Supporting Information

I. Information about the qualitative interviews

Using snowball sampling using multiple entry points, we conducted 20 interviews with academics and information and communications technology professionals, mostly product managers, at Tencent, Weibo, Baidu as well as other social media companies in China between January and March 2015. The length of expert interviews ranges from 30 minutes to 120 minutes with average being 60 minutes. Only one expert interview was conducted via skype, while the remaining 19 expert interviews were conducted face-to-face in three cities - Beijing, Tianjin and Guangzhou. These were semi-structured interviews and there are two main goals of the expert interviews. First, we aim to understand how they design social media and the criteria they use to assess the success of a social media platform. Second, we aim to obtain subjective assessment and interpretation from the experts on the role of China's social media platforms in facilitating political discussion online.

To achieve these two main goals, we listed the following broad questions as a prompt for the semi-structured interviews: 1) when designing social media platforms, what are the most important criteria, i.e., user control, responsiveness, or other? What design features are used to meet the criteria? For example, how can user control be realized through what features? 2) How will you assess Weibo and WeChat with regards to their design? What are the major differences and similarities between them? 3) What are the main social media platforms where users discuss political news in China? What features do you think are most important when it comes to shaping political discussion online in China? 4) How will you assess Weibo and WeChat on their role in shaping political discussion online? 5) What is politics in the context of online discussion? What kind of issues discussed online are political and what are not?

We also conducted 92 interviews with Internet users varying in terms of gender, education, age, and region (Table 1). Interview with Internet users were conducted over two

periods – between January and May 2015 and between October 2015 and March 2016. The length of Internet user interviews ranges from 20 minutes to 120 minutes with average being 40 minutes.

Table 1 Descriptive statistics of the Interviewees

Social Demographics		N.	Percent
Gender	Male	42	46%
	Female	50	54%
Age	18-24	35	38%
	25-34	31	34%
	35-44	11	12%
	45-54	8	9%
	55-64	5	5%
	65 or more	2	2%
Education	Primary school or below	2	2%
	Junior high school	2	2%
	Senior high school	29	32%
	College or above	59	64%
Region of residence	North	21	23%
	Northeast	18	20%
	Northwest	2	2%
	Central	2	2%
	East	11	12%
	South	5	5%
	Southeast	23	25%
	Southwest	9	10%
	West	1	1%
Total		92	100%

29 interviews were conducted face-to-face in the following cities, Beijing, Shenzhen, Guangzhou, Tianjin, Taiyuan. 63 interviews were conducted via telephone call or video call online. Telephone interviews allow us to interview people residing in other cities and rural counties. The key goal of the Internet user interviews is to understand their perception of social media and political discussion online and their behaviours. We designed the following questions to guide the semi-structured interviews: 1) What is politics? What issues/topics do you think are politics? 2) What do you think is politically sensitive in China? 3) What social media do you use and why? What do you normally do with these social media platforms? Is any of these online behaviours related to politics in your opinion? 4) How will you describe

the differences between the social media you use? Do you think these differences also affect what you do on these social media?

Upon gaining consent from the interviewees, we audio-taped the interviews and a group of university students were recruited to transcribe the interviews. In terms of transcribing the interviews, students were asked to write the interview out in full according to the recording. When analysing the interviews, we went through all interviewees' answers to the same broad questions in detail, looked for keywords and identify patterns. For example, in the user interviews, we asked users to describe what is politics. Users have used various terms and provided various examples to describe what is considered politics in their opinion. We then grouped these examples into different categories. Examples, such as, President Xi's visit to African countries, China-Japan relationship, etc., are categorised as China's relationship with foreign countries. In the expert interviews, when asking to describe what features realize user control, experts have listed various features. We grouped these features together in a list, such as, fewer clicks to realize a function, putting on the front page, providing easy guidance, the use of menu bar with fewer choices, etc.

II. Information about the nationally representative survey

1. Sampling information of the media survey

The survey was conducted between May 5 to July 4 in 2014. The target population covers Chinese citizens aged 18 and above, who have resided in the surveyed counties/districts for no less than 6 months. GPS assisted area sampling method was used which also incorporated population as a measure of size, stratification and multi-stage PPS (Probabilities Proportional to Size). The purpose of the survey is to investigate Chinese citizens' media engagement. As media engagement is highly related to the level of internationalization and urbanization, the primary sampling units (PSUs) were stratified into 4 layers including cosmopolitan cities, districts under judiciary of sub-provincial cities, districts under judiciary of municipal cities

and county-level cities, suburban district or counties under judiciary of municipal cities and above. The questionnaire was implemented by experienced and trained interviewers in face-to-face conversations. A total of 5654 eligible samples were drawn with an effective sample size of 3747. The response rate was 66%.

2. Measurements of control variables

Size of online network was measured by asking participants to estimate their number of online friends (Wangyou). Estimates were right-skewed and ranged from 0 to 4000. They were thus log transformed before being recoded to run on a 0 to 1 scale, with 1 representing the highest number of online friends reported in the dataset.

Frequency of getting information from traditional media (TV) was measured on a 4-point scale in which participants indicated how often they used TV as a news source, ranging from "everyday or most of the time", "at least once a week", "less than once a week", to "never." It was recoded to run on a 0 to 1 scale, with higher values indicating more frequent use of TV as a news source.

Frequency of getting information on social media was measured on a 4-point scale in which participants indicated how often they used "social media, such as Weibo, WeChat, QQ and etc." as a news source. The scale values were the same as above, and were similarly recoded to run on a 0 to 1 scale, with higher values indicating more frequent use of social media as a news source.

Following political news online served as a proxy for political interest and was measured by asking participants how many of a list of seven political topics they were currently following online. Example topics on the list included anti-Japanese or anti-American sentiments or activities, mass incidents, China's environmental problems, the fight against corruption, political leader dynamics, government policy, and major international news events.

The item was then recoded such that participants who followed all seven political topics online received a score of 1, while those who did not follow any received a score of 0.

Trust in government was measured with an additive scale of two items in which respondents indicated their trust in city/county government and in China's central government on 0-3 scales, leading to a final scale range from 0 to 6. This was then recoded to run from 0 to 1, keeping seven scoring increments. The scale's reliability was satisfactory (Cronbach's $\alpha = 0.72$).

Pride in being Chinese was an additive scale consisting of three items in which participants indicated their agreement or disagreement with several statements about China and its people on a 5-point Likert scale. These items are "Overall, China is better than most other countries", "If I was given choices to be citizen of any country in the world, I would still prefer to be a Chinese citizen" and "When others criticize Chinese, I feel like as if they were criticizing me". The scale's reliability was high (Cronbach's $\alpha = 0.77$). The variable was recoded to run on a 0 to 1 scale, with higher values indicating greater pride in being Chinese.

Political efficacy was measured with one item: "In your opinion, how much influence do you have when you ask the government to solve the problems closely related to your personal interest?" Respondents indicated the amount of influence they thought they had on a 4-point scale ranging from "a great deal of influence" to "no influence". This variable was then recoded to run on a 0 to 1 scale, with higher values indicating greater perceived political efficacy.

VPN use was used to control for participants' privacy concerns and was a dummy variable that took a value of 1 if the participant used a VPN and 0 otherwise. VPN use was determined both directly via two questions asking whether participants used a VPN or proxy server to browse the Web, as well as indirectly by asking participants whether they had ever viewed any of 10 blocked sites, such as the English or Chinese versions of the New York Times

or BBC. A VPN is one common way - although not the only way - to access such content inside China. Participants who answered yes to any one of these 12 questions were coded as using a VPN.

QQ use was measured by asking whether respondents had used QQ in the past week and was a dummy variable with 1 indicating the participant has used QQ in the past week and 0 otherwise.

Age was calculated by subtracting participants' year of birth from 2014, the year in which the survey was conducted. This variable was rescaled such that 0 represented the youngest age present in the survey (18) and 1 represented the oldest age (89).

Education was measured on a 4-point ordinal scale indicating whether participants had completed primary school or below, junior high school, senior or vocational high school, or college or above. It was recoded to run from 0 to 1.

Male was a dummy variable that took a value of 1 if the participant was male and 0 otherwise.

Migrant worker is identified by two questions - status of household registration and current occupation. Respondents are considered as migrant workers if they have rural (agricultural) household registration but work in non-agricultural sector (excluding governments, police bureaus and the military). It is a dummy variable that took a value of 1 if the respondent was a migrant worker and 0 otherwise.

CCP member was a dummy variable that took a value of 1 if the participant was currently a member of the Chinese Communist Party and 0 otherwise.

3. Descriptive survey statistics

Table 2. Descriptive survey statistics

	N	Mean	SD	Min	Max
Discussing protest online	1961	.05	.21	0	1
Criticizing government officials online	1961	.05	.22	0	1
Discussing Non-sensitive political topics online	1937	1.17	1.57	0	6

Weibo user	1952	.40	.49	0	1
WeChat user	1952	.84	.36	0	1
Uses Group Chat function on WeChat and/or QQ	1961	.67	.47	0	1
Size of online network	1393	.40	.26	0	1
Frequency of getting information from traditional media (TV)	1957	.86	.26	0	1
Frequency of getting information on social media	1920	.78	.36	0	1
Following political news online	1961	.41	.31	0	1
Trust in government	1834	.71	.20	0	1
Proud to be Chinese	1916	.73	.19	0	1
Political efficacy	1725	.19	.22	0	1
using VPN	1961	.11	.32	0	1
Age	1961	.25	.16	0	.97
Age squared	1961	.09	.11	0	.94
Education	1961	.63	.32	0	1
Male	1961	.50	.50	0	1
Migrant worker	1961	.35	.48	0	1
CCP member	1961	.12	.32	0	1

4. Chinese question wording of dependent and independent variables

Table 3. Chinese question wording of dependent and independent variables

	Chinese question wording
Dependent variables	
Discussing non-sensitive political topics online	一般而言，对于网络时事政治新闻，您是经常、有时、偶尔还是从不做下列事情？ 1) 在网上发言/评论 2) 与网友争论/讨论
Criticizing government officials online	下列是一些政治和社会活动，请问您做过这些事情吗？ 1)在网上批评政府官员或政策
Discussing protest online	下列是一些政治和社会活动，请问您做过这些事情吗？ 2) 在网上讨论游行 静坐 示威 群体性事件
Independent variables	
Weibo user	在过去一周之内，您使用过以下应用程序或媒体信息服务吗？微博
WeChat user	在过去一周之内，您使用过以下应用程序或媒体信息服务吗？微信
GroupChat use	如果您使用微信或 QQ，通常您加入群组吗？
	通常您都会加入哪些群组？家庭成员群体，朋友群，同事群，同学群，兴趣群，工作群和其他

III. Information about the online survey

1. Sampling information of the online survey

We conducted an online survey experiment focusing on Internet users' behaviors on social media between May 10 and June 3, 2016. The online survey drew a quota sample from an online panel of over 1.6 million Chinese Internet users provided by a market research company based in China. We made use of the distribution of IPv4 addresses among the 31 provinces in China compiled by Statistic Bureau in 2015 and the sociodemographic characteristics – age, gender, and education - of the 2014 nationally representative media survey mentioned above to design the quota. In the online survey experiment, 27,000 panelists were invited and 1,489 completed the survey.

To gain insights into the actual implementation of the quota sampling, we compared the relevant characteristics of our online sample with those of the two sources that we used to draw the quota. In the media survey, 50.4% are male and 49.6% female; while in our online sample, 52.9% are male and 47.10% female. In terms of age group, our online sample appears to be slightly older than the Internet users in the media survey sample. In our sample, 66.1% are younger than 40 years old; while in the media survey sample, 70.8% falls into the age group below 40 years old. In terms of education, the distribution of our online sample is heavily skewed to highly educated people. In our sample, 75.38% have at least been to college, while this figure in the media survey sample is 26.6%. Moreover, in the media survey sample, 8.7% has an education level of primary school or under, while in our online sample, we are only able to obtain 1.26% falling into this education group.

Based on the distribution of IPv4 addresses among the 31 provinces in China compiled by Statistic Bureau in 2015, we categorize these provinces into 5 groups, ranking from the one with highest percentage of IPv4 addresses to the one with the lowest percentage. In our online sample, we slightly oversample Internet users from the lowest two groups including people residing in the following provinces, Jilin, Heilongjiang, Tianjin, Yunan, Xinjiang, Hainan, Gansu, Guizhou, Ningxia, Qinghai and Tibet, accounting for 14.84% of the sample; while the

actual distribution of IPV4 addresses in these provinces is 8.66% of total number of IPV4 address.

2. Poststratification

The purpose of poststratification is to adjust the sampling weights so as to make the sampling size within each post-stratum is equal to the population size. In our online sample drawing from an online panel of Internet users, we are likely to oversample active Internet users who join online discussion; thus, we stratify our sample according to known population distribution of lurkers and discussants from the media survey. In the media survey, lurking frequency was obtained from the question asking the frequency of using social media to lurk news information and discussing frequency was obtained from the question asking the frequency of commenting or voicing opinion online about hot issues and political news. For each activity, we divided respondents into two groups – low and high frequency. Similarly, in the online survey, lurking frequency and discussing frequency were obtained from asking respondents frequency of reading, posting and commenting on three social media platforms – WeChat, Weibo and Baidu Tieba. Additive indices of lurking and discussing were created and then respondents were categorized into two levels – low and high frequency. Post-weight of each stratum is calculated by using the following formula:

$$Post\ weight = \frac{Proportion\ in\ population}{Proportion\ in\ sample}$$

We then run regression on the post-stratified sample.

Table 4. Poststrata and weights.

Lurking / Discussing		Low	High
Low	Population/Sample	31.60% / 14.00%	63.56% / 40.03%
	Post weight	2.26	1.59
High	Population/Sample	0.53% / 0.98%	4.31% /45%
	Post weight	0.54	0.10

Source: The media survey 2014; Online social media survey, 2016.

3. Balancing table of the online survey experiment

Table 5. Balancing table for WeChat and Weibo groups

Variable	Range	Mean Value		*p*
		WeChat group	Weibo group	
Demographics				
Gender (Female=0)	0-1	0.51	0.52	0.52
Age	18-103	35.17	35.48	0.61
Education	1-5	4.21	4.23	0.55
Resident (Urban=3, Town=2, Rural=1)	1-3	2.88	2.84	0.23
Procedural details				
Duration (minutes)	1.88-1519.48	17.63	14.70	0.37
Privacy concern				
Social media behavioral measure	0-1	0.64	0.64	0.81
Anonymity (1= anonymous)	0-1	0.76	0.76	0.99
Weibo behavioral measure	0-1	0.55	0.54	0.45
User gratification				
Information-seeking needs	0-1	0.77	0.76	0.30
Social needs	0-1	0.73	0.72	0.21
Recognition-seeking needs	0-1	0.72	0.72	0.63
Personality				
Extraversion	0-1	0.52	0.52	0.93
Agreeableness	0-1	0.56	0.56	0.93
Consciousness	0-1	0.55	0.57	0.06*
Neuroticism	0-1	0.50	0.49	0.58
Intellect/Imagination	0-1	0.55	0.56	0.37
Issue details				
Seriousness of the issue	1-7	5.86	5.89	0.66
Having seen the picture before	0-1	0.80	0.79	0.53
Attention check question				
Attention test	0-1	0.95	0.96	0.25

Data: Online survey 2016
Notes: * p<0.10; ** p<0.05; *** p<0.01

4. Manipulation check

After the treatment participants received two questions: one asked whether they would recommend Weibo, WeChat or both platforms to a friend when interested in understanding news and in-depth reports on current affairs and when trying to understand discussion on current affairs. Ordered probit regressions on both items were substantially and statistically insignificant.

Similarly, we asked participants to indicate which items were closer to WeChat, Weibo or both, including the extent to which posts by other were deleted, posts by yourself, and public

accounts or users with large networks being blocked. OLS regression analysis on an index of these items revealed no substantial or statistically significant relationship.

However, when asked to evaluate which platform better allowed yourself to express an opinion about current affairs, participants were more likely to choose Weibo over WeChat upon viewing the Weibo treatment, significant at the 0.1 level.

5. Chinese question wording of the online survey experiment

Table 6. Chinese question wording of dependent and independent variables

	Chinese question wording
Dependent variables	
Forwarding with comments	请问如果在微信/微博上看到这张图片，您会在微信/微博上做什么？ 转发该图片或信息到朋友圈并带自己的评论 (WeChat group) 转发该图片或信息并带自己的评论(Weibo group)
Forwarding to other platforms	请问如果在微信/微博上看到这张图片，您会在微信/微博上做什么？-- 转发该图片或信息到其他社交媒体
Discussing with friends	请问如果在微信/微博上看到这张图片，您会在生活中做什么？--与亲友讨论这个事件
Manipulation check	
Perceived political content	您的朋友想要了解关于时政社会热点的信息和深度报道，您会推荐哪个平台? 微博/微信/两者都不推荐
	您的朋友想要了解关于时政社会热点的讨论，您会推荐哪个平台？微博/微信/两者都不推荐
Censorship	请问您觉得以下这些描述更贴近微博还是微信？更贴近微博, 更贴近微信, 两者一样？ 1）别人分享的链接常常点进去发现内容已经被删除 2）转发文章发不出去或被删帖 3）我关注的有些用户、大 V 或公众号被封号
Functions of the platform	请问您觉得以下这些描述更贴近微博还是微信？更贴近微博, 更贴近微信, 两者一样？-- 我可以对时政社会热点发表见解