ISSN (Print): 0972-2467
ISSN (Online): 0976-2477
SRELS Journal of Information Management, Vol 55(4), August 2018, p. 179-187 DOI: 10.17821/srels/ 2018/v55i4/120348

Awareness and Use of Government Information in Digital Form by Social Science Researchers

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Abstract

Governments generate various types of information in different formats. To facilitate transparency and accountability, governments across countries make information available to citizens. Social science researchers use this information for studying different social and economic issues. The present study analyses the level of awareness among social science researchers regarding the perceived information quality, accessibility and relevance to their research. The digital documents are preferred more than the print and other formats in which government information is available. The purpose for which they use government information available in digital form has been studied along with the frequency of use of different kinds of government information. The study observes that social science researchers rank most government information as high quality and relevant to their research besides using frequently. Although there is no gender difference observed with respect to the use of government information, there is a significant difference between researchers in the domain of economics and other social science researchers so far as access to statistical information is concerned.

Keywords: Digital Information, Government Information, Social Science Research

1. Introduction

Government generated information - large scale surveys like census or information on development schemes implemented in rural areas is one of the major sources of information for social science researchers.

Governments produce various kinds of information such as evaluation reports, administrative reports, statistical data, maps, etc in different formats which involve both time and money in terms of collection, verification, coding and compilations etc. Some government information is self-generated through the system such as birth registration or land registration; government also puts in special efforts to collect data on household expenditure as part of a large scale survey. Such government information is made available at different levels i.e. from a local government (Panchayats, Municipalities, etc.) to district administration to State government is used by social science researchers as the base material for carrying out analyses. On the other hand, government information available at macro level is used for international comparisons and benchmarking.

Government information is available both in print and electronic formats and is either free or available at a nominal cost. With the development of information and communication technology, websites/web portals have become one of the major platforms for information sharing. Accessibility and easy-to-locate information make the websites a preferred choice for sharing information. A small portion of government information is also available in CD-ROM.

The importance of government information is quite immense for public disclosure. Koga (2005) points out four reasons central to the distribution of government information i) as a rule of law, ii) quality of Life issue, iii) historical and cultural heritage and iv) accountability for current and future generations. Government information is being produced and distributed as it is mandated by law such as Right to Information. Information provided by the government is very useful for social consumption as it is

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expected to help improve the quality of life. Government information presents the accountability of the government and is characterised by high social, historical and cultural values. However, what is more important to note is that such information is also being used for social science research which, most of the time depends on empirical data. The information provided by the government is quite reliable as it goes through verification at various levels before being released to the public. The collection of large scale socio-economic information requires huge investment and proper government support. It is difficult for other agencies to provide such information. Most of the time, it is the only source of information. Government data is available at different points of time which helps social science researchers carry out trend analysis using time-series data. Also, the policy documents and proceedings of various meetings and reports constitute the primary source of information for social science research.

2. Literature Review

Information seeking behaviour of Social Scientists has been studied by many researchers in different countries. Investigation into Information Requirements of the Social Sciences (INFROSS), a study conducted at the University of Bath shows that 34% of social science researchers often used government publications and that researchers from the subject domain of economics used government publications more frequently than the others. However, 23% of respondents did not use government publications at all (Line, 1971). Hernon (1976) while studying the use of federal documents by the university faculty members across all disciplines observed that only 19% of social science faculty members did not use government documents where as it is 68% in the case of humanities and 33% for physical sciences. Also, the study shows that social science faculty members used federal information more frequently than those in other departments. Another larger study conducted in multiple campuses in the United States by Hernon (1979) shows that the non-use of government information is very low at 16.4% whereas 34% used government generated information 2-3 times in a month which was significantly high as compared to the previous studies. While analysing the heavy and moderate use of government documents across the subject domains the study observed that Economists are the largest group with 72.9%, followed by 63.2 % of Political scientists and 54.8% of Sociologists. Historians, on the other hand, were predominantly infrequent users or non-users (60.2%). Study on the use and non-use of government publications by social scientists at the University of Botswana found that 97.3% of the respondents used government publications but 65.4% used frequently. The study findings further show that 86% of the social scientists used this information for research and 83% for teaching (Mooko 1998).

While studying the use of documents published by Statistics Canada by social science researchers Neilson observed that 85.6% had used Statistics Canada at some point of time, but 41.5% used the government information produced by the agency more than 50% of the time in the ten years preceding the survey (to 1995). The survey found 60% of the researchers do not find government information very useful. However, the researchers agree that the statistical information being released as digital form was much appreciated, though most of the researchers preferred print documents. While 76.3% respondent, were found using print format, those using electronic products, or both the formats accounted for 60.8%. A discipline wise study of the use of government information across different categories indicated that Geographers used Statistics Canada resources more frequently followed by Economists. Although, economists lead the usage statistics when it comes to other types of government information, interestingly political scientists were the second highest users of government information produced by agencies other than Statistics Canada. This study also observes a statistically significant difference between most of the categories of government information across disciplines (Neilson, 1998, 1999).

A study at Walter Stiern Library at California State University, Bakersfield (CSUB), shows that the usage of government information is much lower as compared to education based or commercial websites. Likewise, the circulation of government documents is also found to be quite low as compared to other printed resources (Asher, Yi and Knapp 2002).

While studying information use by economists Pujar and Sangam (2007) found 54.1% of economists use government/statistical publications frequently and further 16% use most frequently. Occasional users constitute 23.7% whereas the rare and non-users are

2.6% and 3.6% respectively. 33% were found accessing the government information through internet frequently. The study concludes that the rare use or non-use of electronic information is due to lack of awareness among user community which has to be improved by organizing better orientation programmes and greater participation of library professionals.

A study on awareness, frequency of use, methods of locating government information was studied by Burroughs at University of Montana found that 5% of researchers used government information daily. Most of the respondents prefer electronic access, though some users still prefer the print format. The study also observed that search engines are the preferred choice for locating government information. Websites and e-mails are the two preferred alerting mechanism (Burroughs, 2009).

The use of federal depositories was studied by Powell, King and Haley suggests that 36% of the respondents used government resources more than 6 times a year. The respondents included the general public and government departments as well. The study found historical records and statistics are used more frequently than the other types of resources. 65% of the respondents reported using these resources for academic research which is much higher than the second best response i.e. education at 40%. The study also reveals that most of the respondents used both print and online government resources, and that the percentage of print only users was very low (between 14-22% for different kind of resources) (Powell, 2011).

A survey conducted at 11 federal depository libraries in 2011 shows that many academic users were bypassing the library while using government information. The study also finds that the use of 'ask a librarian' service or a visit to the library stack are much lower than use of search engines such as Google and browsing the government website to locate government information. The results also show that faculty members use government information more frequently than undergraduates, graduates and staff members (Psyck, 2013).

The above studies show the use government information is quite high among social science researchers for their study and research. With the development of Web, electronic access has become a preferred mode of access. In fact, often, the search for government information begins with a search engine.

3. Objectives

1. To assess the level of awareness and knowledge of availability of government information in digital form among social science researchers,
2. To analyse the extent of use of government information in digital form by social science researchers,
3. To study the purpose of and preference for use of government information by social science researchers, and
4. To suggest ways and means for a wider access to government information in digital form by social science researchers.

4. Hypotheses

We consider the following two hypotheses for the study.

1. There is gender difference in terms of use of government information in digital form, and
2. Researchers in the domain of economics use government generated statistical information more than the researchers from other domains.

5. Methodology

The study was conducted at the Institute for Social and Economic Change (ISEC), Bangalore. ISEC is a multidisciplinary social science research institution established in the year 1972. There are three types of users at ISEC i.e., faculty members, PhD scholars and research staff. As all of them are engaged in social science research, all the categories of researchers were included in the study. Faculty members and Research staff are provided with a designated space, whereas students use library, reading space outside the library and computer section for their academic and research activity in the institute premises.

Survey method was used for collecting the necessary data. A questionnaire was prepared and distributed personally to the readily approachable faculty members and research staff. An electronic version of the same questionnaire was sent to students through institutional group e-mail. A total of 135 responses (42 filled in printed questionnaires and 93 online responses) were received from the user's a-response rate of 72%.

6. Analysis and Interpretation of Data

The collected data was coded with predetermined codes and then transferred to SPSS (Version 22) for statistical analyses. Fisher's exact test was used to examine the relationship between the categorical variables.

6.1 Demographic Distribution of Data

The 135 respondents included 71 (52.6%) male respondents and 64 (47.4%) female respondents. Most of the respondents belong to the age group of below 30 years constituting 66%; 20% belong to the age group 31-40 years. Only 7% and 9% of the respondents fall in the age group of 41-50 years and above 51 years respectively. Analysis of basic educational qualification reveals that 68.9% have only master's degree and that they are new to research environment where as 21.5% and 9.6% respondents have completed PhD and MPhil degrees which denotes higher level of research experience. Research scholars constitute the major portions of the respondents (69.6%) followed by research associates (11.1%). Assistant Professors/Associate Fellows, Associate professors/Fellows, Professors/Senior Fellows constitute 9.6%, 5.2% and 4.4% respectively. A discipline-wise look at the respondent categories reveals that 25.9% are from economics where as 74.1% belong to the other social sciences such as political science, sociology, demography, education, development studies, etc. These 74.1% are treated as non-economics researchers in the study (Table 1).

Table 1. Distribution of respondents by demographic characteristics

Demographic Characteristics		Nos.	Percentage
Gender	Male	71	52.6%
	Female	64	47.4%
Age Group	Under 30 years	89	65.9%
	31-40 years	27	20.0%
	41-50 years	7	5.2%
	Above 51 years	12	8.9%
Educational Qualification	Master's	93	68.9%
	MPhil	13	9.6%
	PhD	29	21.5%
Designation	Assistant Professor/ Associate Fellow	13	9.6%
	Associate professor/ Fellow	7	5.2%
	Professor/ Senior Fellow	6	4.4%
	Research Associate/ Assistant	15	11.1%
	Research scholar	94	69.6%
Discipline Category	Economics	35	25.9%
	Non-Economics	100	74.1%

6.2 Quality and Relevance of Government Information

The content of any document is evaluated based on quality and relevance of information. Responses on quality and relevance with respect to different kinds of government information are presented in Table 2. According to most of the respondents (97.8%) Government reports contain high quality and moderate quality information and nearly as many felt that Government reports are highly and moderately relevant to their academic and research purpose. 71.1% of respondents replied that statistical publications contain high quality information and 27.4% mentioned that it is of moderate quality. Similarly, 67.4% of the respondents reported that it is highly relevant, while 30.4% of the responds find it is moderately relevant. Many social science researchers have expressed that policy documents, acts and bills, budget documents contain information of moderate quality and that such information is moderately relevant to their research. In the case of annual reports, maps and grey literature as per most of the respondents the quality of information is low besides being not so relevant for their research. The researchers agree that government reports, commission reports presents systematically analyzed and well documented contents prepared by experts in the subject domain, and hence are very relevant to social science research and contain high quality information. Statistical information and data sets present facts which are mostly the only source of information and these have been ranked as highly qualitative and highly relevant to social science research.

Table 2. Quality and relevance of government information

Types of government information	Quality			Relevance		
	High quality	Moderate quality	Low quality	Highly relevant	Moderately Relevant	Not so relevant
Government Reports (General)	54 (40.0%)	78 (57.8%)	3 (2.2%)	83 (61.5%)	48 (35.6%)	4 (3.0%)
Policy documents	39 (28.9%)	86 (63.7%)	10 (7.4%)	52 (38.5%)	71 (52.6%)	12 (8.9%)
Acts and Bills	20 (14.8%)	75 (55.6%)	40 (29.6%)	22 (16.4%)	72 (53.7%)	40 (29.9%)
Budget Documents	34 (25.2%)	66 (48.9%)	35 (25.9%)	35 (25.9%)	64 (47.4%)	36 (26.7%)
Annual reports	10 (7.4%)	52 (38.5%)	73 (54.1%)	15 (11.1%)	57 (42.2%)	63 (46.7%)
Committee & Commission reports	70 (51.9%)	57 (42.2%)	8 (5.9%)	62 (45.9%)	66 (48.9%)	7 (5.2%)
Maps	15 (11.1%)	43 (31.9%)	77 (57.0%)	16 (11.9%)	44 (32.6%)	75 (55.6%)
Statistical publications	96 (71.1%)	37 (27.4%)	2 (1.5%)	91 (67.4%)	41 (30.4%)	3 (2.2%)
Data sets	56 (41.5%)	49 (36.3%)	30 (22.2%)	56 (41.5%)	29 (21.5%)	50 (37.0%)
Gray Literature	6 (4.4%)	40 (29.6%)	89 (65.9%)	6 (4.4%)	37 (27.4%)	92 (68.1%)
Others	2 (2.0%)	17 (16.8%)	82 (81.2%)	0 (0.0%)	17 (18.3%)	76 (81.7%)

6.3 Frequency of Use of Government Information Available in Different Formats

Table 2 shows that government information is ranked quite high in terms of both quality and relevance by social science researchers. Now it is essential to understand how they access this government information for their research and academic use. Government information is made available in different formats such as print, online, CDROM, microforms, etc. Technological developments and the need to provide wider accessibility have made governments to publish information online through websites. Frequency of Use of Government Information available in different formats is presented in Figure 1. It is interesting to note that over 60% of the respondents use government information available in print format 'very frequently' or 'frequently'. 56.1% of the respondents use government information which is available online (37.1% of them frequently). Over the years, the popularity of CD-ROM has reduced with more information being available online. A similar trend can be seen from the below mentioned figures. The high for online government information is largely due to easier and timely access. It is only when information is not available online or requires some serious reading, print documents are preferred. The statistical information available in digital form is readily usable both as a data for statistical analysis and inclusion as tables in reports thereby saving considerable amount of time of researchers and hence, the use of government information in digital form is quite high.

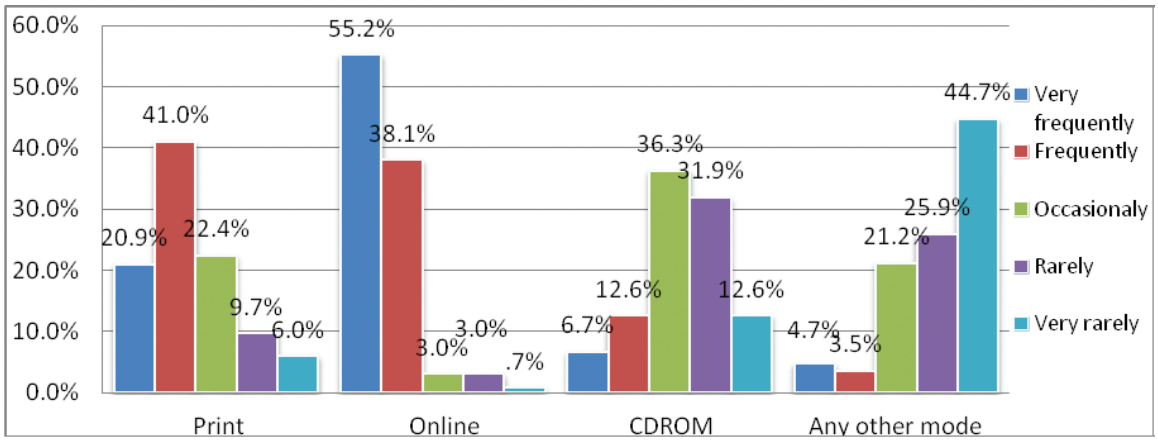

Figure 1. Frequency of use of government information available in different format.

6.4 Availability of Different Types of Government Information in Digital Form

The assessment of users on the availability of different types of government information in digital form was collected, using a 5 point scale as presented in Table 3. Budget documents present annual financial statement and governments tend to make this information available at all levels for transparency and accountability. Hence this information is widely available for public access. Likewise, an Annual report presents mostly the annual activity of the government departments and by making it available government makes people aware about the achievements and performance. Therefore, most annual reports are available in digital form.

Table 3. Availability of different types of government information in digital form

			N=135
Types of government information	**Mean**	**Mode**	**Std. Deviation**
Government Reports (General)	4.3	4	0.692
Policy documents	3.92	4	0.947
Acts and Bills	3.84	4	0.976
Budget Documents	4.4	5	0.967
Annual reports	4.53	5	0.862
Committee and Commission reports	3.87	4	0.832
Maps	3.01	3	1.152
Statistical publications	4.33	4	0.731
Data sets	3.26	4	1.209
Gray Literature	2.12	1	1.252
Others	1.64	1	1.022

Note: 1=Never Available, 2=Very rarely available, 3=Rarely available, 4=Some Available, and 5=Widely available

6.5 Frequency of Use of Different Types of Government Information in Digital Form

How frequently is this digital government information utilized by social science researchers? The frequency of use of digital government information is presented in Table 4. It is seen that statistical publications are highly used followed by government reports and reports of committees. Grey literature is being used least by the social science researchers. Statistical publications contain data and are used most frequently by social science researchers as an empirical support for their research.

Table 4. Frequency of use of different types of government information in digital form

					N=135
Types of govt. information	**Very frequently**	**Frequently**	**Occasionally**	**Rarely**	**Very rarely**
Government Reports (General)	40 (29.6%)	68 (50.4%)	22 (16.3%)	4 (3.0%)	1 (0.7%)
Policy documents	19 (14.1%)	55 (40.7%)	47 (34.8%)	10 (7.4%)	4 (3.0%)
Acts and Bills	3 (2.2%)	28 (20.9%)	67 (50.0%)	28 (20.9%)	8 (6.0%)
Budget Documents	10 (7.4%)	38 (28.1%)	43 (31.9%)	30 (22.2%)	14 (10.4%)
Annual reports	10 (7.4%)	31 (23.0%)	36 (26.7%)	43 (31.9%)	15 (11.1%)
Committee & Commission reports	19 (14.1%)	56 (41.5%)	48 (35.6%)	9 (6.7%)	3 (2.2%)
Maps	7 (5.2%)	16 (11.9%)	28 (20.9%)	59 (44.0%)	24 (17.9%)
Statistical publications	49 (36.6%)	67 (50.0%)	14 (10.4%)	4 (3.0%)	0 (0.0%)
Data sets	33 (24.6%)	30 (22.4%)	18 (13.4%)	36 (26.9%)	17 (12.7%)
Gray Literature	2 (1.5%)	14 (10.5%)	28 (21.1%)	36 (27.1%)	53 (39.8%)
Others	1 (1.0%)	5 (5.1%)	9 (9.1%)	22 (22.2%)	62 (62.6%)

6.6 Purpose of and Preference

Social science researchers are engaged in a wide range of activities such as research writing (Journal articles, working papers, monographs, etc.), report writing (project reports, thesis, etc.), classroom teaching, presentations, etc. Government information is being used by social science researchers in various degrees for different purposes. Preference given to the use of government information in digital form by the social science researchers for different purposes is presented in Figure 2. It can be seen from the figure that as per 37.6% respondents that government information is highly preferred as a resource for report writing while 48.1% of the respondents give a moderate preference to the use of such kind of documents. Report writing here includes preparation of research report by the faculty members for the studies they have undertaken and theses writing for the PhD Scholars. Likewise, for research publications such as articles for journals, working papers, monographs, newspaper articles etc. 42.5% of the respondents use government publications in digital form very frequently while 48.5% use moderately. The use of government information for invited lectures, presentations, discussions and current awareness is of a much lower order. Research and publication of research is the major activity at the Institute for Social and Economic Change for which government information in digital form is used frequently. Many faculty members participate in conferences and seminars frequently and perhaps that is the reason why it is observed higher level of preference under this category as well.

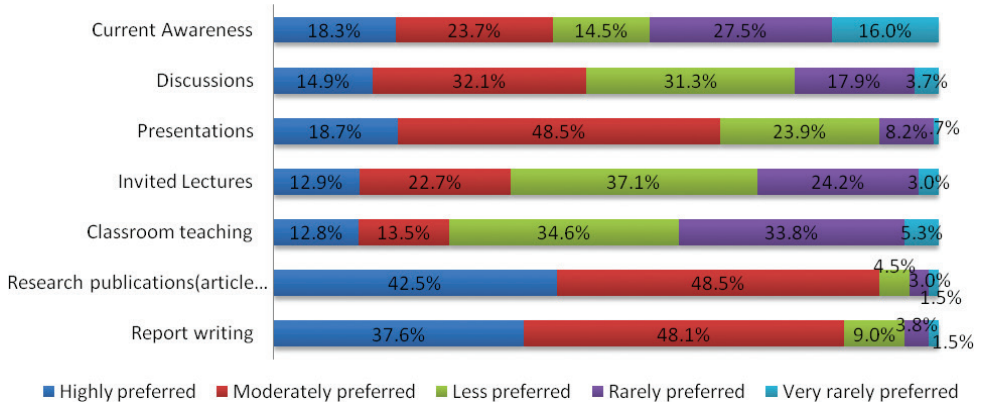

Figure 2. Purpose and preference to use of government information.

7. Testing of Hypotheses

Fisher's exact test was used for verifying the relationship, if any, between gender and the use of government information in digital form and for testing the relationship between discipline categories and the use of government information in digital form.

As we can observe from the table below, *p* values are much higher than .05 at 95% significance. We conclude that there is not enough evidence to suggest an association between gender and use of government information (Table 5).

Table 5. Fisher's exact test result for gender and use of government information in digital form

Types of government information	*p* values
Government Reports (General)	.499
Policy documents	.192
Acts and Bills	.112
Budget Documents	.299
Annual reports	.296
Committee and Commission reports	.296
Maps	.675
Statistical publications	.585
Data sets	.964
Gray Literature	.890

Table 6. Fisher's exact test result for discipline and use of statistical government information

Statistical government information	*p* values
Budget Documents	0.001
Statistical publications	0.003
Data sets	0.001

Table 6 we can notice that *p* values are much less than 0.05 at 95% significance hence the null hypothesis is rejected. The low *p* values suggest there is strong relationship between discipline category and use of statistical government information that is available in digital form.

8. Discussion

The study has presented some interesting results related to the use of government information in digital form by social science researchers. Statistical publications, Committee and Commission reports and Government Reports (General) carry a higher weight in terms of quality and relevance to social science research. Grey literature, Maps and Annual reports are rated much lower in terms of quality and relevance of information content. Online access to government information is more frequent than the print. Quality and relevance are directly linked to use. The documents which are ranked higher in respect of quality and relevance have achieved higher level of use as well. A good number of respondents use Government Reports (General), Policy documents, Committee and Commission reports and Statistical publications frequently. But very frequent users are in the 2nd position for Government Reports (General), and Statistical publications whereas occasional users are in the 2nd position for Policy documents, Committee and Commission reports. Other types of documents are either used occasionally or rarely, except grey literature and others which are used very rarely by most users. The study also shows that there is no significant difference between men and women so far as access to government

information in digital form is concerned. However, there exists a statistically significant difference between access to statistical information by economists and non-economists.

9. Conclusion

Social science researchers rank government information quite high in terms of quality of information they contain and relevance to their research work. Although most of the government information is available online still some of it might be missing. Governments should make available Maps, Data sets to the research community. Undoubtedly most of the researchers prefer to access government information online. It is only when they are not able to locate it online they look for the print documents. More archival information should be made available electronically. The main purpose behind the use of government information by the researchers is to produce research reports (including theses) and articles. Social science researchers use government information frequently for presentations and discussions also.

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