

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

7-3-2013

Journal Bibliometric Analysis: A Case Study on Internet Research

Dr. Dillip K. Swain

KIIT University, swaindk_69@yahoo.co.in

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>

Swain, Dr. Dillip K., "Journal Bibliometric Analysis: A Case Study on Internet Research" (2013). *Library Philosophy and Practice (e-journal)*. 985.

<https://digitalcommons.unl.edu/libphilprac/985>

Journal Bibliometric Analysis: A Case Study on Internet Research

Dr. Dillip K Swain

KIIT University, Bhubaneswar, Odisha, India

Abstract

This paper aims to evaluate the pattern of publications of *Internet Research (IR)* from 2008 to 2012 and to reveal the research influence of this journal from the citing and cited references of the papers through appropriate bibliometric measures. The study analyses five volumes of *Internet Research* from the year 2008 to 2012. Citations to each of the published articles are explored through *Google Scholar* for assessing average impact of individual paper. Citation record for measurement of impact factor and immediacy index was extracted from *Scopus*. It is found that the average length of articles published in *IR* is 19.83 ranging from year wise average of 18.63 to 21.96 pages. The study revealed the domination of collaborative research and the degree of collaboration (DC) in *Internet Research* is found to be 0.83. The numbers of references used by the authors are high with majority of them citing 41 to 50 references and on an average, *Internet Research* authors have cited over 53 references per article. It is found that more than two third of citations reflected in *Internet Research* are emanated from journals followed by books. However, proceedings of conferences/seminars, and e-citations referred by authors were found quite less and negligible. The study further reveals that major share of contribution to the publications of *Internet Research* hails from Taiwan, followed by Spain, and USA. However, UK occupies the 4th rank by scores though the number of authors of this country is lesser than that of South Korea. Moreover, the study reveals that a total number of 148 source articles published in *Internet Research* have received in all 1783 Google Scholar citations averaging 12.04 citations per paper. The journal citing half life is 6.65 years and the *average age of citations* is 9.71. Additionally, 2012 Impact Factor of *Internet Research* (based on record of Scopus citations) is computed to be 1.900 and immediacy index is 0.241.

Keywords: Bibliometric study, bibliometric analysis, equal credit method, h-index, country productivity ranking, impact factor, immediacy index, average age of citations, self-citations, Google Scholar

Introduction

Bibliometrics is the application of statistical and mathematical methods to bibliographical studies and all forms of written communications (Hazarika, Goswami and Das, 2003). Bibliometrics has developed as a type of quantitative research method used in information science to describe patterns of publication within a given field or body of literature to identify the pattern of publication, authorship, citations and journal coverage with the hope that such studies can give an insight into the dynamics of the field under consideration (Vijaykumar and Naqvi, 2002; Warraich and Ahmad, 2011; Rodríguez-Ruiz, 2009). Bibliometric research methodologies of library and information science have always been used to provide tools for understanding the stature of disciplines, developing policy, and justifying research funding (Noruzi, 2006). Moreover, bibliometric methods are used in studies of properties and behavior of recorded knowledge, for analysis of the structures of scientific and research areas, and for evaluation of research activity and administration of scientific information (Patra, et al, 2006). Thus, it is an ideal field for academic librarians to develop and provide innovative services for both academic and administrative university staff. In so doing librarians make sure to take an active part in the development of new strategies and in fostering innovation. Qualitative processes like peer-review need to be validated and are therefore increasingly complemented by quantitative methods like bibliometrics (Gumpfenberger, et al, 2012). The idea of studying journal articles to perform a bibliometric study to gain ideas about a journal, author, or topic is a natural progression from earlier types of research in the field (Epstein, 2005; Iovino, 2008). More particularly, when a single journal is studied bibliometrically, it creates a portrait of the journal, providing a description that offers an insight that is beyond the superficial. It can indicate the

quality, maturity and productivity of the journal in any field, in a country or region. It also informs us about the research orientation that it supports to disseminate and its influence on author's choice as a channel to communicate or retrieve information for their research needs (Anyi, Zainab and Anuar, 2009). Contextually, the present study attempts to measure the pattern of publication of *Internet Research (IR)* from 2008 to 2012.

Internet Research is an international, refereed journal that aims to describe, assess and foster understanding of the role of wide-area, multi-purpose computer networks such as the Internet besides looking at the technological developments which facilitate the use of wide-area networks, the journal examines the social, ethical, economic and political implications which arise from mass public access to information resources. *IR* is indexed in all major indexing and abstracting databases of the world. The 2012 ISI Impact Factor of *Internet Research* is 1.500 (www.emeraldinsight.com/intr.htm). A bibliometric analysis based on citing and cited references of the papers of *IR* may provide sufficient indications about the influence and impact of this journal among readers and research scholars across countries.

Objectives

The key objectives of the study are depicted as under:

- To find out the average length of article published in *IR*;
- The study the authorship pattern and measure the degree of authors' collaboration;
- To study the range of references used by *IR* authors;
- To study the ranking of bibliographical forms of documents by the number of their citations;
- To study the country wise share of contributions to *IR* publications;
- To identify the core journals that are frequently cited in *IR* papers;
- To study quantum of citations of *IR* papers recorded in Google Scholar;
- To find out half life of journal citations and the *average age of citations*; and
- To measure 2012 Impact Factor and immediacy index of *IR*

Materials and Methods

The html version of Emerald articles published in *IR* from 2008 to 2012 is the major data source of the present paper. The lists of references of each and every article were collected from the mentioned source along with front page information of the respective articles carrying details of authors' geographical affiliations, types of papers, keywords, and page range of the article. The data was then segregated aspect wise and put into excel spread sheets for making the analysis convenient. The study employed authentic bibliometric measures to elicit concrete findings. Moreover, Google Scholar (GS) was used to explore the *total citation counts* of the published articles, *authors self citations*, and *journal self citations* of each and every paper published during the stated period. The citation record of the source journal available with Scopus was exported to excel file for computing Impact Factor (IF), and immediacy index of the journal.

Review of literature

Several bibliometric studies on single journals in various fields have been carried out by research scholars from different parts of the world, out of which some of the pertinent studies need to be highlighted. In this direction, Tsay (2008) analysed the citations published in JASIST in 1980, 1985, 1990, 1995, 2000 and 2004 with a vivid examination of the document type, the most cited resource, the country and subject distribution of articles. Garg (2003) studied articles published in *Scientometrics* from 1978 to 2000 and made a comprehensive assessment of national and institutional characteristics of papers published in this journal. Tiew, Abdullah and Kaur (2002) studied *Malaysian Journal of Library and Information Science* from 2006 to 2000 and found that this journal published 8 articles per issue on an average and each article had an average of 22.5 references. They further revealed that multi-authored articles outnumbered single-authored articles. Park (2010) revealed author collaboration, authors' affiliations, and geographical distribution of authors of the first 13 years publication patterns of *D-Lib Magazine*.

Swain (2011) conducted a bibliometric study of *Library Philosophy and Practice* (LPP) from 2004-2009 and found that major cited journals in LPP were from the core field of Library Science followed by Education, Medical Sciences, Sociology, Psychology, and Computer Science indicating a healthy trend of multidisciplinary research. The study observed that authorship productivity pattern of LPP partially complied with Lotka's Law. Swain and Panda (2012) in the bibliometric study on *Journal of Intellectual Property Rights* revealed that the visibility of collaborative contribution in the journal was found remarkably less. More than half of the journal articles carried just 1 citation, one fourth got 2 citations, and the rest received citations between 3 to 9 times and the average number of citations against all published articles was found to be 0.66 per article. Tsay (2011) vividly demonstrated the bibliometric characteristics of the *Journal of Information Science* and the subject relationship with other disciplines. Jena, Swain and Sahu (2012) studied *The Electronic Library* (TEL) from 2003 to 2009 and found that solo research in TEL is predominant and the average length of article reported was 13.017 pages. Moreover, they found that, majority of citations were from journals followed by web resources, and books; the half life of journal citations and book citations were reported to be 5 and 7 respectively. Swain, Jena and Mahapatra (2012) in the bibliometric study of the journal *Interlending & Document Supply* (ILDS) observed that majority of ILDS' journal citations belonged to the publishing year and the next year of publication; and the half life of journal citations was estimated to be 1 year which indicated that ILDS authors preferred to cite recent documents in their scholarly papers. Isiakpona (2012) indicated low level of collaboration among authors of the articles published in the *LIBRES Research Electronic Journal* and the degree of collaboration was found to be 0.279. Das (2012) in his Bibliometric study of *Nelumbo* (plant taxonomy journal) found that half of the papers published in the journal were contributed by two authors and just one fourth of articles were contributed by single authors. Lokhande (2013) revealed the multi-authored characteristics of *Annals of Library and Information Studies* from 2002 to 2011 through a vivid content analysis. Regolini and Jannes-Ober (2013) revealed the high degree of transdisciplinarity of *Informing Science*. They considered the impact of 184 articles and found that the h index for those articles was 12. However, the present paper is yet again another case study on the publication characteristics of *Internet Research* which is unexplored.

Analysis

Year wise distribution of types of articles

Table I shows that *IR* has published a total number of 148 articles from 2008 to 2012 averaging over 29 articles per year (5 issues). It is understood that *IR* has accommodated on an average 5 to 6 papers in each issue. Majority of articles published in *IR* are *research papers* (87.83%; 130 articles) followed by *general review* and *conceptual paper* (4.05%; 6 articles) each. However, *literatures review* (2.70%; 4 articles), *case study* and *view point* (0.67%; 1 article) each have found their presence quite less.

Table I. Year wise distribution of types of articles

Types of Articles	2008	2009	2010	2011	2012	Total
Research Paper	27	27	21	27	28	130
General Review	0	1	5	0	0	6
Conceptual Paper	0	0	5	1	0	6
Literature Review	1	2	0	1	0	4
Viewpoint	1	0	0	0	0	1
Case Study	0	0	0	0	1	1
Total	29	30	31	29	29	148

Length of article

It is found from table II that the average length of article published in *IR* is 19.83 ranging from year wise average of 18.63 to 21.96 pages. It is inferred that *IR* has published articles of standard length by giving enough scope to its authors to report their research results at length so that no significant aspect of their respective research is left out from the purview of their research presentation and discussion.

Table II. Length of article

Year	Total Pages	Cumulative pages	Total no. of articles	Cumulative articles	Average pages per article
2008	559	559	29	29	19.28
2009	559	1118	30	59	18.63
2010	587	1705	31	90	18.94
2011	594	2299	29	119	20.48
2012	637	2936	29	148	21.96
Cumulative average pages per article=19.83					

Authorship pattern

Table III shows that the majority of publications in *IR* has been contributed by three joint authors (50 articles; 33.78%), followed by two joint authors (48 articles; 32.43%) and > Three joint authors (26 articles; 17.57%). However, articles contributed to *IR* in single authorship mode (24 articles; 16.22%) is found to be at the bottom. Therefore, it is evident that research in *IR* is dominated from the collaborative front bearing in mind the positive correlation between institutional and international collaboration and the high number of citations of collaborating authors as compared to single authorship as opined by Narin et al., (1991), Chinchilla-Rodríguez et al., (2010) and Cantos-Mateos, et al,(2012).

Table III. Authorship pattern

Authorship pattern	2008	2009	2010	2011	2012	Total	% of the total publications
Single	3	3	4	9	5	24	16.22
Two	11	10	9	8	10	48	32.43
Three	13	8	9	9	11	50	33.78
> Three	2	9	9	3	3	26	17.57
Total	29	30	31	29	29	148	100.00

Degree of collaboration

The precise nature and magnitude of collaboration cannot be easily determined by the usual methods of observation or interview because of the complex nature of human interaction that takes place between or among collaborators over a period of time (Subramanyam, 1983; Katz and Martin, 1997). However, the extent of collaboration made in a particular domain or a given set of literature can be measured through some quantitative techniques. In this direction, Subramanyam (1983) has developed a formula for calculating degree of collaboration as:

$$DC = \frac{NM}{NM + NS}$$

Where: DC=Degree of collaboration; NM=number of multiple authored papers; and NS=Single authored papers. By putting the value of NM (=124) and NS (=24) in the above equation, the degree of collaboration (DC) in *IR* is found to be 0.83. As the degree of collaboration exceeds 0.5, it indicates a high degree of collaborative research in *IR* which is already evident from Table III.

Range of references

The listing of references in publications is a convention among scientists for giving credit or recognition to the value of previous work (Merton, 1988). It is evident from table IV that, the numbers of references used by the authors are high with majority of them citing 41 to 50 references that is indicated by the tallest bar in figure 1. The table further reveals that, though the authors have more frequently used 41 to 50 (f=26) citations in their papers, the percentage of citations to the total citations in the range of 71 to 80 references (f=17) is little higher. On an average, *IR* authors have cited over 53 references per article. Hence, it is inferred that *IR* authors have conducted their research with ample evidences from earlier studies.

Table IV. Range of references

Citation range	Frequency of citations	Cumulative frequency of citations	Total citations	Cumulative total citations	% of citations	Cumulative % of citations
< 10	3	3	9	9	0.11	0.11
11 to 20	15	18	239	248	3.00	3.11
21 to 30	18	36	484	732	6.08	9.19
31 to 40	16	52	581	1313	7.30	16.49
41 to 50	26	78	1213	2526	15.23	31.72
51 to 60	14	92	775	3301	9.73	41.45
61 to 70	14	106	926	4227	11.63	53.08
71 to 80	17	123	1239	5466	15.56	68.64
81 to 90	11	134	924	6390	11.60	80.24
91 to 100	4	138	390	6780	4.90	85.14
> 100	10	148	1184	7964	14.87	100.00
Average citations per paper=53.81						

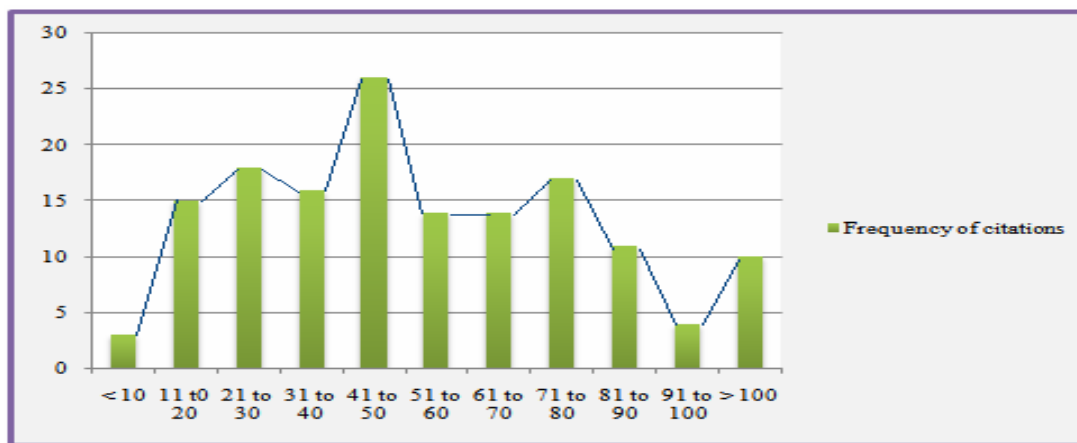


Figure 1. Range of references

Year wise distribution of bibliographical forms of citations

Table V shows that more than two third of citations reflected in *IR* are emanated from journals (70.61%) followed by books (13.96%). However, proceedings of conferences/seminars (5.31%), and e-citations (4.75%) referred by *IR* authors were found quite less and negligible. The highest journal citations was recorded in 2012 and the lowest in 2009.

Table V. Year wise distribution of bibliographical forms of citations

<i>Bibliographical forms</i>	2008	2009	2010	2011	2012	Total	Percentage
Journals	1030	797	900	1369	1527	5623	70.61
Books	222	186	212	267	225	1112	13.96
E-Citations	65	107	58	72	77	379	4.76
Proceedings	39	104	109	54	117	423	5.31
Others	84	97	115	64	67	427	5.36
Total	1440	1291	1394	1826	2013	7964	100.00

Distribution of keywords

Keywords play the major role in retrieval of the documents from the vast sea of literature. Keywords help indexing the documents at their relevant places in different indexing databases so that users can browse their required documents easily and conveniently as most of the times they approach documents by keyword searches. An improper setting of keywords by the authors or editors may put the documents at obscurity leading to poor visibility and accessibility of valuable works and thereby drawing low citations. Keywords that have been featured in the structured abstracts of *IR* articles at least for 5 times are presented in table VI. It is found that ‘internet’ as a keyword, has become the first and foremost choice by the authors and editor, which has occurred as many as 58 times followed by ‘electronic commerce’, ‘consumer behavior’, and ‘trust’. The keywords which have been indexed in the structured abstract for a minimum of 5 times include, ‘brands’, ‘communication’, ‘customer loyalty’, ‘information exchange’, ‘online operations’, ‘social networking sites’, ‘auctions’, and ‘data analysis’.

Table VI. Distribution of keywords

<i>Keywords</i>	<i>Frequency</i>	<i>Keywords</i>	<i>Frequency</i>
Internet	58	Customer satisfaction	6
Electronic commerce	28	Data security	6
Consumer behaviour	26	User studies	6
Trust	16	Brands	5
Communication technologies	15	Communication	5
Worldwide web	14	Customer loyalty	5
Taiwan	13	Information exchange	5
Computer networks	7	Online operations	5
Consumers	7	Social networking sites	5
Innovation	7	Auctions	5
Social networks	7	Data analysis	5

Prolific authors

There are some authors who develop great interest and enthusiasm to write for a specific journal and continue to write frequently and regularly whom we call prolific authors. It is evident from the study that *IR* has not accommodated any author who has contributed more than *three* articles since 2008 and 2012. There are a total number of *eight* authors who have contributed maximum three articles, out of which *three* authors belong to Taiwan, *three* from Spain and *one* from USA and *one* from Netherlands. It is apparent that authors have hardly found any time slot to get published more than three times may be due to a longer queue in the publication pipeline of the journal. The ranking of authors by their number of contributions is depicted in Table VII for a view.

Table VII. Ranking of authors by number of contributions

<i>Sl No</i>	<i>Rank</i>	<i>No of papers</i>	<i>Name of the author</i>	<i>Country</i>
1	1	3	Binshan Lin	USA
2	1	3	Ching-Jui Keng	Taiwan
3	1	3	Federico Barrero	Spain
4	1	3	Hui-Ying Ting	Taiwan
5	1	3	Kuo-Ming Chu	Taiwan
6	1	3	Peter C. Neijens	Netherlands
7	1	3	Sergio L. Toral	Spain
8	1	3	Francisco J. Martínez-López	Spain
9	2	2	Ching-I Teng	Taiwan
10	2	2	Chung-Chi Shen	Taiwan
11	2	2	Dov Te'eni	Israel
12	2	2	Echo Huang	Taiwan
13	2	2	Edith G. Smi	Netherlands
14	2	2	Edward C.S. Ku	Taiwan
15	2	2	Eldon Y. Li	Taiwan
16	2	2	Francisco Cortés	Spain
17	2	2	George J. Avlonitis	Greece
18	2	2	Hilde A.M. Voorveld	Netherlands
19	2	2	Hui-Chun Chan	Taiwan
20	2	2	Hyeonjoo Seol	South Korea
21	2	2	Javier Aracil	Spain
22	2	2	Jennifer Rowley	UK
23	2	2	Jeong-Dong Lee,	South Korea
24	2	2	Jong Hyuk Park	South Korea
25	2	2	Jongsu Lee	South Korea
26	2	2	Jyh-Shen Chiou	Taiwan
27	2	2	Li-An Ho	Taiwan
28	2	2	M.R. Martínez-Torres	Spain
29	2	2	Sadao Kurohashi	Japan
30	2	2	Shao-Kang Lo	Taiwan
31	2	2	Sinawong Sang	South Korea
32	2	2	Stuart J. Barnes	UK
33	2	2	Tsung-Hsien Kuo	Taiwan
34	2	2	Yoshikiyo Kato	Japan
35	2	2	Yu-Jen Chou	Taiwan
36	-	1	304 authors	-

Country productivity ranking by equal credit method

By equal credit method, each article is assigned one point which is equally shared by the contributors representing different countries. If an article is contributed by n authors, then each contributor will earn $1/n$ points for his country (Chua et al., 2002; Lowry, et al., 2007; Serenko et al., 2010; Swain et al, 2012). Table VIII reveals that major share of contribution to the publications of *IR* is emanated from Taiwan (83 authors; 39.15 scores) followed by Spain (70 authors; 21.63 scores), and USA (41 authors; 17.74 scores). However, UK (20 authors; 8.08 scores) occupies the 4th rank by scores though the number of authors of this country is lesser than that of South Korea (27 authors; 8 scores). The research productivity of Singapore appears to be very less with just one author earning 0.333 scoring points presumably through cross country collaboration.

Table VIII. Country productivity ranking

<i>Sl. No</i>	<i>Rank</i>	<i>Country</i>	<i>Score</i>	<i>No of authors</i>
1	1	Taiwan	39.15	83
2	2	Spain	21.63	70

3	3	USA	17.74	41
4	4	UK	8.08	20
5	5	South Korea	8	27
6	6	Japan	5.5	25
7	7	Greece	4.75	15
8	7	Israel	4.75	12
9	8	Netherlands	4.66	12
10	9	Australia	4.41	14
11	10	Canada	3.41	5
12	11	Iran	3	8
13	12	China	2.99	7
14	13	Germany	2.5	4
15	14	Hong Kong	2	4
16	14	UAE	2	3
17	15	Malaysia	1.75	6
18	16	India	1.66	4
19	16	Turkey	1.66	4
20	17	Argentina	1.5	4
21	18	Austria	1	1
22	18	Finland	1	3
23	18	Shanghai	1	3
24	18	Switzerland	1	4
25	18	Tunisia	1	2
26	19	Colombia	0.7	3
27	20	Korea	0.5	1
28	20	Pakistan	0.5	2
29	21	Singapore	0.33	1
Total			148.17	388

Ranking of journals cited by *IR* authors

A total number of 1111 journals have been cited by authors for cumulative total of 5623 times. It is evident from table IX that *Internet Research* (the source journal) tops the table with 260 citations constituting 4.61 per cent of total citations, followed by *Information & Management* (187 citations; 3.32 per cent), *Journal of Marketing* (155 citations; 2.36 per cent), and *MIS Quarterly* (147 citations; 2.61 per cent). Interestingly, it is observed that *IR* authors have given almost equal importance for exploring literature form some other journals. In this respect, the value of Source Normalized Impact per Paper (*SNIP*) (Moed, 2010) of key journals cited in *IR* papers was obtained from Scopus for assessing the relative value of respective journals. It is found that the authors of *IR* have rightly explored their research materials from a few other journals which are ranked higher than *Internet Research*.

Table IX. Ranking of journals by number of citations reported in *IR*

<i>Sl No.</i>	<i>Rank</i>	<i>Name of the journal</i>	<i>Total citations</i>	<i>% of citations</i>	<i>SNIP*</i>
1	1	Internet Research	260	4.61	1.382
2	2	Information & Management	187	3.32	2.904
3	3	Journal of Marketing	155	2.36	4.493
4	4	MIS Quarterly	147	2.61	3.885
5	5	Journal of Consumer Research	125	2.22	2.614
6	6	Journal of Marketing Research	122	2.16	2.269
7	7	Journal of Business Research	109	1.93	1.817
8	8	Information Systems Research	107	1.90	2.670
9	9	Management Services	100	1.77	-
10	10	Journal of Retailing	94	1.67	2.281
11	11	Communications of the ACM	93	1.65	4.619
12	12	Journal of Interactive Marketing	88	1.56	1.372
13	13	International Journal of Electronic Commerce	74	1.31	1.340
14	14	Journal of the Academy of Marketing Science	69	1.22	2.859
15	15	Journal of Management Information Systems	66	1.17	1.984

16	16	Computers in Human Behaviour	63	1.12	-
17	17	Decision Support Systems	56	0.99	2.284
18	18	Journal of Advertising Research	55	0.98	0.803
19	19	Journal of Advertising	54	0.96	1.630
20	20	Journal of Personality and Social Psychology	50	0.89	3.405
21	21	Industrial Management & Data Systems	42	0.74	-
22	22	Electronic Commerce Research and Applications	41	0.73	1.665
23	22	Psychological Bulletin	41	0.73	6.750
24	23	European Journal of Marketing	39	0.69	1.210
25	23	Journal of Computer-Mediated Communication	39	0.69	2.732
26	23	Omega: International Journal of Management Science	39	0.69	2.871
27	24	International Journal of Information Management	38	0.67	1.768
28	25	Psychology and Marketing	37	0.66	1.460
29	26	CyberPsychology & Behavior	36	0.64	-
30	26	Journal of Service Research	36	0.64	2.020
31	27	Marketing Science	35	0.62	1.623
32	28	International Journal of Service Industry Management	33	0.59	2.833
33	29	Harvard Business Review	32	0.57	9.405
34	29	Internet Research, Electronic Networking Applications and Policy	32	0.57	-
35	29	Psychology and Marketing	32	0.57	1.460
36	30	International Journal of Retail and Distribution Management	31	0.55	1.048
37	31	Advances in Consumer Research	29	0.51	0.148
38	31	Decision Sciences	29	0.51	1.281
39	31	Journal of Communication	29	0.51	1.528
40	32	Industrial Marketing Management	28	0.50	1.432
41	33	International Journal of Research in Marketing	27	0.48	1.369
42	33	Journal of Consumer Psychology	27	0.48	0.739
43	34	International Journal of Human-Computer Studies	26	0.46	3.136
44	35	Electronic Markets	24	0.43	0.610
45	35	Journal of Electronic Commerce Research	24	0.43	1.059
46	36	European Journal of Information Systems	23	0.41	1.688
47	37	Expert Systems with Applications	22	0.39	2.539
48	37	Journal of Computer Information Systems	22	0.39	0.804
49	38	Journal of Broadcasting and Electronic Media	21	0.37	1.378
50	-	Cumulative citations for other 1061 journals	2635	47.01	-
Total		1111 journals	5623	100	-

*Scopus 2011 *SNIP* (Source Normalized Impact per Paper)

Citing half life and average age of journal citations

The cited half-life is a measure of the rate of decline of the citation curve. It is the number of years that the number of current citations takes to decline to half of its initial value (Amin and Mabe, 2000). Table X reveals that the citations of journals in *IR* start declining at the age of 6 years (though it partially overflows to Sen's (1999) predicted critical year-7th year) which is evident from table X. Further, the citation curve in figure 2 indicates that the initial portion of the graph up to 6 years follows straight line pattern showing the citations concentration which is further extended right up to 11 years (carrying cumulative citations of 73.87%). Thereafter, there is a deviation of straight line pattern up to 67 years showing low concentration of citations and the horizontal straight line portion of the graph from 67 to 91 years indicates the steady and low frequency of citations. In a nutshell, it is inferred that the cream of journal citations in *IR* is confined within 7 years of their publications (calculated citing half life=6.65).

Table X. Half-Life period and average age of journal citations

Age of citation (C _a)	No of citations (C _n)	Cumulative total of citations	Score of citations (C _a X C _n)
1	368	368	368
2	396	764	792
3	458	1222	1374
4	449	1671	1796
5	448	2119	2240

6*	430	2549	2580
7**	410	2959	2870
8	352	3311	2816
9	317	3628	2853
10	282	3910	2820
11	244	4154	2684
12	172	4326	2064
13	142	4468	1846
14	99	4567	1386
15	86	4653	1290
16	80	4733	1280
17	86	4819	1462
18	78	4897	1404
19	68	4965	1292
20	18	4983	360
21	51	5034	1071
22	63	5097	1386
23	73	5170	1679
24	42	5212	1008
25	35	5247	875
26	39	5286	1014
27	37	5323	999
28	33	5356	924
29	24	5380	696
30	30	5410	900
31	31	5441	961
32	16	5457	512
33	12	5469	396
34	11	5480	374
35	18	5498	630
36	11	5509	396
37	16	5525	592
38	6	5531	216
39	8	5539	312
40	9	5548	360
41	10	5558	410
42	2	5560	84
43	7	5567	301
44	5	5572	220
45	2	5574	90
46	4	5578	184
47	1	5579	47
48	5	5584	240
49	3	5587	98
50	5	5592	250
51	3	5595	153
52	4	5599	208
53	4	5603	212
54	2	5605	108
55	2	5607	110
56	3	5610	168
57	2	5612	114
59	2	5614	118
60	1	5615	60
61	1	5616	61
62	1	5617	62
65	2	5619	130
67	1	5620	67

68	1	5621	68
85	1	5622	85
91	1	5623	91
Total ($\sum C_n = 5623$)			54617

*Subcritical year **Critical year

Taking the data from table X, we can measure the *average age of journal citations (AC_a)* in *Internet Research* from 2008 to 2012 by dividing sum of *scores of citations* to sum of *total citations* using a simple **formula**:

$$AC_a = \frac{\sum C_a \times C_n}{\sum C_n}$$

Where: AC_a = Average Age of citations; C_a = Age of citation; C_n = Number of citations

Applying the formula mentioned above, average age of citations (AC_a) from the obtained data set of *Internet Research* from 2008 to 2012 is calculated as:

$$AC_a \text{ (in Internet Research)} = \frac{54617}{5623} = 9.71$$

Hence, it is understood that though the half of the citations in *IR* fall within 7 years (half life=6.65) of publications of respective journals, the *average age of cited journals* is a bit higher than the half-life of citations because *IR* authors have cited many articles published way back to more than 50 years.

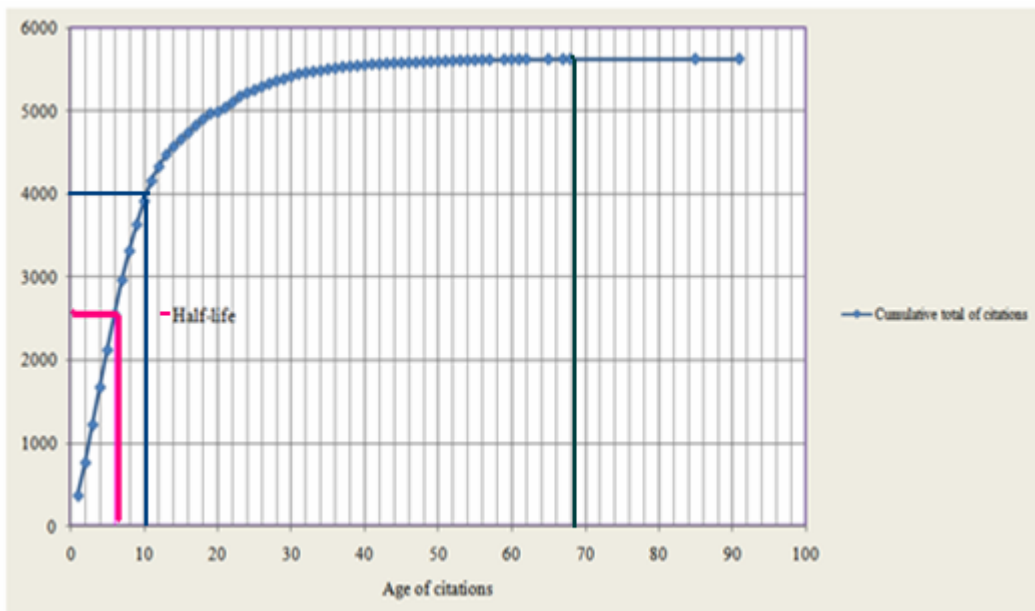


Figure 2. Journal citing half-life

Analysis of citations recorded in Google Scholar

The citations to source articles of *IR* were explored through Google Scholar (GS) for providing a clear and magnified picture of the impact and influence of *IR* articles all around. The year wise distribution of citations of *IR* papers is depicted in table XI for a view.

Table XI. Year wise distribution of total citations vs self citations

Publication year	GS citations	% of citations	Author self citations	% of author self citation to total citations	Journal self citations	% of journal self citation to total citations
2008	637	35.73	31	1.74	46	2.58
2009	655	36.74	49	2.75	64	3.59
2010	223	12.51	38	2.13	28	1.57
2011	221	12.39	10	0.56	57	3.20
2012	47	2.64	5	0.28	14	0.79
Total	1783	100.00	133	7.46	209	11.72

Note: The citation data retrieved from Google Scholar during last week of April, 2013

It is evident from Table XI that a total number of 148 source articles published in *IR* have received in all 1783 GS citations averaging 12.04 citations per paper. Furthermore, it is observed that out of 148 papers, 133 (89.86%) papers received citations where as only 15 papers (10.13%) so far left uncited (see appendix).

Self-citations

Academics cite themselves to a greater or lesser extent; the frequency of self-citation often varies depending on the field in which the author works (Snyder and Bonzi, 1998). Self-citation will clearly inflate an author's overall citation count and potentially at least could also inflate their *h*-index (Norris and Oppenheim, 2010). Author self-citation refers to citing one's previous publications in a new publication. Author self-citation exists when the citing and cited papers have at least one author in common. Although authors may have good reasons to cite their own works, these citations do not necessarily reflect the importance of their work or its impact on the rest of scientific community (Fowler and Aksnes, 2006). Author self-citations may misrepresent the importance of individual articles; skew the calculation of journal impact factors, and bias perceptions of the importance of a publication (Davaranah and Amel, 2009). The characteristics and patterns of journal self-citation may completely differ from those of author self-citation. An author may never cite his own previously published papers, and yet still cite others' papers published in the same journal, creating an incidence of journal self-citing without author self-citation (Huang and Lin, 2012). Therefore, a journal editor can hardly object an author to cite others paper of the same journal. Similarly, authors can not always follow the rule of the thumb. Irrespective of all consequences, they sometimes need to acknowledge their previous works, may like to promote their own work at the initial stages, or even find some relevant substances from their already published work. In such situation, how can they completely ignore their creditable previous works? Similar is the situation for a source journal. Can it always ask potential authors to completely delete some of the outstanding works already published in it from their reference list for the sake of improving its impact factor or *h*-index? Nevertheless, self-citation for citation sake or journal self citation by the author for winning the favor of the editor should always be discouraged.

Moreover, it is observed that the authors' self citation tendency was a bit more in 2009 in comparison to other publishing years and it has gradually declined to reach a minimal point in 2012. However, journal citation trend is constantly up and down but never gone over 4% of total citations. It is further evident that the aggregate authors' self citations (7.48%) is quite understandable and journal self citation (11.92%) is very reasonable. This speaks volumes about the maturity of the editorial policy of *IR* that gives top

priority on the quality of publications. Hence, it is deduced that the learned editorial board of *IR* have made a good balance of the issues discussed above.

Highly Cited papers

The article entitled, “*Understanding the appeal of user-generated media*” by Guosong Shao of *USA* published in 2009 (volume 19 issue 1) carrying 102 bibliographical references has so far received 127 citations (see appendix) without any self citations but the source journal has cited it for 4 times may be due to authors’ choice for this extraordinary piece of work. In the same year of publication, another article entitled, “*Social ties and online word of mouth*” by Erin M. Steffes and Lawrence E. Burgee of *USA* (ranked third) containing 38 bibliographical references attracted 81 citations without any self citations and with 6 journal self citations for obvious reasons. The quantum of citations to these two articles shows why citations to 2009 publications are at top. The second most highly cited paper entitled, “*The impact of electronic word-of-mouth*” by Christy M.K. Cheung, Matthew K.O. Lee, and Neil Rabjohn of Hong Kong appeared in 2008 (volume 18 issue 3). The article carrying 61 bibliographical references drew 118 citations in total that included 6 author self citations and journal self citations each. The ranking of highly cited papers are presented in table XII in decreasing order of their citations for a view.

Table XII. Highly cited papers

Sl. No.	Title	Author(s)	GS Citations	Self Citations	Citations in IR
1	Understanding the appeal of user-generated media	G Shao	127	0	4
2	The impact of electronic word-of-mouth	CMK Cheung, et al	118	6	6
3	Social ties and online word of mouth	EM Steffes, LE Burgee	81	0	6
4	Factors influencing online auction repurchase intention	CH Yen, HP Lu	55	0	5
5	Customer satisfaction factors of mobile commerce..	J Choi, et al	50	0	2
6	Factors affecting purchase intention on mobile shopping..	HP Lu, PYJ Su	48	2	4
7	Taking sides: user classification for informal online..	R Malouf, T Mullen	47	0	1
8	Understanding online community user participation	T Zhou	42	0	12
9	Effects of self-service technology on customer...	SH Ho, YY Ko	38	0	0
10	An empirical study of the driving forces behind online...	SL Toral, et al	37	11	5
11	Influence of interorganizational relationships on SMEs'...	AYL Chong, et al	36	6	4
12	The acceptance of blogs: using a customer experiential...	CJ Keng, HY Ting	32	1	9
13	The acceptance of blogs	CJ Keng, HY Ting	32	1	9
14	Use and gratification in e-consumers	E Huang	31	0	1
15	Empirically testing innovation characteristics...	HF Lin	30	1	2
16	Past purchase and intention to purchase in e-commerce	J Weisberg, et al	29	0	5
17	Integrating wireless sensor networks and the internet	R Roman, J Lopez	28	7	0
18	The effect of community identification on attitude...	CC Shen, JS Chiou	26	1	6
19	Towards an understanding of the behavioral intention...	YHH Chen, D Corkindale	25	0	1
20	A review of trust modeling in ad hoc networks	M Mejia, et al	25	3	0

Impact factor and immediacy index of *IR* (based on Scopus citation record)

Impact factor is one of the key bibliometric measures to rate and evaluate the standard of a specific journal. The idea of impact factor was first introduced by Dr Eugene Garfield in 1955 (Garfield, 2006). The impact factor of a journal is calculated by dividing the number of current year citations to the source items published in that journal during the previous two years (Sen, 1999; Zainab, et al, 2009; Arnold and Fowler, 2011). Citation of *IR* papers recorded in Scopus (Table XIII) is taken into consideration for the calculation of 2012 impact factor of *Internet Research*.

Table XIII. Citations of IR papers recorded in Scopus

Year of Publication	No of publications	Citations in 2012	Citations in 2012 (excluding self citations)	h-index	h-index (excluding self citations)
2008	30	75	74	11	11
2009	29	96	83	11	10
2010	31	57	45	7	6
2011	29	57	53	5	5
2012	29	7	3	2	2
Total	148	292	258	-	-

Sen (1999) has demonstrated the use of impact factor calculation in *Journal Citation Reports* as:

$$I_{f(j)} = \frac{C_1 + C_2}{S_1 + S_2}$$

Where, $I_{f(j)}$ is Impact factor for journal j for the year Y . S_1 is the source items published in the journal in the year $Y-1$. S_2 is the source items published in the journal in the year $Y-2$. C_1 is the number of citations S_1 source items received for the year Y . C_2 is the number of citations received by S_2 source items in the year Y .

Putting the obtained values of C_1 , C_2 , S_1 , and S_2 (from table VIII) in the above equation, 2012 Impact Factor of IR = $57+57/31+29=1.900$ and 2012 Impact Factor of IR (excluding self citations) = $45+53/31+29=1.63$.

In this situation, Immediacy Index as explained by Sen (1999) can be expressed through the formula:

$$I_x(IR) = \frac{C}{S}$$

Where, $I_x(IR)$ is the immediacy index of the journal *Internet Research* in the calendar year 2012. S is the number of source item published in the year 2012; C is the number of citations received in the year 2012 by the source items of 2012. By putting the value of C and S in the above equation, the immediacy index of *Internet Research* is found to be 0.241 (7/29).

Key findings

The major findings of the study are highlighted as under:

1. It is found that the average length of article published in *IR* is 19.83 ranging from year wise average of 18.63 to 21.96 pages;
2. The study shows that the majority of publications in *IR* has been contributed by three joint authors, followed by two joint authors and > Three joint authors indicating the domination of collaborative research;
3. The degree of collaboration (DC) in *IR* is found to be 0.83;
4. It is evident that, the number of references used by the authors are high with majority of them citing 41 to 50 references ($f=26$) and the percentage of citations to the total citations in the range of 71 to 80 references ($f=17$) is little higher. On an average, *IR* authors have cited over 53 references per article;

5. It is found that more than two third of citations reflected in *IR* are emanated from journals (70.61%) followed by books (13.96%). However, proceedings of conferences/seminars (5.31%), and e-citations (4.75%) referred by *IR* authors were found quite less and negligible;
6. The study reveals that major share of contribution to the publications of *IR* is emanated from Taiwan, followed by Spain, and USA. However, UK occupies the 4th rank by scores though the number of authors of this country is lesser than that of South Korea. The research productivity of Singapore appears to be very less.
7. *Internet Research* (the source journal) tops the table with 260 citations constituting 4.61 per cent of total citations, followed by *Information & Management* (187 citations; 3.32 per cent), *Journal of Marketing* (155 citations; 2.36 per cent), and *MIS Quarterly* (147 citations; 2.61 per cent). Though the source journal has taken the lead, but the self citation tendency is very less and quite negligible;
8. The study reveals that a total number of 148 source articles published in *IR* have received in all 1783 Google Scholar citations averaging 12.04 citations per paper. It is observed that out of 148 papers, 133 (89.86%) papers received citations where as only 15 papers (10.13%) so far left uncited
9. The half life of citing journals is 6.65 years and the average age of citations is 9.71; and
10. 2012 Impact Factor of *Internet Research* (based on Scopus citation counts) is computed to be 1.900 and immediacy index is 0.241.

Conclusion

The editor must be able to attract authors who publish original and innovative research that captures the attention of the international scientific community. To maximize the impact one needs establish high standards and avoid becoming a dumping ground for mediocre or inferior research (Garfield, 2003). In this regard, *Internet Research* seems to be very careful, cautious and meticulous as it is reflected from the study. It has strived to maintain a standard norm for its authors to meet its publication pattern so that the published papers can get subsequent impact and influence among the readers and the researchers' community. The great number of 1783 Google Scholar citations to 148 papers carrying a rate of 12.04 citations per paper shows how well most of its articles have received impact all around. It is implicit that the articles of *Internet Research* are appropriately indexed in all the major indexing databases available across the world facilitating all relevant articles to be easily accessed and retrieved world wide.

Several methods, not necessarily with nefarious intent, exist for a journal to cite articles in the same journal which will increase the journal's impact factor (Fassoulaki et al, 2002; Agrawal, 2005). It is observed from the study that *Internet Research* is proactive, prudent and wise enough in this particular issue to limit the citations to its own publications (11.72%) to a very genuine and reasonable extent. Presumably, *IR* has adopted some necessary policy to advise its authors only to choose the selected specific articles published in the source journals which can give true substance to their own research and subsequently add value to the journal as well. Moreover, collaborative trends, the authors' act of using sizable range of references in making of their papers, citing references of standard journals, minimal rate of self citations (7.48%), and impressive impact factor are all testimony to the meticulous editorial policy of the journal. Furthermore, it is deduced that *Internet Research* follows a standard mechanism through its efficient editorial policy monitored by its learned editorial board and prudent panel of reviewers and the journal may strive to improve its editorial policy further to make it more vibrant and influential among the academic and research community by adopting any possible constructive measures in future. It is expected that *IR* will grow its stature further by augmenting its influential characteristics and impact among its readers, peers and academic community at length consequently taking its reputation to a lofty height!

References

1. Agrawal, A. (2005). Corruption of journal impact factors. *Trends in Ecology and Evolution*, 20(4), 157.
2. Amin, M., & Mabe, M. (2000). Impact factors: use and abuse. *Perspectives in Publishing*, (1). Retrieved April 24, 2013 from <https://info.aiaa.org/SC/PC/Private%20Documents/Journals%20Subcommittee%20Materials/IFUseandAbuse.pdf>.
3. Anyi, K. W. U., Zainab, A. N., & Anuar, N. B. (2009). Bibliometric studies on single journals: a review. *Malaysian Journal of Library & Information Science*, 14(1), 17-55.
4. Arnold, D. N. & Fowler, K. K. (2011). Nefarious numbers. *Notices of the AMS*, 58 (3), 434-437. Retrieved April 27, 2013 from <http://www.ams.org/notices/201103/rtx110300434p.pdf>.
5. Cantos-Mateos, G., Vargas-Quesada, B., Chinchilla-Rodríguez, Z. & Zulueta, M. A. (2012). Stem cell research: bibliometric analysis of main research areas through KeyWords Plus. *Aslib Proceedings*, 64 (6), 561 – 590.
6. Chinchilla-Rodríguez, Z., Vargas-Quesada, B., Hassan-Montero, Y., González-Molina, A., & Moya-Anegón, F. (2010). New approach to the visualization of international scientific collaboration. *Information Visualization*, 9 (4), 277-87.
7. Chua, C., Cao, L., Cousin, K., & Straub, D.W.(2002). Measuring research-production in information systems. *Journal of the Association for Information Systems*, 3, 145-215.
8. Das, H. K. (2012). Bibliometric analysis of the plant taxonomy journal *Nelumbo*, 2004-2011. *International Journal of Library and Information Studies*, 2(4). Retrieved April 20, 2013 from: http://www.ijlis.org/img/2012_Vol_2_Issue_4/51-61.pdf.
9. Davarpanah, M. R. & Amel, F. (2009). Author self-citation pattern in science. *Library Review*, 58 (4), 301–309.
10. Epstein, I. (2005). Following in the footnotes of giants: a citation analysis and its discontents. *Social Work in Health Care*, 41 (3/4), 93-101.
11. Fassoulaki, A., Papilas, K., Paraskeva, A., & Patris, K. (2002). Impact factor bias and proposed adjustments for its determination. *Acta Anaesthesiologica Scandinavica*, 46 (7), 902-905.
12. Fowler, J.H., & Aksnes, D.G (2006). Does self-citation pay? Retrieved April 26 from http://jhffowler.ucsd.edu/does_self_citation_pay.pdf.
13. Garfield, E. (2006). The History and Meaning of the Journal Impact Factor. *JAMA*, 295 (1), 90-93.
14. Garfield, E. (2003). The meaning of the impact factor. *International Journal of Clinical and Health Psychology*, 3 (2), 363-369.
15. Garg, K.C. (2003). An overview of cross-national, national, and institutional assessment as reflected in the international journal *Scientometrics*. *Scientometrics*, 56 (2), 169-199.
16. Gumpenberger, C., Wieland, M., & Gorraiz, J. (2012). Bibliometric practices and activities at the University of Vienna. *Library Management*, 33 (3), 174 – 183.
17. Hazarika, T., Goswami, K., & Das, P. (2003). Bibliometric analysis of Indian Forester: 1991-2000. *IASLIC Bulletin*, 48 (4), 213-233.
18. Henk F. Moed (2010). Measuring contextual citation impact of scientific journals. *Journal of Informetrics*, 4 (3), 265–277. Retrieved April 25 from <http://www.sciencedirect.com/science/article/pii/S1751157710000039>.
19. Huang, M. H., & Lin, W. Y. C. (2012). The influence of journal self-citations on journal impact factor and immediacy index. *Online Information Review*, 36 (5), 639 – 654.
20. Iovino, L. A. (2008). The civil rights movement in Mississippi: a bibliometric study in scholarly journals. *Library Student Journal*. Retrieved May 22 from <http://www.librarystudentjournal.org/index.php/ljsj/article/view/87/181>.

21. Isiakpona, C. D. (2012). Bibliometric Analysis of the Library and Information Science Research Electronic Journal from 2004 to 2010. *Library Student Journal*. Retrieved May 22 from <http://librarystudentjournal.org/index.php/lisj/article/view/301/360>.
22. Jack, Meadows. (2005). A practical line in bibliometrics. *Interlending & Document Supply*, 33 (2), 90 – 94.
23. Jena, K. L., Swain, D. K., & Sahoo, K. C. (2012), “Annals of Library and Information Studies, 2002-2010: a bibliometric study. *Library Philosophy and Practice*. Retrieved April 18 from <http://www.webpages.uidaho.edu/~mbolin/jena-swain-sahoo.htm>.
24. Jena, K. L., Swain, D. K. & Sahu, S. B. (2012). Scholarly communication of The Electronic Library from 2003-2009: a bibliometric study. *The Electronic Library*, 30 (1), 103–119.
25. Katz, J. S., & Martin, B. R. (1997). What is research collaboration? *Research Policy*, 26, 1-18. Retrieved April 28, 2013 from http://www.sussex.ac.uk/Users/sylvank/pubs/Res_col9.pdf.
26. Lokhande, R. S. (2013). Content Analysis of Open Access LIS Journal “ALIS” (2002 - 2011). *International Journal of Information Dissemination and Technology*. Retrieved May 2, 2013 from <http://hdl.handle.net/10760/18283>.
27. Lowry, P.B., Karuga, G.G., & Richardson, V.J. (2007). Assuring leading institutions, faculty, and articles in premier information systems research journals. *Communications of the Association for Information Systems*. 20, 142-203.
28. Merton, R.K. (1988). The Matthew Effect in science, II: cumulative advantage and the symbolism of intellectual property. *ISIS*, 79 (299), 606-23.
29. Norris, M. & Oppenheim, C. (2010). The h-index: a broad review of a new bibliometric indicator. *Journal of Documentation*, 66 (5), 681 – 705.
30. Narin, F., Stevens, K., & Whitlow, E.S. (1991). Scientific cooperation in Europe and the citation of multinationally authored papers. *Scientometrics*, 21 (3), 313-23.
31. Noruzi, A. (2006). The web impact factor: a critical review. *The Electronic Library*, 24 (4), 490 – 500.
32. Park, T.K. (2010). D-Lib Magazine: Its first 13 years. *D-Lib Magazine*, 16 (1/2). Retrieved April 27, 2013 from <http://www.dlib.org/dlib/january10/park/01park.html>.
33. Patra, S. K., Bhattacharya, P. & Verma, N. (2006). Bibliometric study of literature on bibliometrics. *DESIDOC Bulletin of Information Technology*, 26 (1), 27-32.
34. Regolini, A. & Jannes-Ober, E.(2013). A bibliometric study of Informing Science: the International Journal of an Emerging Transdiscipline. *Informing Science: the International Journal of an Emerging Transdiscipline*, 16, 117-130.
35. Rodríguez-Ruiz, O. (2009). The citation indexes and the quantification of knowledge. *Journal of Educational Administration*, 47 (2), 250 – 266.
36. Sen, B. K. (1999). Symbols and formulas for a few bibliometric concepts. *Journal of Documentation*. 55 (3), 325 – 334.
37. Serenko, A., Bontis, N., Booker, L. D., Sadeddin, K. W. & Hardie, T. (2010). A scientometric analysis of knowledge management and intellectual capital academic literature (1994-2008). *Journal of Knowledge Management*, 4(1), 3-23.
38. Snyder, H., & Bonzi, S. (1998). Patterns of self-citation across disciplines (1980-1989). *Journal of Information Science*, 24 (6), 431-5.
39. Subramanyam, K. (1983). Bibliometric studies of research collaboration: a review. *Journal of Information Science*, 6, 35-37.
40. Swain, D. K. (2011). Library Philosophy and Practice, 2004-2009: a scientometric appraisal. *Library Philosophy and Practice*, Annual volume 2011. Retrieved June 10, 2013 from <http://www.webpages.uidaho.edu/~mbolin/dillipswain-LPP.pdf>.
41. Swain, D. K., & Panda, K. C. Journal of Intellectual Property Rights, 2002-2010: A Bibliometric Study. *Chinese Librarianship: an International Electronic Journal*, 2012, Vol. 33. Retrieved June 10, 2013 from <http://eprints.rclis.org/19186/>.

42. Swain, D. K., Jena, K. L. & Mahapatra, R. K.(2012). Interlending & Document Supply: a bibliometric study from 2001 to 2010. *Webology*, 9(2). Retrieved June 10, 2013 from <http://www.webology.org/2012/v9n2/a102.html>.
43. Tiew, W. S., Abdullah, A. & Kaur, K. (2002). Malaysian Journal of Library and Information Science 1996-2000: a bibliometric study. *Malaysian Journal of Library & Information Science*, 6 (2), 43-56.
44. Tsay, M. Y. (2008). Journal bibliometric analysis: a case study on JASIST. *Malaysian Journal of Library & Information Science*, 13 (2), 121-139. Retrieved June 10, 2013 from <http://majlis.fsktm.um.edu.my/document.aspx?FileName=663.pdf>.
45. Tsay, M. Y. (2011). A bibliometric analysis on the journal of information science. *Journal of Library and Information Research*, 5 (2), 1-28.
46. Vijayakumar, M. & Naqvi, S. H. (2002). Authorship trends in Azadirachta Indica literature: a bibliometric study. *SRELS Journal of Information Management*, 39 (4), 445-455.
47. Warraich, N. F. and Ahmad, S. (2011). Pakistan Journal of Library and Information Science: a bibliometric analysis. *Pakistan Journal of Library & Information Science*, 12. Retrieved June 10, 2013 from pu.edu.pk/images/journal/pjlis/pdf/pjlis-12-warraich1.pdf.
48. Zainab, A.N., Anyi, K.W.U., & Anuar, N.B. (2009). A single journal study: Malaysian Journal of Computer Science. *Malaysian Journal of Computer Science*, 22 (1), 1-18.

Appendix

List of publications of Internet Research (2008 to 2012) and corresponding citations recorded in Google Scholar (GS)

IR 2008					
Sl No	Title	Author(s)	GS Citations	Authors Self Citations	Journal Self Citations
1	Factors influencing online auction repurchase...	CH Yen, HP Lu	55	0	5
2	Reading newspapers on the Internet...	C Flavián, R Gurrea	23	2	2
3	Consumer behaviour in multi-channel contexts...	F Slack, et al.	21	0	2
4	Empirically testing innovation characteristics...	HF Lin	30	1	2
5	eDSLAb: remote laboratory for experiments on DSP..	F Barrero, et al.	19	11	3
6	Product-oriented design theory for digital information...	F Wijnhoven, J Kraaijenbrink	9	0	0
7	Development and application of a framework...	HM Kim, S Nevo	2	0	0
8	Management of information-credibility risk...	Y Hirose, N Sonehara	5	0	1
9	Evaluation data and prototype system WISDOM...	H Miyamori, et al.	13	3	1
10	A question answer system based on confirmed...	Y Watanabe, et al	2	1	0
11	Taking sides: user classification for informal online..	R Malouf, T Mullen	47	0	1
12	Classifying information sender of web documents	Y Kato, S Kurohashi, K Inui	3	0	1
13	The effectiveness of online customer relations tools..	L Fink, A Zeevi, D Te'eni	5	0	0
14	The impact of electronic word-of-mouth...	CMK Cheung, et al	118	6	6
15	Differences between potential, new and experienced..	B Hernández-Ortega, et al	19	0	2
16	Predicting online channel use for an online...	P Srisuwan, SJ Barnes	6	0	1
17	Towards an understanding of the behavioral...	YHH Chen, D Corkindale	25	0	1
18	Customer satisfaction factors of mobile commerce in Korea	J Choi, et al	50	0	2
19	Connecting P2P to the web...	BD Davison, W Zhang, B Wu	0	0	0
20	An empirical study of the uptake of performance...	G Gunawan, et al	12	1	0

21	Verbal and visual reasoning...	GM Johnson	6	0	0
22	The moderating role of user motivation in Internet access..	R San José-Cabezudo, et al	11	0	1
23	Use and gratification in e-consumers	E Huang	31	0	1
24	Effects of self-service technology on customer value...	SH Ho, YY Ko	38	0	0
25	Mutual self-disclosure online in the B2C context	YJ Chou, CI Teng, SK Lo	5	0	0
26	The acceptance of blogs: using a customer...	CJ Keng, HY Ting	32	1	9
27	Community based innovation...	KM Chu, HC Chan	9	0	1
28	E-government adoption in ASEAN...	S Sang, JD Lee, J Lee	23	0	1
29	Consumers' responses to brand websites...	HAM Voorveld, et al	18	5	3
IR2009					
1	Understanding the appeal of user-generated media...	G Shao	127	0	4
2	Collective intelligence for idea management with Internet...	E Bothos, et al	16	2	1
3	Social ties and online word of mouth	EM Steffes, LE Burgee	81	0	6
4	Collaborative attack on Internet users' anonymity	R Puzis, et al	14	5	2
5	Homepage not enough when evaluating web site accessibility	S Hackett, B Parmanto	11	0	1
6	A review of trust modeling in <i>ad hoc</i> networks	M Mejia, et al	25	3	0
7	The role of experiential value in online shopping...	SW Jeong, et al	23	0	4
8	Problem localization using probabilistic dependency...	S Piao, J Park, E Lee	0	0	0
9	Obligations of trust for privacy and confidentiality...	UM Mbanaso, et al	1	0	0
10	Ubiquitous proximity e-service for trust collaboration	YC Hwang, ST Yuan	2	1	0
11	Privacy and fair information practices in ubiquitous...	M Karyda, et al	6	0	1
12	Security technologies based on a home gateway...	GW Kim, et al	2	0	0
13	An efficient collusion resistant security mechanism...	Hussain, et al	0	0	0
14	Integrating wireless sensor networks and the internet...	R Roman, J Lopez	28	7	0
15	Statistical inference from power law distributed web-based..	DR Raban, E Rabin	10	2	2
16	A study of members' helping behaviors in online community	KM Chu	17	0	3
17	Design and implementation of a generic per-fee-link framework	A Ruiz-Martínez, et al	4	2	1
18	Influence of interorganizational relationships on SMEs'...	AYL Chong, et al	36	6	4
19	Classifying enterprises on the basis of WWW use...	P Papastathopoulou, GJ Avlonitis	7	0	1
20	Online branding strategies of UK fashion retailers	J Rowley	17	1	1
21	An empirical study of the driving forces behind online...	SL Toral, et al	37	11	5
22	The effect of community identification...	CC Shen, JS Chiou	26	1	6
23	Complementing consumer magazine brands with internet..	Tarkiainen, et al	5	0	2
24	Quantitative assessment of European municipal web sites...	FJ Miranda, et al	14	0	1
25	Factors affecting purchase intention on mobile shopping..	HP Lu, PYJ Su	48	2	4
26	Mutual self-disclosure online in the B2C context	YJ Chou, CI Teng, SK Lo	5	0	0
27	The acceptance of blogs: using a customer...	CJ Keng, HY Ting	32	1	9
28	Community based innovation...	KM Chu, HC Chan	9	0	1
29	E-government adoption in ASEAN: the case of Cambodia	S Sang, JD Lee, J Lee	23	0	2
30	Consumers' responses to brand websites...	HAM Voorveld, et al	18	5	3
IR 2010					

1	Individualist and collectivist factors affecting online..	D Frost, S Goode, D Hart	20	0	6
2	Integrating user modeling approaches into a framework...	D Godoy, et al	4	0	0
3	Influence of online learning skills in cyberspace	LA Ho, TH Kuo, B Lin	17	4	2
4	The role of Internet in the development of future software...	MR Martinez-Torres, et al	13	3	2
5	An analysis of Internet banking offerings and its determinants..	P Malhotra, B Singh	17	0	1
6	Examining the effects of website-induced flow...	A O'Cass, J Carlson	16	1	1
7	A novel attribute-based dynamic content area layout for internet.	BH Ulutas, AA Islier	4	1	2
8	Internet in the development of future road-traffic control systems	Barrero, et al	8	6	0
9	User acceptance of a G2B system: a case of electronic...	Sambasivan, et al	15	0	0
10	Effects of web experience on consumer choice: a multicultural..	Constantinides, et al	15	1	1
11	Can perceived risks affect the relationship of switching costs...	YS Yen	8	1	2
12	ACT 2.0: the next generation of assistive consumer technology..	KB Murray, et al	9	1	0
13	A multi-agent architecture to support B2C e-Marketplaces...	JJ Castro-Schez, et al	1	1	0
14	A multi-agent approach for provisioning of e-services...	N Sanchez-Pi, JM Molina	5	3	0
15	Using linguistic incomplete preference relations...	RM Rodríguez, et al	11	0	0
16	Psychological elements explaining the consumer's adoption..	Martinez-Lopez, et al	1	0	1
17	BizSeeker: A hybrid semantic recommendation system...	J Lu, et al	14	10	1
18	Privacy-preserving data-mining through micro-aggregation..	G Navarro-Arribas, V Torra	4	3	0
19	The Internet in six words or less	DG Schwartz	1	0	1
20	Developing the national communications and information...	M Kapor, DJ Weitzner	4	1	1
21	Prospero: a tool for organizing Internet resources	BC Neuman	2	0	1
22	Commercialization of the Internet	AH Weis	10	0	4
23	Tort liability, the First Amendment, equal access...	HH Perritt Jr	1	0	0
24	World-wide web: the information universe	T Berners-Lee, et al	6	0	0
25	NCSA Mosaic: a global hypermedia system	M Andreessen, E Bina	0	0	0
26	Exploring asymmetrical information transmission...	JJ Wu, SH Wang	0	0	0
27	Factors affecting consumer behaviors in online buy-it-now..	B Xu, Z Lin, B Shao	9	0	2
28	Tentative steps towards interaction...	D Lilleker, N Jackson	0	0	0
29	Understanding the role of electronic trading...	C Fearon, J Ballantine, G Philip	2	0	0
30	Classifying the user intent of web queries using k-means..	A Kathuria, et al	6	2	0
31	eBraille: a web-based translation program for Japanese text..	A Sugano, et al	0	0	0
IR 2011					
1	Theories into practice: a content analysis of anti-smoking..	HJ Paek, et al	3	3	0
2	The perceived benefits of six-degree-separation social networks	W Shu, YH Chuang	3	0	1
3	Dual effect of perceived risk on cross-national e-commerce	S San Martín, et al	10	0	3
4	Understanding online community user participation...	T Zhou	42	0	12
5	Past purchase and intention to purchase in e-commerce...	J Weisberg, et al	29	0	5
6	Web site structure mining using social network analysis	Martinez-Torres, et al	2	1	1
7	Comparing consumer complaint responses to online and offline..	CC Chang, YC Chin	4	0	1
8	Trust and reputation models comparison	FG Mármol, GM Pérez	6	0	2
9	Remedies for information asymmetry in online transaction...	CC Shen, et al	1	0	0

10	A web analytics tool selection method...	K Nakatani, TT Chuang	4	0	1
11	The different effects of online consumer reviews on..	J Lee, DH Park, I Han	21	0	8
12	Construction and validation of an e-lifestyle instrument	CS Yu	2	1	1
13	Who needs cyberspace? Examining drivers of needs...	SJ Barnes, AD Pressey	5	0	2
14	Internet/e-business technologies acceptance in Canada's SMEs...	P Ifinedo	14	0	2
15	Recommendations from a virtual community...	ECS Ku	9	2	7
16	Developing a B2B web site effectiveness model for SMEs	C Lin, et al	2	0	0
17	Virtual store layout effects on consumer behaviour...	EE Manganari, et al	11	1	3
18	Linking generativity and disruptive innovation to conceptualize..	S Menon	1	0	0
19	Impact of national culture on e-government development	F Zhao	4	1	0
20	Reviewing person's value of privacy of online social networking	U Hugl	3	0	0
21	Effects of virtual-experience combinations on...	CJ Keng, et al	6	1	3
22	Web sites for e-electioneering in Maharashtra and Gujarat, India	R Gadekar, et al	0	0	0
23	The effect of channel quality inconsistency on the association...	CH Liao, et al	4	0	2
24	Understanding customers' satisfaction and repurchase..	YH Fang, et al	14	0	1
25	Modeling e-coupon proneness as a mediator in the extended..	MF Chen, TY Lu	2	0	0
26	An empirical examination of initial trust in mobile banking	T Zhou	10	0	1
27	An eye-tracking investigation of internet consumers' decision..	Y Huang, F Kuo	0	0	0
28	Online social network acceptance: a social perspective	DC Li	9	0	1
29	<i>Predicting online game loyalty based on need gratification and experiential motives</i>	LY Huang, YJ Hsieh	6	0	3
IR 2012					
1	How social identification and trust influence organizational..	Li-An Ho, et al	4	0	1
2	Factor analysis of Internet traffic destinations from similar..	Felipe Mata, et al	5	0	0
3	Social research 2.0: virtual snowball sampling method using..	Fabiola Baltar, Ignasi Brunet	0	0	0
4	Exploring satisfaction with the portal's "Cs": assessing ...	Sung-Eon Kim, Kirk P. Arnett	1	0	0
5	A study of purchasing behavior in Taiwan's online...	Jih-Chun Yeh, et al	2	1	1
6	Factors influencing consumption experience of mobile..	Min Li, et al	4	0	3
7	Factors influencing mobile services adoption: a brand-equity perspective	Wei-Tsong Wang, Hui-Min Li	4	0	1
8	The moderating effect of uncertainty-avoidance on...	Carmen M. Sabote, et al	2	0	2
9	Investigating member commitment to virtual communities...	Edward Shih-Tse Wang, et al	4	0	1
10	Impact of privacy concern in social networking web sites	Xin Tan, et al	2	0	0
11	Accessibility and decay of web citations in five open access...	M.K. Saberi, H. Abedi	1	0	0
12	Online experiences and virtual goods purchase intention	Echo Huang	2	0	1
13	Mining consumer dialog in online forums	Carolin Kaiser, Freimut Bodendorf	1	1	0
14	Job search on the internet and its outcome	Farrukh Suvankulov, et al	0	0	0
15	Exploring consumer value of multi-channel shopping...	Cheng-Chieh Hsiao, et al	0	0	0
16	A holistic approach to the analysis of online profiles	Helena Bukvova	1	1	0
17	Effects of quality antecedents on e-learning acceptance	Yung-Ming Cheng	1	0	0
18	System design effects on online impulse buying	Kathy Ning Shen, Mohamed Khalifa	2	0	0
19	How wise are online procrastinators? A scale development	Anissa Negra, et al	0	0	0
20	Determinants of information retweeting in microblogging	Zhiming Liu, et al	0	0	0

21	The functional and usable appeal of Facebook SNS games	Kuo-Hsiang Chen, et al	2	1	1
22	Service fairness and customer satisfaction in internet banking...	Yu-Qian Zhu, Houn-Gee Chen	2	0	1
23	Internet advertising adoption: a structural equation model..	Payam Hanafizadeh, et al	1	0	0
24	Antecedents and consequences of e-business adoption..	Victoria Bordonaba-Juste, et al	1	0	1
25	An integrated e-recruitment system for automated..	Evanthia Faliagka, et al	1	1	0
26	Beyond price: how does trust encourage online group's..	Edward C.S. Ku	1	0	0
27	The impact of electronic word of mouth on a tourism...	Mohammad Reza Jalilvand, et al	0	0	0
28	To establish online shoppers' markets and rules ..	Wen-Yu Chiang	2	0	1
29	Friend me: which factors influence top global...	Theo Araujo, Peter Neijens	1	0	0
Total			1778	133	212

Note: The citation record was compiled during last week of April, 2013