

A WEBOMETRICS ANALYSIS OF SOCIAL SCIENCE RESEARCH INSTITUTE WEBSITES IN INDIA

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Abstract: *The purpose of this paper is to explore the websites of Social Science Research Institute by Webometrics analysis. This study is based on twenty-nine Social Science Research Institute websites which are sponsored by ICSSR. Webometrics is one of the most important aspects in web era. It is basically a quantitative study of web related phenomena and concerned with measuring aspects of web domains, websites, internal and external links, total age of web pages and social share. Further, this paper also focuses on ranking and metrics of websites of the Social Science Research Institute. This study generalizes that Centre for Policy Research (New Delhi), Gujarat Institute of Development Research (Ahmadabad) and Institute of Developing Studies Kolkata are the most popular websites among the Social Science Research Institutes in India.*

Keywords : *Webometrics, Social Science Research Institute, Internal Links, External Links.*

1. Introduction

Institutional website contains different information about the institutes and serves as an organized information hub. Academicians access institutional website for up-to-date information. The development of Web 2.0 and 3.0 tools has meticulously revolutionized the method of information use throughout its generation. Information and Communication Technology (ICT) plays as data support system for the development of the society and the information seeking behavior of users is diverting from traditional to web and website acts as one of the most important information source. Websites and web links are commonly used web platforms where users can access information easily and effectively. An Academic websites provide useful information and it helps outsiders to know more

about any institution. Webometrics or Cybermetrics evaluated from the concept of Bibliometrics and Scientometrics. Bjorneborn and Ingwersen (2004) defined Webometrics as "the study of the quantitative aspects of the construction and use of information resources, structures and technologies on the Web drawing on bibliometric and Informetrics approaches." Webometric is one of the most important techniques for measuring web domains, web pages, links, web search engines result, and web impact factor (WIF). This paper is based on the measurement of twenty nine ICSSR institutional websites.

2. About Social Science Research Institutes in India

Social Science Research Institutes deal with socio-economic research and development activities. Indian Council of Social Science Research (ICSSR) was established in 1969 by the Government of India (GOI) to endorse the research in Social Sciences in India. The Social Science Research Institutes provide frontiers of knowledge, formulation of governmental action planning strategies. It also promotes a systematic and scholarly study on social, political, and economic perspectives. Such institutes also include the M.Phil and Ph.D. programmes in Social Science and short term training programmes for students and research scholars. A list is given below.

Table 1: Social Science Research Institutes in India

Sl. No.	Name of the Institutions	Place	Year of Established	URL of the Institutions
1.	Centre for Studies in Social Sciences Calcutta (CSSS)	Kolkata, West Bengal	1973	http://www.cssscal.org/
2.	Institute for Social and Economic Change (ISEC)	Bangalore, Karnataka	1972	http://www.isec.ac.in/
3.	Centre for Development Studies (CDS)	Thiruvananthapuram, Kerala	1971	http://www.cds.edu
4.	A.N. Sinha Institute of Social Studies (ANSISS)	Patna, Bihar	1964	http://www.ansiss.in
5.	Institute of Public Enterprise (IPE)	Hyderabad, Andhra Pradesh	1964	http://www.ipeindia.org/
6.	Institute of Economic Growth (IEG)	University of Delhi, Delhi	1958	http://www.iegindia.org
7.	Centre for the Study of Developing Societies (CSDS)	Raipur Road, Delhi	1963	http://www.cds.in
8.	Centre for Social Studies (CSS)	Surat, Gujarat	1969	http://www.css.ac.in
9.	Madras Institute of Development Studies (MIDS)	Chennai, Tamil Nadu	1971	http://www.mids.ac.in
10.	Indian Institute of Education (IIE)	Pune, Maharashtra	1948	http://www.iiepune.org
11.	Giri Institute of Development Studies (GIDS)	Lucknow, Uttar Pradesh	1973	http://www.gids.org.in/
12.	Centre for Policy Research (CPR)	Chanakyapuri, New Delhi	1973	http://www.cprindia.org
13.	Sardar Patel Institute of Economic and Social Research	Ahmedabad, Gujarat	1965	http://www.spiesr.ac.in

	(SPIESR)			
14.	Council for Social Development (CSD)	Hyderabad, Andhra Pradesh	1962	http://csdindia.org
15.	Institute of Development Studies Jaipur (IDSJ)	Jaipur, Rajasthan	1966	http://www.idsj.org/
16.	Centre for Research in Rural and Industrial Development (CRRID)	Chandigarh, Punjab	1978	http://www.crrid.res.in
17.	Centre for Women's Development Studies (CWDS)	Bhai Vir Singh Marg, New Delhi	1980	http://www.cwds.ac.in
18.	Centre for Economic and Social Studies (CESS)	Hyderabad, Andhra Pradesh	1980	http://www.cess.ac.in
19.	(I) Nabakrushna Choudhury Centre for Development Studies, Orissa (NKCCDS)	Bhubaneswar, Orissa	1987	http://nkccds.nic.in
20.	Gujarat Institute of Development Research (GIDR)	Ahmedabad, Gujarat	1970	http://gidr.ac.in
21.	Institute for Studies in Industrial Development (ISID)	Near the Hotel The Grand, New Delhi	1947	http://www.isid.org.in
22.	O.K.D. Institute of Social Change and Development (OKDISCD)	Guwahati, Assam	1989	https://www.okd.in/
23.	Centre for Multi-Disciplinary Development Research (CMDR)	Dharwad, Karnataka	1976	http://www.cmdr.ac.in/
24.	Madhya Pradesh Institute of Social Science Research (MPISSR)	Ujjain, Madhya Pradesh	1983	http://mpissr.org
25.	Indian Institute of Dalit Studies (IIDS)	Andrews Ganj, New Delhi	2003	http://www.dalitstudies.org.in
26.	Asian Development Research Institute (ADRI)	Patna, Bihar	1991	http://www.adriindia.org
27.	Gulati Institute of Finance and Taxation (GIFT)	Thiruvananthapuram, Kerala	1992	http://gift.res.in
28.	Institute of Development Studies Kolkata (IDSK)	Kolkata, West Bengal	2002	http://idsk.edu.in
29.	Institute for Human Development (IHD)	Mahatma Gandhi Marg, New Delhi	1998	http://www.ihdindia.org

[Source: <https://icssr.org/research-institutes-0>]

The above table collates the general view of all the 29 ICSSR institutes and it includes the name of the institutes, year of establishment and the website links.

3. Objectives of the Study

The purpose of this present paper is to investigate and represent a Webometrics study on Social Science Research Institutes in India. The specific objectives are;

- To identify the domains of institutional websites.
- To find out domain authority and page authority of the websites of the Institutes.
- To compute the total number of web pages of the institutes.
- To find out total number of internal and external links of websites.
- To find out the age of the websites.
- To find out the aspects of social share of the websites.

4. Methodology

This study was conducted on twenty nine Social Science Research Institutes' websites and the data was collected from the respective websites. Tools such as Moz.com, Small SEO Tools, and Visiospark have been used for website and page links analysis. Further, just discovered links, age of the websites, total back links, internal links, and external links also have been measured through mentioned above tools. The ranking of the datasets is measured by MS Excel. Further, the mean/average value of the given data in the following tables is calculated by the simple arithmetic mean equation to understand better, whereas \bar{x} is AM (Arithmetic Mean), $\sum x$ is the total of the value and n is the total number of the institution.

$$\text{The Equation } \bar{x} = \frac{\sum x}{n}$$

5. Literature Review

Numbers of studies on Webometrics have been done by various authors. Some related works are studied for reviewing the literature.

Babu & Rao (2010) conducted a study on 40 central universities' websites in India by investigating domain systems of the websites, number of web-pages and link pages. They calculated the simple web impact factor, self-link web impact factor, external link web impact factor and revised web impact factors of the websites. **Chakravarty & Wasan (2015)** studied the Web Impact Factor (WIF) and Revised WIF of top ten library websites of Higher Educational Institutes in India and it was done by Google SE. Their study also reveals the WIF and R-WIF are correlated and associated and this calculation was done by structured formulas. As per their findings, it was stated that the list of the top ten institutes (Higher Education) of India was discriminated from Ranking Web of Universities. **Gopalakrishnan & et. al. (2002)** examined the nature and the pattern of the citations of Information scientists in proceedings and a volume of an international journal in LIS field. They also found that the image of citation has been changing and web citation might replace the other citations in the coming years. **Jalal & et. al. (2010)** investigated web impact factors of the websites of universities in West Bengal. They have used SocSciBot 3.0 to generate linked data for micro-link topology. The results of the paper revealed that except NITs, all state and central universities are not linked with the topology framework. **Ratha & et. al. (2012)** analyzed the design and structure of the library websites of IITs. They mentioned the differences according to the user supporting services, number of hyperlinks, images, location of images, In-active links, and other web pages etc. **Verma & Brahma**

(2017) studied the Web Impact Factor, Internal Links, and External Links of the South Asian National Libraries. They found the highest domain authority, page authority, and equity passing links national libraries and the highest Web Impact Factor belongs to National Library India.

6. Areas of the study

Areas of the study deals with the followings;

6.1 Domain Extension

A domain extension is a classification string which can be easily identified rather than remembering the IP address. So, every website has a single domain name. Domain names are formed by the rules and procedures of the Domain Name System (DNS). Such domain extensions are .com, .org, .edu.in, and .ac etc.

6.2 Domain and Page Authority

Domain authority and page authority are the key features of websites and useful for the measurement of the web links. Domain authority is the thought leadership of the websites and it describes the details of subject field. It is an important element for ranking through search engines optimization and analysis. Page Authority describes possible search results of specific pages of any website in search engines like Google, Bing etc. It foretells the rank of the particular web page in a search engine.

6.3 Internal Links and External Links

An internal link is a kind of hyperlink which directs users to navigate one page to another page. Considerably hyperlinks depend on its' destination. External Links are such hyperlinks which point other website links in the website.

6.4 Page Link Metrics

Page link metrics allows exploring the back links, anchor texts, top pages, and just discovered links etc.

6.5 Website Age and Social Shares

Website Age basically denotes the age of the domain. It is about the year when a website came into the existence and the registration year. Domain creation date, domain updating, registration, and name servers can be found by using domain checker tools (Ex-Small SEO tools). Social Share means sharing of information given in a website through Application Programming Interfaces (APIs). Facebook, Twitter, and YouTube etc. are the most commonly used APIs for sharing information.

7. Data Analysis

7.1 Data regarding Domain Extensions

Table 2: Domain Extensions

Sl. No.	Domains	No. of institutes	Percentage (%)
1	.ac.in	8	27.59
2	.edu	1	3.45
3	.edu.in	2	6.90
4	.in	5	17.24
5	.org	10	34.48
6	.org.in	3	10.34

This table shows the domain extension of the Social Science Research Institutes. There are commonly six types of domain extensions were found. It shows '.org' is the most used domain which ranks top with 10 institutes (34.48%) followed by '.ac.in' (27%) and '.in'. Further, '.edu' is the least used domain only 1 (3.45%) institute uses it as their website domain.

7.2 Domain Authority and Page Authority

Table 3: Domain Authority and Page Authority

Sl. No.	Name	Domain Authority	Page Authority	Sl. No.	Name	Domain Authority	Page Authority
1	CSSS	40	50	16	CRRID	28	39
2	ISEC	40	50	17	CCWDS	30	41
3	CDS	45	54	18	CESS	40	50
4	ANSISS	20	24	19	NKCCDS	15	25
5	IPE	44	51	20	GIDR	38	41
6	IEG	42	51	21	ISID	43	49
7	CSDS	45	54	22	OKDISCD	26	37
8	CSS	28	39	23	CMDR	26	38
9	MIDS	35	45	24	MPISSR	20	19
10	IIE	20	33	25	IIDS	32	42
11	GIDS	27	38	26	ADRI	25	30
12	CPR	54	62	27	GIFT	15	27
13	SPIESR	19	32	28	IDSK	27	33
14	CSD	33	27	29	IHD	36	47
15	IDSJ	27	39	Total Domain Authority=920 Total Page Authority=1167 \bar{x} of Total Domain Authority=31.72 and Total Page Authority=40.24			

[Note: Name of the Institutes are used as acronym, full names are given in the table no.1 and so on]

This table indicates the number of domain authority and page authority of the websites. Centre for Policy Research (CPR, New Delhi) has the highest position in domain authority (54) and page authority (62). Nabakrushna Choudhury Centre for Development Studies (Orissa) has the lowest rank in above distribution. More than 23 institutes have approximately (25%) domain authority and almost 24 institutes have (30%) page authority as per average rank.

7.3 Total Links, Internal Links, External Links, and Total Back Links analysis

Table: 4 Types of Links

Sl. No.	Name	TL	IL	EL	TBL	Sl. No.	Name	TL	IL	EL	TBL
1	CSSS	104	101	3	30	16	CRRID	91	89	2	30
2	ISEC	80	79	1	30	17	CWDS	77	74	3	0
3	CDS	91	81	10	30	18	CESS	NF	NF	NF	0
4	ANSISS	40	38	2	22	19	NKCCDS	18	16	2	0
5	IPE	14	14	NF	0	20	GIDR	212	205	7	0
6	IEG	152	138	14	0	21	ISID	NF	NF	NF	0
7	CSDS	128	125	3	0	22	OKDISD	43	NF	43	0
8	CSS	46	43	3	30	23	CMDR	61	54	7	0
9	MIDS	19	19	NF	30	24	MPISSR	89	86	3	0
10	IIE	2	1	1	0	25	IIDS	54	54	NF	0
11	GIDS	9	8	1	0	26	ADRI	78	71	7	0
12	CPR	80	57	23	0	27	GIFT	86	84	2	18
13	SPIESR	19	19	NF	12	28	IIDSK	146	121	25	30
14	CSD	97	89	8	0	29	IHD	72	63	9	30
15	IDSJ	64	58	6	0	Total TL=1972, IL=1787, EL=185, TBL=292 \bar{x} of TL=68, IL=61.62, EL=6.37 & TBL=10.06					

[Note: TL=Total Links, IL=Internal Links, EL=External Links and TBL=Total Back Links]

This table is combined by total links, internal links, external links, and back links of the websites of the institutes. The above distribution was analyzed by using 'Visiospark' which envisages peak rank and as a result Gujarat Institute of Development Research ranks top with 212 total links and Institute of Public Enterprise (IPE) has the lowest rank which is about 14 total and internal links. Further, Gujarat Institute of Development Research leads the table with 205 internal links. There were no results found regarding all the mentioned links in the table for the Centre for Economic and Social Studies (Hyderabad) and Institute for Studies in Industrial Development (New Delhi). O.K.D. Institute of Social Change and Development (Guwahati) ranks top regarding external links. This table also shows that only 11 institutes have the back links.

7.4 Page Link Metrics

Table 5: Page Link Metrics

Sl. No.	Name	JD	Established Links		Sl. No.	Name	JD	Established Links	
			RD	TL				RD	TL
1	CSSS	0	60	297	17	CWDS	0	23	182
2	ISEC	0	82	206	18	CESS	0	33	4067
3	CDS	0	102	979	19	NKCCS	0	4	5
4	ANSISS	0	3	11	20	GIDR	0	31	220
5	IPE	0	77	604	21	ISID	0	16	86
6	IEG	182	64	6086	22	OKDISCD	0	18	34
7	CSDS	1	95	6453	23	CMDR	0	7	10
8	CSS	0	63	75	24	MPISSR	0	0	0
9	MIDS	2	48	109	25	IIDS	0	30	108
10	IIE	0	7	13	26	ADRI	0	16	8
11	GIDS	0	11	58	27	GIFT	0	3	11
12	CPR	62	282	30442	28	IDSK	0	10	78
13	SPIESR	0	5	8	29	IHD	0	31	917
14	CSD	0	4	45	Total JD=247, Total RD=1169, Total Links=51428 \bar{x} of JD=8.5, RD=40.31, Total Link=1773.37				
15	IDSJ	0	20	274					
16	CRRID	0	24	42					

[Note: JD=Just Discovered, RD=Root Domain, TL=Total Links]

This table shows the rankings regarding Just Discovered Links, Root Domains and Total links. Institute of Economic Growth (Delhi) is dignified by the highest rank of Just Discovered Links and 25 institutes have no ranking on the basis of the same. Centre for Policy Research (New Delhi) has 282 root domains as well as total 30442 links and Madhya Pradesh Institute of Social Science Research (Ujjain) has neither Just Discovered Links nor root domains.

7.5 Website Age and Social Shares

Table 6: Website Age and Social Shares

Sl. No.	Name	Age	Social shares	Sl. No.	Name	Age	Social shares
1.	CSSS	14	322	17	CWDS	10	30
2.	ISEC	16	532	18	CESS	NF	NF
3.	CDS	4	110	19	(2) NKCCDS	4	110
4.	ANSISS	3	6	20	GIDR	16	34
5.	IPE	13	28937	21	ISID	14	17
6.	IEG	12	225	22	OKDISCD	10	NF
7.	CSDS	N. A	146	23	CMDR	7	13
8.	CSS	10	62	24	MPISSR	15	168
9.	MIDS	14	143	25	IIDS	11	58
10.	IIE	17	57	26	ADRI	15	70
11.	GIDS	11	222	27	GIFT	4	1
12.	CPR	16	455	28	IDSK	8	111
13.	SPIESR	10	21	29	IHD	15	33
14.	CSD	14	56		Total Shares = 32032		
15.	IDSJ	17	8				
16.	CRRID	7	90				

The classification of the above table is done by Age and Social Share (Domain) of Social Science Research Institutes' websites. The oldest website is Institute of Development Studies (Jaipur) which was introduced 17 years ago and A.N. Sinha Institute of Social Studies is the newer than all. On the other hand, Institute of Public Enterprise (Hyderabad) has the highest ranking on social share (28937), O.K.D. Institute of Social Change and Development (Guwahati) and Centre for Economic and Social Studies have no social share domains.

8. Summary of the Findings

- ◆ From above the analysis (Table no 2) it is very clear that most of the institutions use '.org' as domain extension.
- Centre for Policy Research (New Delhi) has the topmost rank regarding domain authority as well as page authority and followed by Centre for Development Studies (Kerala) and Centre for the Study of Developing Societies (Delhi).

- Gujarat Institute of Development Research (Ahmadabad) has total 212 links which is highest among the website; it also has 205 internal links.
- While measuring the internal links, it was found that total three institutes don't have the internal links.
- O.K.D. Institute of Social Change and Development (Guwahati) has the highest number of external links and no external links were found in three institutes' websites.
- After analyzing the data, it can be said that a very few number of websites of the institutes have back links.
- Just discovered links were found only in four websites on the basis of sixty days.
- Website of the Institute of Development Studies (Jaipur) was introduced firstly among the entire websites and Institute of Public Enterprise (Hyderabad) has the highest activity on social sharing.

9. Conclusion

The present study represents the glimpse of Social Science Research institutes in India and the website of these institutes. Social Science Research Institute websites disseminate quality information which commonly referred to the deliberate use of web information and communications. An attempt has been made to showcase a Webometric study of 29 Social Science Research Institutes by different analyzing tools. It gives a clear view of domain authority, page authority, total links, internal links, external links, etc. and the differences on various portions of the websites.

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