The Test of Torrential Rains—— Analysis of Factors Influencing the Credibility of Government Microblogs in Major Natural Disasters

Abstract. Social media has become an important platform for the government to release information, publicize policies, and communicate with the public due to its instantaneous, synchronized, interactive advantages. And it plays an irreplaceable role in the rescue and relief process of major natural disasters. It is because of the special attributes and unique effectiveness of government social media that it has also become a visible window to reflect and evaluate the credibility of the Government.

This research focuses on the rare and extremely heavy rainstorm that occurred in Zhengzhou City, Henan Province, China in July 2021, and uses it as a scenario. By collecting and analyzing the information release data and public interaction information of governments' microblog accounts in Zhengzhou City, the research is carried out from three dimensions: government information supply, public information demand, and the deviations between the them. After that we will examine the credibility and effectiveness of government social media during the "720" Zhengzhou heavy rainstorm, and try to create a model of the factors which influence the credibility of government social media in major natural disasters, and then propose strategies to improve it.

I   Research Background

During the digital transformation period, government social media has become an important platform for Chinese government departments at all levels to perform their functions, release information and communicate with the public. The platform is also used for the public to access government information and respond to government policy. In the process of prevention and warning of major natural disasters, emergency rescue and disaster relief, and post-disaster reconstruction, it is not only a popular and convenient way to communicate between government and the public, but also a visible channel to objectively evaluating the influence and credibility of government social media.

The "720" Zhengzhou rainstorm in 2021 aroused national and world-wide attention. In the process of early warning, disaster relief, and post reconstruction, what role did government social media play during the early warning, relief and reconstruction process of the "720" Zhengzhou rainstorm in 2021? did government agencies meet the information needs of the public? how about the impact it had on government's credibility? Major natural disasters pose a huge challenge to the government's ability to respond, to provide services and to govern information quickly. The credibility of

government microblogs is also severely tested by the diversity of information, rapid dissemination, and complex public opinion during major disasters, and this is an important issue that must be solved in the construction of government social media.

II   Concepts

1. Government credibility and government social media credibility
Government credibility refers to the government's ability to gain public's trust. On the one hand, it is an objective result determined by the government's ability to perform its duties, its governing level and its own credibility. On the other hand, it's a reflection of the public's subjective evaluation and satisfaction with the government.

Government social media credibility refers to the ability of the government's official social media accounts to gain public trust in the process of information construction, information release and interaction with the public, which is expressed in the degree of public trust, satisfaction and public opinion compliance with government social media.
2. Sina Weibo and government microblogs

Sina.com micro-blog (Sina Weibo) is one of the most popular social media apps and it is a popular micro-blogging platform used by Chinese government departments. Sina Weibo has SNS characteristics, including information distribution (similar to Twitter) and social functions (similar to Facebook).

Government microblogs refer to microblog accounts of an official nature that are set up on behalf of government departments and officials to deal with public affairs. The functions of government microblogs mainly include releasing official information, promoting policies, deploying work and serving the community, and also serving as an important channel for collecting public opinions, interacting with the public and guiding public opinion.

III   Research Questions

Considering that government social media have become rapidly popular and widely used throughout society, and have an irreplaceable and special effect in the dissemination of government information to the public, this study examines the communication power(propagation), influence and especially the credibility of government social media, represented by the government Sina Weibo, from the perspective of government information governance. The main issues to be studied are as follows:

1. During the "720" Zhengzhou torrential rain, what was the content, frequency, timing and effectiveness of government microblog information? Had the intention of the release been fulfilled? Was there any synergy among the relevant government microblog operators?

2. What are the public's information needs during major natural disasters? What kind information do they expected from government microblogs? Can they get the information at real time? Are they satisfied with the information on government microblogs?

3. In the face of major natural disasters, is there a deviation between government information supply and public information demand? What kind of deviation exists? How to make up for gap to increase the credibility of government social media?

IV Method

This study focuses on the credibility of government social media in major natural disasters. It takes the "720" Zhengzhou torrential rain as the research scenario, mainly employs a case study method, and combines qualitative and quantitative analysis. On the one hand, we define the relevant concepts and construct a model of government social media credibility influencing factors through literature research. On the other hand, we crawl the data of government microblogs during the disaster and conduct multi-dimensional analysis of the data, thus to discover the information release of government microblogs, people's information demand and the supply and demand deviation between them. Then further we verify and improve the model of government social media credibility influencing factors, and explore the strategy to enhance the credibility of government social media.
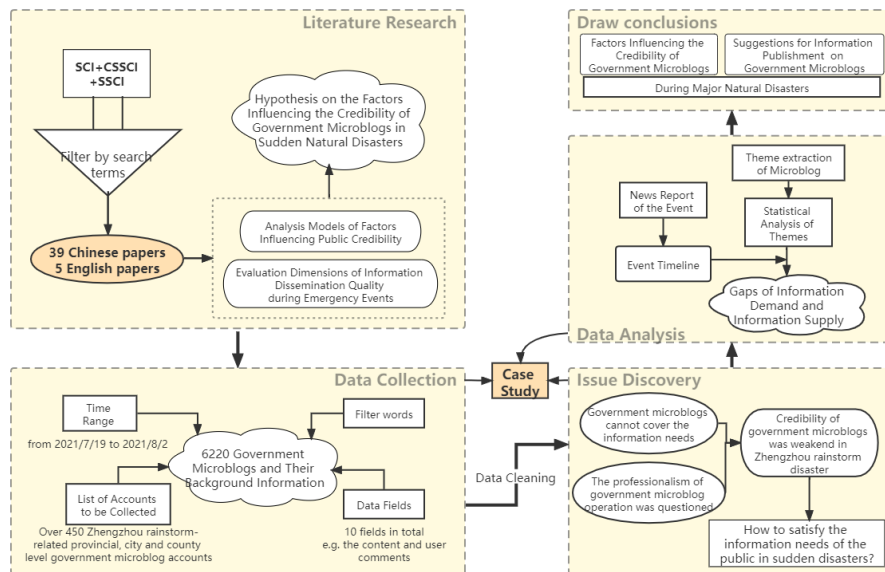

Figure 1 Research map

V Research Contribution

This research aims to find out the shortcomings and weaknesses of government information management, especially the major deficiencies in the information effectiveness in major natural disasters and the resulting consequences by a case study examining the credibility of government microblogs in major sudden natural disasters. And based on

this, we will build a model of the factors influencing the credibility of government social media.

Furthermore, This research will explore the innovative path and linkage mechanism of government information governance and information service in the new media era thus to propose strategies and effective ways to improve the credibility of government social media, so as to better meet the public's demand for accurate, diversified and real-time government information during major sudden natural disasters, and to help the government better fulfill its social responsibilities of preventing, controlling, rescuing and serving the public in major catastrophes.

As undergraduates, we hope to make a professional contribution to the study of topical social issues through our professional knowledge. We are still young, but full of enthusiasm for research, and we believe that we can meet and learn a lot from experts and scholars by attending iConference2022. We are looking forward to the opportunity!

References

1. Gal Yavetz, & Noa Aharony. (2020). Social media in government offices: usage and strategies. Aslib Journal of Information Management, 72(4), 445–462. http://ifcfb391f4815d8064db7sppnb5o0cxk056cc0.fzzh.lib-proxy.ruc.edu.cn/10.1108/AJIM-11-2019-0313
2. Kavan, S. (2021). Selected social impacts and measures resulting from the Covid-19 epidemic in the Czech Republic on the specific example of the South Bohemian Region. Health & Social Care in the Community, 29(5), e224–e231. http://ifcfb391f4815d8064db7sppnb5o0cxk056cc0.fzzh.lib-proxy.ruc.edu.cn/10.1111/hsc.13272
3. Lijuan Luo, Siqi Duan, Shanshan Shang, & Wenfei Lyu. (2021). Understanding citizen engagement and concerns about the COVID-19 pandemic in China: a thematic analysis of government social media. Aslib Journal of Information Management, 73(6), 865–884. http://ifcfb391f4815d8064db7sppnb5o0cxk056cc0.fzzh.lib-proxy.ruc.edu.cn/10.1108/AJIM-11-2020-0377
4. Liu, W., Lai, C.-H., & Xu, W. (Wayne). (2018). Tweeting about emergency: A semantic network analysis of government organizations' social media messaging during Hurricane Harvey. Public Relations Review, 44(5), 807–819. http://ifcfb391f4815d8064db7sppnb5o0cxk056cc0.fzzh.lib-proxy.ruc.edu.cn/10.1016/j.pubrev.2018.10.009
5. Saroj, A., & Pal, S. (2020). Use of social media in crisis management: A survey. International Journal of Disaster Risk Reduction, 48. http://ifcfb391f4815d8064db7sppnb5o0cxk056cc0.fzzh.lib-proxy.ruc.edu.cn/10.1016/j.ijdrr.2020.101584
6. Cao Shujin,Chang Kyung-Ping Wei. Research on the Influencing Factors of Information Credibility of Public Health Emergencies in Social Media--Take Wechat as an example[J]. Modern Intelligence,2020,40(09):3-14.
7. Chi Zhun, Wang Changwei, Liang Jingguo, Du Rong. Network Crisis Information Dissemination Simulation Based on the Government Intervention[J]. Journal of Intelligence,2012,31(11):23-29.

8. Fan Mingyue,Wang Ruonan,Qin Rui,Liu Lingyan. Research on the Influencing Factors of Information Credibility on Social Media Based on MAIN Model——Taking WeChat Official Account as an Example [J]. Intelligence Science,2017,35(07):101-106.

9. Gao Hang,Ding Ronggui. Research on Modeling and Simulation of Risk of Internet Public Opinion Based on System Dynamics[J]. Journal of Intelligence,2014,33(11):7-13.

10. Lv Weixia, Wang Yonggui. Analysis of the Factors Influencing Government Credibility Based on Public Perception[J]. Journal of Huazhong Normal University (Humanities and Social Sciences Edition),2010,49(04):33-39.

11. Song W.,Liu C.,Zhang X. Yang. Study on the Factors Influencing Government Response Effect of Major Public Health Emergencies:An Empirical Analysis Based on 36 Major Public Health Emergencies in China from 2011 to 2020 [J/OL]. Intelligence Theory and Practice:1-11 [2021-10-16]. http://kns.cnki.net/kcms/detail/11.1762.G3.20210811.1306.004.html.

12. Sun Lili,Wu Chao. Study on the Influence Factors on Risk Information Perception of the Public in a major Emergencies:A Case Study of COVID-19 [J]. Intelligence Theory and Practice,2020,43(08):38-43+28.

13. Wu Guangyun,Gao Dan,He Ruiyun. The Current Situation and the Influencing Factors of China's Local Government Credibility[J]. Contemporary economic management,2015,37(10):55-60.

14. Wu LW. An Analysis of Government Credibility in the Era of Microblog [J]. Journal of Shanxi Normal University (Social Science Edition),2013,40(S3):4-7.

15. Wu Y,Hu GW. User Acceptance Model for Social Media of Government Agencies[J]. Journal of Intelligence,2014,33(02):177-182.

16. Xie Lina,Zhou Qishan. An Empirical Study of Factors Influencing Users' Access to Government Information through Social Media——Take Sina Micro-blog for Instance[J]. Book and intelligence,2015(05):109-116.

17. Yang F,Shi Q,Yao Leye. Evaluation on Information Quality of Government Social Media Based on User Cognition--Investigation on Administrative Microblog[J]. Journal of Intelligence,2015,34(12):181-185.

18. Zhan Qian,Sun Y. Research on the Factors Influencing Social Media Credibility from the Perspective of Users[J]. Contemporary Communication,2020(05):82-85.

19. Zhang Yan, Wei Jiu Chang, Qi Wei. Reseach on the Citizens' Preference of Channels to Obtain Information in Emergency States[J]. Intelligence Science,2012,30(04):574-578.

20. Zhang Yan, Wei Jiu Chang. Risk Attitude, Risk Perception and Trust:an Analysis Framework of Government Information Supplying Mechanism in Crisis Situation Based on Prospect Theory[J]. Journal of Huazhong University of Science and Technology (Social Science Edition), 2011,25(01):53-59+90.