Impacts of government website information on social sciences and humanities in China: A citation analysis

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ABSTRACT

The purpose of this research is to investigate the current state and trend of government website information cited by social science and humanities (SS&H) journal articles in China. The Chinese Social Science Citation Index (CSSCI) was used as the benchmark and the Social Science Citation Index (SSCI) journals as the reference samples. It analyzed 204,019 web citations (N = 5,063,237) found in 925,506 articles that were published in CSSCI journals during the 1998–2009 period. The findings unveil that web citations accounted for only 4.03% of the total number of citations (N = 5,063,237), and that citations of Chinese government websites constituted 6.6% of the total number of web citations (N = 204,019). The study disclosed detailed information regarding citations derived from ministries and commissions directly under the State Council websites (N = 69), government online media (N = 7), government website citation subjects (N = 21), and various types of government website information (N = 5). Although government website information has limited influence on SS&H, their impact is currently growing rapidly. In comparison with international research community, influence of government web information on Chinese social science is higher, while its influence on humanities is lower. Essentially, Chinese scholars put emphasis on citing information from authoritative central government websites or highly visible state-owned media information as supporting evidences in their articles. In general, the citation of information from Chinese government website tends to hot social issues of society. Finally, it is necessary to promote the visibility of local government websites, to develop policies and guidelines to encourage the disclosure and the diversity of data, so that there will be more citation balances between social and technological topics.

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1. Introduction

The recent development of World Wide Web (WWW) has greatly enriched e-government resources. Online tools and data are important facilitators to scholarly communication and academic research (Zhao & Logan, 2002). The richness of internet resources is far beyond human imagination and many scholars use the internet for searching information. With the implementation of the Ordinance on Openness of Government Information of the People's Republic of China on May 1, 2008, the Chinese law requires government information openness through government websites and open access channels. It has been reported that 54,974 government websites have been established, of which 43,968 are under the .gov.cn domain (Chinese Government Website Statistic Report, 2010).

Finding evidence is one of the most significant steps in scientific research. There have been some studies showing that SS&H publications are more likely to cite government publication either in print or online (Barnes, 2006; Casserly & Bird, 2003; Caswell, 1997; Hogenboom, 2002; Nilsen, 1998; Weech, 1978). Nevertheless, it seems to have no particular attention to what has been happening in China. This article

endeavors to fill the literature gap by investigating how Chinese SS&H researchers cite information from government websites as supporting evidences in their research, and to evaluate the impact of government website information used on SS&H publications. This study was undertaken based on the hypothesis that the quantity of information from government websites cited by researchers could likely demonstrate the impact of such information.

2. Research background

2.1. Literature review

The advent of the internet has significantly changed the scholarly communication patterns of researchers. Either in social sciences, humanities or natural sciences, researchers has been citing information from the web as supporting evidences in their scholarly publications in an ever-increasing pace. An analysis of 175 articles published in 12 journals representing different academic areas (including LIS, gender studies, ecology, religion and society, computer, education and law) from 1999 to 2000 disclosed that 97 literatures contained web citations, accounting for 62.58% of the total articles studied (Herring, 2002).Oermann, Nordstrom, Ineson, and Wilmes (2008) selected 573 web citations in nursing articles from the Journal Citation

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Reports and unveiled that 30% of these articles contained at least one web citation, whereas 13.2% of the citations were linked to research reports, government websites and university websites. A study on 133 conference proceedings published from 1995 to 2003 exhibited an increasing number of authors who used URL citations to support their academic research (Sellitto, 2005). From an analysis of 13,859 research papers published in 30 journals in six disciplines from 2001 to 2007, Zhang (2011) discovered that the web resource citations used by researchers increased yearly.

Government information affects the life of every citizen. Since the 1970s, there has been growing interests in using government publications in academic research, because they contain valuable information for teaching, research and the provision of consulting services (Butcher, 1991). Based on citation analysis of seven articles, Weech (1978) identified that 17.5% social science journals cited government publications. Among all the social science journals investigated, economic journals accounted for 36% (ranked highest) of total government publication citations, whereas sociology journals only accounted for 10% (ranked lowest). Caswell (1997) reviewed the use of government publications from 1990 to 1996 and pointed out that analyzing the references to government electronic publications would be a new research direction and research should be undertaken without being limited to articles in English. In Brill (1990) on citations of government publications in the area of international relations, a total of 3784 citations were sampled from three years. The study found that the number of citations of government publications was 710, 19% out of the total citations investigated. An investigation on social science research in Canada during the period of the cost-recovery and restraint initiatives based on Statistics Canada, pointed out that articles published in geography and economics journals made the greatest use of Statistics Canada's statistics, and those journals in political science made the least use of them. However, there was no change over time in these disciplinary variations (Nilsen, 1998). A total of 2809 citations from American Indian issues were analyzed, of which 1350 citations (48.1%) were of government publications, specifically, 1193 (88.4%) were from the U.S. Federal Government and 33 (2.4%) were from international governmental organizations (Metoyer-Duran & Hernon, 1995).

The internet stimulates the utilization of government website information as references in research reports and publications. In 1982, when the internet was in its infancy, the use of government document was limited, and only found in doctoral dissertations written by doctoral candidates of the University of Oklahoma (McClure & Harman, 1982). While in 2006, with the rapid development of the internet, by examining the citations to the U.S. Federal Government publications used in the doctoral dissertations in Mississippi State University from 2000 to 2004, there was a growing tendency in citing online government publications, especially in the Colleges of Education, Agricultural Sciences, Engineering, Business and Industry, Forest Resources and Medicine (Barnes, 2006). Hogenboom (2002) investigated the influences of government information on demographic journals. The results showed that researchers are more likely to cite government publications in electronic format than they are with non-government publications. Mooko and Aina (1998) surveyed 101 social scientists at the University of Botswana, and revealed that most of the respondents (97.3%) used government documents. Moreover, most users attached a high importance to the use of government publications for research (89%) and teaching (86%). Furthermore, frequent users constituted 65.4% of all users, whereas infrequent users were only 12%, and moderate users accounted for one-fifth of the total number of users. Additionally, the most cited five types of government publications were statistical reports (51.4%), national development plans (37%), and annual reports (28.6%), reports of ministries and committees (28.6%) and census reports (20%). Of the 205 publications, only 19 did not contain citations of government documents. These findings clearly indicated that social scientists at the University of Botswana frequently used government publications in their research. Casserly and Bird (2003) sampled 3582 citations in 1425 LIS papers

published from 1999 to 2000, and identified that 9% of the citations were under the domain name .gov, much less than those under domain name .org (21.8%) or .edu (18.8%).

There are several barriers which prevent researchers from using of government information. Specifically, there are barriers in searching and using of government information, namely, the correlation between government information and the specific research, the importance of government information to the research, the familiarity with the organization of government publications in library, and the unavailability of the publications to the scholars (Meho & Haas, 2001). In this regard, they asserted that instability, content fluidity, fast change, mobility and inaccessibility of the web-based resources could affect the acceptance of scholars in using government information as a legitimate source in formal scholarly communications (Lawrence et al., 2001; Spinellis, 2003). Government document librarians also acknowledged that the use of government document collections was out of proportion to its value and importance. One possible explanation is that while government document depository libraries have focused on public access and issues on collection preservation, they have failed to recognize the importance of the discipline-based framework and the impact so much freely available information would have on the use of government information (Cheney, 2006). In order to identify the main barriers, Meho and Haas (2001) surveyed a group of social scientists, and revealed that 50% of the participants indicated that the lack of a comprehensive online catalog was one of the main obstacles, 37.5% showed that it was difficult to determine which publications their libraries had or did not have, while 37.5% of the scientists pointed out that the classification scheme of government information was confusing. Moreover, the ownership of the government website information prevented the extensive use of such information. Some of the government information remains the property of the agencies producing it. Private information providers, such as publishers and the information industry, cannot reproduce the information or add value to it, without specific contractual arrangements with the government. When a government agency chooses to increase the prices for its information products, potential users must either pay the higher prices, or attempt to obtain similar information from alternative sources (Nilsen, 1998).

Researchers in different disciplines such as law (Rumsey, 2002), library and information science (Casserly & Bird, 2003), pedagogy (Markwell & Brooks, 2002) and history (Russell & Kane, 2008) further identified that traceability existed in web citations. An, Jiang, and Zhang (2004) analyzed 300 randomly drawn web citations from six LIS journals. The results indicated that the general traceability was not only low, but also uneven. According to analysis of the web resource citations contained in articles that published in *Journal of Software* and *Journal of Library Science in China* from 1999 to 2003, Wu (2009) suggested the backtracking ratio decreased 9–10% every year and that the traceability of the web citations was related to the type of the source website, the type of the web resource and the language. A study in the persistence of URL containing contents of science or science education exhibited that 46.5% of the websites sampled either changed their released contents, or became inaccessible in a period of 14 months, while the web resources under domain name .gov had the highest availability (Markwell & Brooks, 2002).

2.2. The openness policy of Chinese government information on the web

Chinese government officially launched the National Economy Informationization Project at the end of 1993. More than 40 government ministries, departments and commissions jointly endorsed and initiated a "Government Online Project", and they named the year 1999 as the "e-government year". By 2000, 80% of government agencies and departments at all administrative levels had launched their official websites and provided information service for the public. In 2003, the National Informationization Steering Group decided that e-government