evaluation of the websites. The Web Impact Factor (WIF) was developed by Ingwersen to measure the impact of websites by the number of links it receives. It provides quantitative tools for ranking, evaluating, categorizing and comparing websites and top-level domains and sub-domains. A website with a higher impact factor may be considered to be more prestigious or of higher quality than those websites with a lower impact factor. [2] The present study will explore the present status of the websites of ICSSR

sponsored and recognised social science research institutions in India through WIF ranking, SEO analysis and link topology designing.

Literature Review

R. Jeyshankar and B. Ramesh Babu[3] in their webometric study had explored the websites of 45 universities in Tamil Nadu comprising of 27 state and 18 private universities. They identified the domain systems of the websites, analysed the number of web pages and link pages, and calculated the simple Web Impact Factor (WIF), self link Web Impact Factor and external Web Impact Factor of the University websites in Tamil Nadu and ranked the websites as per the WIF. Their paper reflected that some universities in Tamil Nadu have higher number of web pages but correspondingly their link pages are very small in number and websites fall behind in their simple, self link and external link web impact factor.

Lalbiakmawia and Verma[4] analyzed the websites of Indian Institutes of Management (IIMs) through webometric indicators including URL analysis, Web Impact Factor (WIF) calculation, domains and page authority of the website, links pages and individualized domain as well as file formats analysis.

Sarkar, Pal and Kar[5] in their work have focused on the link topology of the tourism websites in India. World popular web crawler SocSciBot (http://socscibot.wlv.ac.uk/) was used to collect the required data from the India's tourism web sites. For Social Network Analysis (SAN) and visualization, the Pajek software was used. The network diagram represented links between 36 tourism sites in India and which reflected that Delhi tourism site (delhitourism.gov.in) is linked with maximum number of tourism sites.

Social Science Research Institutions under ICSSR

The Indian Council of Social Science Research provides maintenance and development grants to 29 research institutes. Sponsoring of research institutes outside the scope of the University Grants Commission has been one of the major programmes of the Council in enlarging the base of social science knowledge, improving the quality of research, and promoting an interdisciplinary perspective. These institutes constitute an important mechanism for implementing the Council's policy of dispersal of research talents and building up of research capabilities in the different regions of the country, particularly in the areas where social science research is not yet well developed. [6] The list of those research institutes is available in Table 1.

Table-1: ICSSR Sponsored and Recognised Research Institutes

Sl. No.	Name of the Institutes	States	Website URLs	Est. Year
1	Institute for Social and Economic Change (ISEC)	Karnataka	http://www.isec.ac.in	1972
2	Centre for Development Studies (CDS)	Kerala	http://www.cds.ac.in	1971
3	Centre for Studies in Social Sciences (CSSS)	West Bengal	http://www.cssscal.org	1969
4	A.N. Sinha Institute of Social Studies (ANSISS)	Bihar	http://www.ansiss.in/	1964
5	Institute of Public Enterprise (IPE)	Telengana	http://www.ipeindia.org/	1964
6	Institute of Economic Growth (IEG)	New Dilhi	http://www.iegindia.org/	1958
7	Centre for the Study of Developing Societies (CSDS)	New Dilhi	http://www.csds.in/	1963
8	Centre for Social Studies (CSS)	Gujrat	http://www.css.ac.in/	1969
9	Madras Institute of Development Studies (MIDS)	Tamil Nadu	http://www.mids.ac.in/	1971
10	Indian Institute of Education (IIE)	Maharashtra	http://www.iiepune.org/	1948
11	Giri Institute of Development Studies (GIDS)	Uttar Pradesh	http://www.gids.org.in/	1973
12	Centre for Policy Research (CPR)	New Dilhi	http://www.cprindia.org/	1973
13	Sardar Patel Institute of Economic and Social Research (SPIESR)	Gujrat	http://www.spiesr.ac.in/	1969
14	Council for Social Development (CSD)	Andhra Pradesh	http://csdindia.org/	1967

15	Institute of Development Studies (IDS)	Rajasthan	http://www.idsj.org/	1981
16	Centre for Research in Rural and Industrial Development (CRRID)	Punjab	http://www.crrid.res.in	1978
17	Centre for Women's Development Studies (CWDS)	New Dilhi	http://www.cwds.ac.in/	1980
18	Centre for Economic and Social Studies (CESS)	Andhra Pradesh	http://www.cess.ac.in	1980
19	NabakrushnaChoudhury Centre for Development Studies (NKCCDS)	Orissa	http://nkccds.nic.in/	1987
20	Gujarat Institute of Development Research (GIDR)	Gujrat	http://gidr.ac.in/	1970
21	Institute for Studies in Industrial Development (ISID)	New Dilhi	www.isid.org.in	1986
22	O.K.D. Institute of Social Change and Development (OKDISCD)	Assam	http://www.okd.in/	1989
23	Centre for Multi-Disciplinary Development Research (CMDR)	Karnataka	http://www.cmdr.ac.in/	1976
24	Madhya Pradesh Institute of Social Science Research (MPISSR)	Madhya Pradesh	http://mpissr.org/	1983
25	Indian Institute of Dalit Studies (IIDS)	New Dilhi	http://www.dalitstudies.org.in	2003
26	Asian Development Research Institute (ADRI)	Bihar	http://www.adriindia.org	1991
27	Gulati Institute of Finance and Taxation (GIFT)	Kerala	http://gift.res.in	2009
28	Institute of Development Studies Kolkata (IDSK)	West Bengal	http://idsk.edu.in	2002
29	Institute for Human Development (IHD)	New Delhi	http://www.ihdindia.org	1996

The last five institutions are only recognised by ICSSR. In the figure 1 state wise distribution of the institutes are available. New Delhi shares the maximum amount of institutes i.e. 24% of the total institutes. New Delhi is followed by Gujrat with 10% of the total institutes.

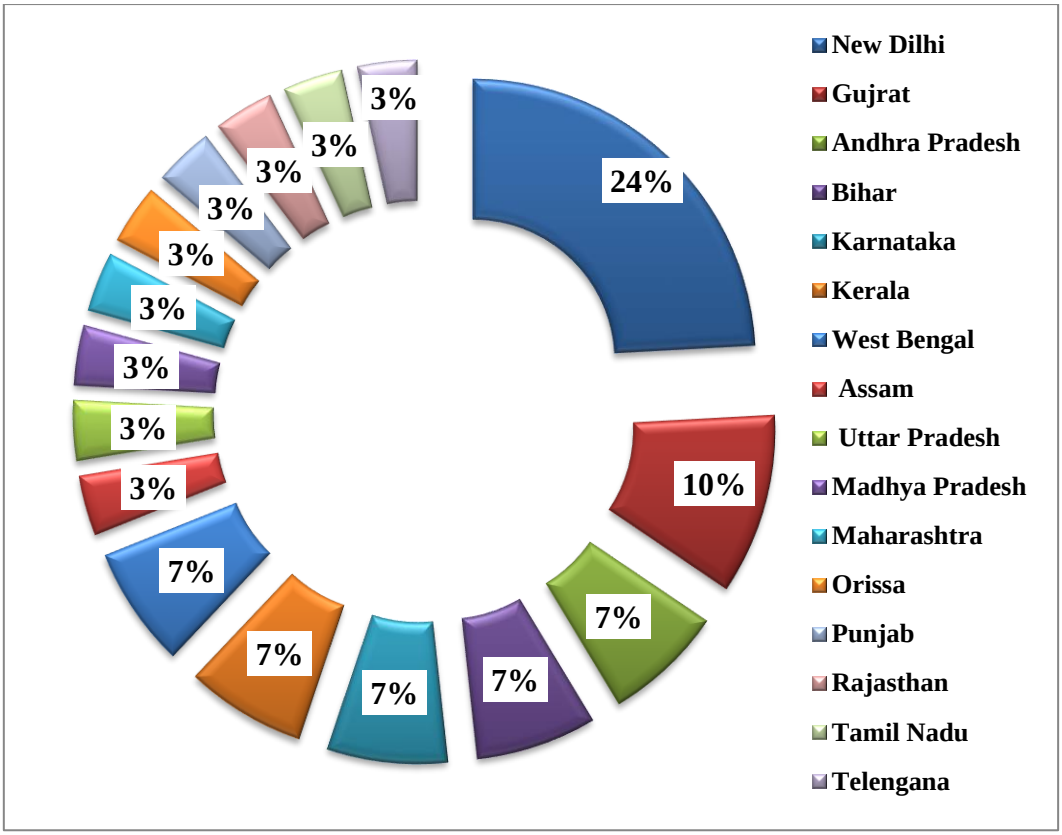

Figure 1: State wise Distribution of the Institutes

Objectives of the Study

The present study deals with the following objectives:

- To calculate three types of web impact factors (SWIF, IWIF, EWIF).
- To rank the websites of the institutions on the basis of three types of web impact factors.
- To analyse and evaluate the websites on the basis of SEO.
- To find out the global popularity ranking of the websites.
- To design the link topology of the websites.
- To represent the text analysis of the websites.

MATERIALS AND METHODS

Methodology

At first, websites with URLs of 29 research institutes have been selected from the list of ICSSR. For three types of WIF calculation at first total number of webpages for each website have been collected from the Google search engine (which have large database) using the command "site:domain name" introduced by Ingwersen in 1998. [7] For the counting of inlinks, external links, total links, meta tags and backlinks, a link analyser tool named SEO Review Tools (https://www.seoreviewtools.com/seo-checker/) has been used. Data have been collected during April 6 to 10, 2019. The WIF introduced by Ingwersen is the ratio of the number of links to a site, to the number of webpages at the site. This can be stated thus: A = Total number of Webpages to a particular site, B = Total Number of Inlinks to a given site, C = Total Number of External links to a given site, D = Total number of links (External + Internal) to a site Therefore, WIF (simple) = D/A; WIF (Internal) = B/A, and WIF (External) = C/A. [8] Then the selected websites are observed and analysed with the help of online Search Engine Optimization (SEO) tools like Neil Patel's SEO analyser (https://neilpatel.com/seo-analyzer/) and Alexa (https://www.alexa.com/siteinfo). Neil Patel's SEO Analyzer has been used to find the load time, page size, SEO Score and Speed Score of the websites. Alexa tool has been used to collect global popularity ranking of the websites. After data collection, the collected data were analysed and tabulated keeping in view the objectives of the study. SocSciBot4 has been used for web data harvesting and Pajek tool has been used for network designing. Finally text analysis of the websites has also been done through Cyclist tool which is integrated with the SocSciBot software.

RESULTS AND DISCUSSION

Ranking of the Institutions on the basis of Three Types of Web Impact Factors

Table 2 represents the number of total webpages, inlinks, external links and total links of the webpages. On the basis of table 2 three types of WIFs are calculated and ranking has been made.

Table 2: Webpages and Links of the Websites of the Selected Institutes

Name of the Institutes	Total Webpages (A)	Internal-Links (B)	External-Links (C)	Total Links (D)
Institute for Social and Economic Change (ISEC)	2710	43	0	43
Centre for Development Studies (CDS)	305	2	0	2
Centre for Studies in Social Sciences Calcutta (CSSSC)	1800	108	5	113
A.N. Sinha Institute of Social Studies (ANSISS)	126	38	2	40
Institute of Public Enterprise (IPE)	1680	18	5	23
Institute of Economic Growth (IEG)	1090	167	10	177
Centre for the Study of Developing Societies (CSDS)	579	80	3	83
Centre for Social Studies (CSS)	279	41	3	44
Madras Institute of Development Studies (MIDS)	353	62	1	63
Indian Institute of Education, Pune (IIE)	138	51	1	52
Giri Institute of Development Studies (GIDS)	247	14	0	14
Centre for Policy Research (CPR)	1400	58	18	76
Sardar Patel Institute of Economic and Social Research	227	17	0	17

(SPIESR)				
Council for Social Development (CSD)	388	86	7	93
Institute of Development Studies (IDS)	613	40	6	46
Centre for Research in Rural and Industrial Development (CRRID)	355	84	2	86
Centre for Women's Development Studies (CWDS)	778	75	5	80
Centre for Economic and Social Studies (CESS)	529	20	3	23
Nabakrushna Choudhury Centre for Development Studies (NKCCDS)	360	102	13	115
Gujarat Institute of Development Research (GIDR)	432	283	8	291
Institute for Studies in Industrial Development (ISID)	890	103	36	139
O.K.D. Institute of Social Change and Development (OKDISCD)	190	8	0	8
Centre for Multi-Disciplinary Development Research (CMDR)	643	55	6	61
Madhya Pradesh Institute of Social Science Research (MPISSR)	142	88	3	91
Indian Institute of Dalit Studies (IIDS)	198	55	2	57
Asian Development Research Institute (ADRI)	1670	66	11	77
Gulati Institute of Finance and Taxation (GIFT)	344	124	1	125
Institute of Development Studies Kolkata (IDSK)	71400	111	24	135
Institute for Human Development (IHD)	1340	53	4	57

Table 3 represents the ranking of the websites on the basis of three types of WIFs. Ranking on the basis of SWIF and IWIF are the same. The table clearly indicates that Gujarat Institute of Development Research (GIDR) holds the numero uno status on the basis of SWIF (0.6736) and IWIF (0.6551). It is followed by Madhya Pradesh Institute of Social Science Research (MPISSR) with SWIF 0.6408 and IWIF of 0.6197. In the third position, comes Indian Institute of Education, Pune (IIE) with SWIF 0.3768 and IWIF of 0.3696. Institute for Studies in Industrial Development (ISID) holds the rank one position on the basis of EWIF of 0.0404. It is followed by Nabakrushna Choudhury Centre for Development Studies (NKCCDS) with EWIF 0.0361 and Madhya Pradesh Institute of Social Science Research (MPISSR) with EWIF 0.0211.

Table 3: Ranking on the basis of Three Types of Web Impact Factors

Rank	Name of the Institutes	SWIF (Total links/W)	IWIF	EWIF	EWIF Rank
1	Gujarat Institute of Development Research	0.6736	0.6551	0.0185	4
2	Madhya Pradesh Institute of Social Science Research	0.6408	0.6197	0.0211	3
3	Indian Institute of Education, Pune	0.3768	0.3696	0.0072	13
4	Gulati Institute of Finance and Taxation	0.3634	0.3605	0.0029	21
6	A.N. Sinha Institute of Social Studies	0.3175	0.3016	0.0159	6
5	Nabakrushna Choudhury Centre for Development Studies	0.3194	0.2833	0.0361	2
7	Indian Institute of Dalit Studies	0.2879	0.2778	0.0101	9
8	Centre for Research in Rural and Industrial Development	0.2423	0.2366	0.0056	17

9	Council for Social Development	0.2397	0.2216	0.018	5
10	Madras Institute of Development Studies	0.1785	0.1756	0.0028	22
11	Institute of Economic Growth	0.1624	0.1532	0.0092	12
12	Centre for Social Studies	0.1577	0.147	0.0108	8
14	Centre for the Study of Developing Societies	0.1434	0.1382	0.0052	18
13	Institute for Studies in Industrial Development	0.1562	0.1157	0.0404	1
15	Centre for Women's Development Studies	0.1028	0.0964	0.0064	15
16	Centre for Multi-Disciplinary Development Research	0.0949	0.0855	0.0093	11
18	Sardar Patel Institute of Economic and Social Research	0.0749	0.0749	0.000	25
17	Institute of Development Studies	0.075	0.0653	0.0098	10
19	Centre for Studies in Social Sciences Calcutta	0.0628	0.06	0.0028	23
20	Giri Institute of Development Studies	0.0567	0.0567	0.000	26
25	O.K.D. Institute of Social Change and Development	0.0421	0.0421	0.000	27
21	Centre for Policy Research	0.0543	0.0415	0.0129	7
24	Institute for Human Development	0.0425	0.0396	0.003	19
22	Asian Development Research Institute	0.0461	0.0395	0.0066	14
23	Centre for Economic and Social Studies	0.0435	0.0378	0.0057	16
26	Institute for Social and Economic Change	0.0159	0.0159	0.000	28
27	Institute of Public Enterprise	0.0137	0.0107	0.003	20
28	Centre for Development Studies	0.0066	0.0066	0.000	29
29	Institute of Development Studies Kolkata	0.0019	0.0016	0.0003	24

Domain and Page Authority of the Institutional Websites

Domain Authority (DA) is a search engine ranking score that predicts how well a website will rank on search engine result pages (SERPs). A Domain Authority score ranges from one to 100, with higher scores corresponding to a greater ability to rank.[9] On the other hand Page Authority (PA) is a score that predicts how well a specific page will rank on search engine result pages (SERP). Page Authority scores range from 1 to 100, with higher scores corresponding to a greater ability to rank. Whereas Page Authority measures the predictive ranking strength of a single page, Domain Authority measures the strength of entire domains or subdomains.[10] It is evident from table 4 that Centre for Policy Research (CPR) with 53 Domain Authority score and Page Authority score of 49 tops the list in both cases.

Table 4: Domain and Page Authority of the Websites

Institution Names	Domain Authority	Page Authority
Institute for Social and Economic Change (ISEC)	39	42
Centre for Development Studies (CDS)	27	29
Centre for Studies in Social Sciences (CSSS)	31	37
A.N. Sinha Institute of Social Studies (ANSISS)	17	21
Institute of Public Enterprise (IPE)	45	24
Institute of Economic Growth (IEG)	42	40
Centre for the Study of Developing Societies (CSDS)	43	41
Centre for Social Studies (CSS)	23	33
Madras Institute of Development Studies (MIDS)	38	38
Indian Institute of Education (IIE)	22	29
Giri Institute of Development Studies (GIDS)	25	31

Centre for Policy Research (CPR)	53	49
Sardar Patel Institute of Economic and Social Research (SPIESR)	21	25
Council for Social Development (CSD)	28	31
Institute of Development Studies (IDS)	26	17
Centre for Research in Rural and Industrial Development (CRRID)	27	28
Centre for Women's Development Studies (CWDS)	36	32
Centre for Economic and Social Studies (CESS)	39	36
NabakrushnaChoudhury Centre for Development Studies (NKCCDS)	25	27
Gujarat Institute of Development Research (GIDR)	27	27
Institute for Studies in Industrial Development (ISID)	37	39
O.K.D. Institute of Social Change and Development (OKDISCD)	28	30
Centre for Multi-Disciplinary Development Research (CMDR)	19	27
Madhya Pradesh Institute of Social Science Research (MPISSR)	17	21
Indian Institute of Dalit Studies (IIDS)	29	30
Asian Development Research Institute (ADRI)	28	27
Gulati Institute of Finance and Taxation (GIFT)	24	23
Institute of Development Studies Kolkata (IDSK)	26	30
Institute for Human Development (IHD)	37	33

Presence of Meta Descriptor Tag

The meta description is an HTML attribute that provides a brief summary of a web page. Search engines such as Google often display the meta description in search results where they can highly influence user click-through rates. It is best to keep meta descriptions long enough so that they're sufficiently descriptive. Therefore, it is recommend to keep the length of a meta descriptor between 50–300 characters. Google announced in September of 2009 that neither meta descriptions nor meta keywords factor into Google's ranking algorithms for web search. Meta descriptions can however impact a page's CTR (click-through-rate) on Google which can positively impact a page's ability to rank. For that reason, among others, it's important to put some effort into meta descriptions. The meta description tag serves the function of advertising copy. It draws readers to a website from the SERP, and thus is a very visible and important part of search marketing. Crafting a readable, compelling description using important keywords can improve the click-through rate for a given webpage.[11] It is really unfortunate that out of the 29 institutes only 6 have used meta tags in their websites. Centre for Studies in Social Sciences Calcutta (CSSSC) with 656 meta tags ranks first among the institutes. It is followed by Institute of Public Enterprise (IPE) (296), Giri Institute of Development Studies (GIDS) (168), Council for Social Development (CSD) (140), Asian Development Research Institute (ADRI) (4) and Gulati Institute of Finance and Taxation (GIFT) with 7 meta descriptor tags.

Load Time, Page Size, SEO Score and Speed Score of the Institutional Websites

Table 5 represents the Load Time, Page Size, SEO Score and Speed Score of the institutional websites. Giri Institute of Development Studies (GIDS) website has the minimum load time i.e. 0.47 seconds signifying the minimum load time delay and maximum satisfaction for the users. Madhya Pradesh Institute of Social Science Research (MPISSR) website with 65.50 seconds load time delay is worst among all. Website of Council for Social Development (CSD) is the heaviest with page size of 5324.8 kb. Giri Institute of Development Studies (GIDS) ranks at the top with SEO score of 91 among all the institutes. Centre for Development Studies (CDS) with a highest speed score of 85 tops the list in this category.

Table 5: Load Time, Page Size, SEO Score and Speed Score of the Institutional Websites

Websites	Load Time (Second)	Page Size (KB)	SEO Score	Speed Score
Institute for Social and Economic Change (ISEC)	9.32	9.2	72	73
Centre for Development Studies (CDS)	1.94	5.5	74	85
Centre for Studies in Social Sciences (CSSS)	1.24	1126.4	73	69
A.N. Sinha Institute of Social Studies (ANSISS)	1.10	236.9	77	69
Institute of Public Enterprise (IPE)	6.39	2355.2	53	56
Institute of Economic Growth (IEG)	2.13	3584	52	72
Centre for the Study of Developing Societies (CSDS)	1.56	619.7	89	60
Centre for Social Studies (CSS)	0.77	541.7	76	68

Madras Institute of Development Studies (MIDS)	9.34	329.4	78	70
Indian Institute of Education (IIE)	21.29	732.5	74	68
Giri Institute of Development Studies (GIDS)	0.47	164.3	91	72
Centre for Policy Research (CPR)	1.03	869.1	78	80
Sardar Patel Institute of Economic and Social Research (SPIESR)	19.32	192.1	78	69
Council for Social Development (CSD)	3.87	5324.8	89	55
Institute of Development Studies (IDS)	9.42	1740.8	71	62
Centre for Research in Rural and Industrial Development (CRRID)	7.35	1740.8	72	58
Centre for Women's Development Studies (CWDS)	6.58	3686.4	78	54
Centre for Economic and Social Studies (CESS)	3.58	1.1	90	81
NabakrushnaChoudhury Centre for Development Studies (NKCCDS)	8.59	929.8	73	72
Gujarat Institute of Development Research (GIDR)	10.82	3584	71	52
Institute for Studies in Industrial Development (ISID)	2.08	2150.4	76	69
O.K.D. Institute of Social Change and Development (OKDISCD)	1.19	226.4	75	78
Centre for Multi-Disciplinary Development Research (CMDR)	2.61	128.2	77	64
Madhya Pradesh Institute of Social Science Research	65.50	4812.8	72	70

(MPISSR)				
Indian Institute of Dalit Studies (IIDS)	4.99	582.4	75	57
Asian Development Research Institute (ADRI)	1.92	2764.8	83	67
Gulati Institute of Finance and Taxation (GIFT)	1.68	1331.2	85	64
Institute of Development Studies (IDS)	7.08	441.4	71	64
Institute for Human Development (IHD)	1.29	756.6	76	57

Global Popularity Ranking of the Websites

Table 6 demonstrates the global popularity ranking of the websites. Centre for Policy Research with the GPR of 3,52,513 tops the list and Nabakrushna Choudhury Centre for Development Studies with its GPR of 48,31,376 comes at the bottom among the institutes.

Table 6: Global Popularity Ranking (GPR) of the Websites

Rank	**Institutes**	**GPR**	Rank	**Institutes**	**GPR**
1	Centre for Policy Research	3,52,513	16	Centre for Women's Development Studies	16,50,680
2	Institute for Social and Economic Change	4,67,899	17	O.K.D. Institute of Social Change and Development	16,87,534
3	Institute of Public Enterprise	5,37,283	18	Centre for Development Studies	17,31,883
4	Institute for Studies in Industrial Development	6,32,729	19	Gujarat Institute of Development Research	22,06,683
5	Institute of Economic Growth	7,30,683	20	Centre for Multi-Disciplinary Development Research	23,05,774
6	Centre for the Study of Developing Societies	8,94,981	21	Madhya Pradesh Institute of Social Science Research	23,06,874
7	Asian Development Research Institute	10,11,032	22	Giri Institute of Development Studies	23,18,309

8	Centre for Studies in Social Sciences	10,32,994	23	Council for Social Development	25,06,764
9	Institute for Human Development	12,46,777	24	Sardar Patel Institute of Economic and Social Research	28,40,249
10	Madras Institute of Development Studies	12,66,030	25	Indian Institute of Education	28,41,570
11	Indian Institute of Dalit Studies	12,70,341	26	Centre for Social Studies	28,57,659
12	Institute of Development Studies	13,36,027	27	Gulati Institute of Finance and Taxation	30,47,401
13	Centre for Research in Rural and Industrial Development	13,98,454	28	A.N. Sinha Institute of Social Studies	32,32,505
14	Centre for Economic and Social Studies	15,75,193	29	Nabakrushna Choudhury Centre for Development Studies	48,31,376
15	Institute of Development Studies	15,87,344			

Link Mapping of the Websites

World popular web crawler SocSciBot (http://socscibot.wlv.ac.uk/) has been used to collect the required data from the websites of the 29 research institutes. The crawler provides some analytical tools and returns the data in a form which can be easily imported in common network analysis programs. The web harvesting has been conducted between 15.04.2019-30.04.2019. For network analysis and visualization, the Pajek software has been used. Pajek allows better diagrams than illustrated in the instructions - including coloured nodes and variable width nodes and arcs. The network diagram showing links among 29 websites covered in this study is given bellow. The figure 2 shows that, Giri Institute of Development Studies (GIDS) (gids.org.in) is linked with 5 other research institutes which is the best among the others.

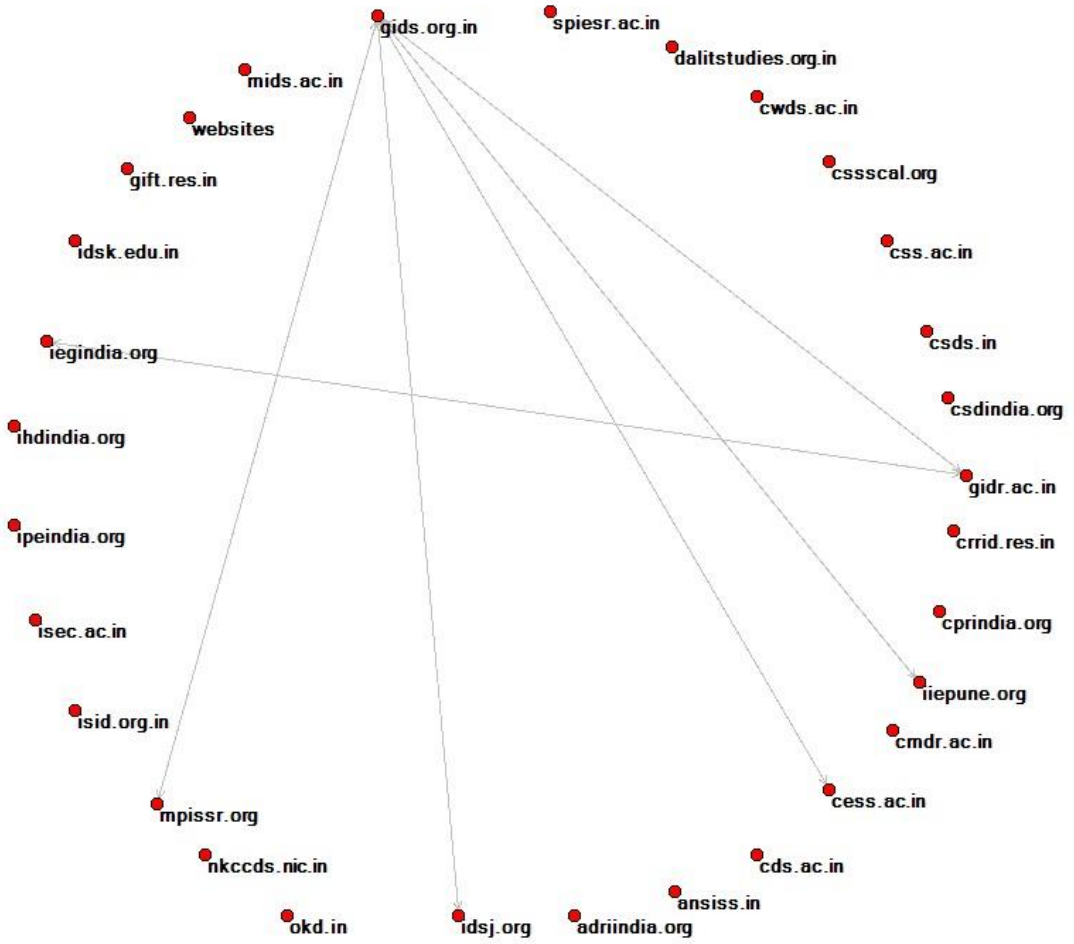

Figure 2: Link Mapping of the Websites

Text Analysis

Text analysis technique has been adopted to determine the most visible topics appeared in the websites of ICSSR sponsored research institutes in India. To acquire the text data, two sets of data file (a. Standard keywords file; b. websites of the institutes) in text format have been prepared and put in the SocScibot software. Text analyser tool Cyclist is integrated with the SocScibot software which assists to extract the words and build the word frequency analysis.

The standard keywords from the world famous subject classification scheme Dewey Decimal Classification's (DDC) social sciences (300) class have been extracted. It is considered that all the 109 standard keywords appearing within 300 to 399 classes in DDC represent all the

micro subjects of social sciences. The result shows that, the term education appeared 47 times, economics 26 times, labour 17 times, social sciences 13 times, trade 12 times, sociology 7 times, migration 5, macroeconomics 4, higher education, public finance and law appeared 3 times. Websites of Institute of Economic Growth (http://www.iegindia.org/), Indian Institute of Education (http://www.iiepune.org/), Sardar Patel Institute of Economic Social Research (http://www.spiesr.ac.in/), and Gujarat Institute of Development Research (http://gidr.ac.in/) are well structured and disclose more the course related and research related information.

Besides the above mentioned structured keywords, the software also harvested few words like “history - bengal - india - south asia; art history”, “gender based analysis of economy and society”, “subaltern studies”, “gender studies”, “cultural studies”, “media studies” etc.

CONCLUSION

The study reflects the overall scenario of the websites of the ICSSR sponsored and recognised research institutes. Institute of Development Studies Kolkata (IDSK) has the maximum number of webpages 71400. Institute of Economic Growth (IEG) has the maximum number of total links (177) and internal links (167). Institute for Studies in Industrial Development (ISID) has maximum number of external links i.e. 36. In case of all the institutes, number of internal-links is more than the external links which indicates that the each website is interlinked with their own webpages but their connection with outer websites is not much praiseworthy. This should be considered for better web visibility of a research institute’s website. Gujarat Institute of Development Research (GIDR) holds the numero uno status on the basis of SWIF (0.6736) and IWIF (0.6551). Institute for Studies in Industrial Development (ISID) holds the rank one position on the basis of EWIF of 0.0404. Centre for Policy Research (CPR) with 53 Domain Authority score and Page Authority score of 49 tops the list in both cases and signifies the website’s good rank on search engine result pages. Search engines often display the meta description in search results

where they can highly influence user click-through rates but it is really unfortunate that out of the 29 institutes only 6 have used meta tags in their websites. Giri Institute of Development Studies (GIDS) and Centre for Development Studies (CDS) hold the top ranks in SEO score and speed score categories respectively. Centre for Policy Research with the GPR of 3,52,513 tops the list among all the institutes. Link topology of the websites reflects that Giri Institute of Development Studies (GIDS) (gids.org.in) is linked with 5 other research institutes. Text analysis represents that websites of Institute of Economic Growth (http://www.iegindia.org/), Indian Institute of Education (http://www.iiepune.org/), Sardar Patel Institute of Economic Social Research (http://www.spiesr.ac.in/), and Gujarat Institute of Development Research (http://gidr.ac.in/) are well structured and disclose more the course related and research related information.

CONFLICT OF INTEREST

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ABBREVIATIONS

ICSSR: Indian Council of Social Science Research; WIF: Web Impact Factor; SWIF: Simple Web Impact Factor; IWIF: Internal-link Web Impact Factor; EWIF: External-link Web Impact Factor; ICSSR: Indian Council of Social Science Research; CTR: Click-through-

rate; SERP: Search Engine Result Pages; GPR: Global Popularity Ranking; SEO: Search Engine Optimization.

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