

Internet Use, Social Network, and Civic Participation in Urban China

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### Abstract

Democratic potentials of the Internet have been a salient research topic. To what extent would the advent of the Internet in a transitional authoritarian society facilitate civic participation and opinion expressions among the general public? To address this question with a focus on urban China, this study analyzed data of seven major Chinese cities extracted from a nationwide representative sample survey. The results show that, taking into account the effects of the variables representing resource-possession and psychological conditions, social networking and Internet use variables are related to both higher levels of civic participation and expressive engagement.

Keywords: Internet, civic participation, opinion expression, democratic transition, China

Democracy needs and expects citizens' active participation in public life. This is, arguably, the most foundational premise in various theoretical formulations of civil society and its democratic functions. In this area, some scholars emphasize citizens' voluntary participation in formal organizations—religious groups, trade unions, and other autonomous associations—wherein citizens acquire the potentials to be enabled and mobilized to engage in collective actions (e.g., Putnam et al, 1993). Other scholars contend that civic participation is not limited to memberships in formal organizations and their activities that they enable; it includes engagement in other ways, with or without explicitly political agenda (Jacobs, Cook & Delli Carpini, 2009; Wuthnow, 1998; Zukin, Keeter, Andolina, Jenkins, & Delli Carpini, 2006). It is on the presumed foundational significance of citizen participation that scholars have either sounded alarms on the shrinkage of citizen participation in established democracies (e.g., Patterson, 2003), or ventured to formulate reforms to revitalize broad-scoped and meaningful citizen participation (e.g, Fung & Wright, 2001).

In different ways, citizen participation can be a lens through which we examine a non-democratic and transitional country such as China, to understand the democratic impulses from society and structural barriers fortified by the state. It has been widely recognized that in China, under its one-party regime, meaningful and sustainable political participation based on stable and autonomous institutions remains lacking (Lieberthal, 2004). However, after 30 years' economic reforms, significant social changes have taken place. While massive collective actions are strictly prohibited, some space has been opened up for the sprout of voluntary associations with varying degrees of autonomy (Unger, 2008); certain civic associations have become active and certain collective

actions by ordinary citizens have been taking place (Read, 2007; Yang, 2009); and under the combined impact of digital informational technology and economic growth, freer—compared with the pre-reform era—expressions among citizens have become widely noted (e.g., Balzer, 2004; McCormick, Su & Xiao, 1992; Esarey & Qiang, 2008).

Of course, none of these observations imply that civic participation in China is comparable to democratic societies in its scope, impact, and significance. Opportunities for Chinese citizens to participate in public life and potentially to take collective actions remain highly restricted by the Party-state authority. In addition, at the individual level, whether and how much one engages in public life is also contingent on many sociological, psychological and communicative factors. Questions to be asked are: What are the levels of citizen participation in public life and who are taking the few available venues to participate? And further, what are the effects of the Internet on citizens' participatory behaviors? This study is aimed to address these questions by analyzing data from a national survey in China completed in 2010. Given China's huge degree of heterogeneity, in this study, we will take the case study logic of exploring the patterns of citizen participation and Internet effects in urban China by analyzing data from seven selected cities located in different regions of China. The analytical goal is to answer our overarching questions with carefully amassed evidence of common patterns across diversely placed cities so that some general inferences about citizen participation in urban China can be made.

#### Civic Participation and Expressive Engagement in China

Citizen participation is an umbrella label that encompasses a broad range of activities (Conge, 1988; Salisbury, 1975; Verba, et al., 1995). It goes beyond the scope

of political participation that is aimed primarily to influence electoral process and policymaking (Verba et al., 1995). It includes civic activities aimed at resolving problems of the community (Zukin, et al., 2006). Activities such like volunteering to help the needy, participating in community services, being a member of a voluntary group also fall into this category of civic participation. Also included are individuals' media use and expressive engagement, such as sending letters to newspapers or magazines to comment on articles and reacting to a message on the Internet, have been recognized as constituent of participation (e.g., Bakker & Vreese, 2011), as well as discursive activities such as engaging in informal conversations on public issues, attending face-to-face deliberative forums, engaging in online information sharing and/or discussions on public issues (Cook et al., 2009). Participatory activities in these categories vary in the extent to which they are situated primarily in the public or private settings; together, however, they bridge various social and discursive spaces of the public sphere (Breese, 2011; Wyatt, Katz, & Kim, 2000).

Equipped with this conceptual image of citizen participation, we can discuss various participatory activities in the Chinese context. The political scientist Gang Guo (2007) suggested, there are mainly two kinds of formal social associations that Chinese citizens participate in: mass organization and civic association. Historically, social organizations in Mainland China, in line with the Leninist tradition, serve as a "transmission belt" linking the Communist Party and the masses. They are, thus, auxiliary apparatuses of the state and a direct extension of the state's power into social sectors. Such mass organizations (e.g., All-China Federation of Trade Unions and All-China Women's Federation) not only are funded by the state but also have their

administrators designated by the state. The main goal of these organizations is to recruit members to the maximal degree, and through the organization membership, absorb the society into the state realm (Guo, 2007). Reflecting this logic, people in a specific sector, e.g., employees of a state-owned enterprise, are assigned the union or women's federation membership automatically when they are employed.

Unlike mass organizations that constitute the system and logic of "state corporatism" (Unger, 2008) in that each is granted the monopoly in representing a particular constituency, namely, a societal sector, and serves specific functions of the state in return (Cawson, 1986), many civic associations, less constrained by official rules, have enjoyed some degrees of autonomy. Many of them are very specialized, organized by a limited number of members sharing the same concerns and interests (Guo, 2007). Members in these associations are more self-selected, voluntary, heterogeneous, and more actively engaged in the associations to which they belong than those in mass organizations (Shi, 1993). For example, in some communities, members of homeowner associations are quite active in voicing the interests and defending the rights (Read, 2008). People engaged in these activities are expected to learn civic skills and cultivate cooperation, tolerance, trust and other values that facilitate future participation in the wider political processes (Guo, 2007; Zhang & Baum, 2004). Reflecting this logic, Yang (2005) concludes, after investigating environmental NGOs in China, that these NGOs provide their members with meaningful experience to self-explore and socialize, through which leadership and skills in interpersonal relations are trained.

Formal organization is not the only venue for citizens to develop their citizenship competence. Research in both the democratic societies and China shows that informal

interactions, both online and offline, can be widely present venues (e.g., Cook et al., 2009; Green & Brock, 2005; Yang, 2009). Beyond these officially registered civic associations, there are many unofficially registered groups in China, e.g., sports clubs (e.g., climbing, hiking), fans clubs, groups in pursuit of personal interest such as stamp collection, practices of an art form, etc. These associations, usually locally formed, have little specific political agenda, oftentimes even without a clear intent for public interests. They may have no formal rules or regulations to which members should commit. Institutional arrangements, and for some, even regular activities, are sometimes absent. The coordinators or organizers of these groups are not designated by the government but instead are the founders of the group or elected by its members. Engaging in these voluntary groups may cultivate civic skills in a different way than what they could learn from participating an official organization. In their study on social capital formation, Green and Brock (2005) argues that formal organizations cultivate leadership and public speaking skills, while informal interaction contributes substantially to foster negotiating skills, opinion sharing and companionship and facilitate creating networks of mutual obligation.

Based on the logic embodied in the literature reviewed here, this paper will focus on individuals' involvement in the formal and informal social groups that are not dictated by the state, as they are two types containing features of prototypical civic associations in a civil society. The involvement includes both being a member and engaging in activities of each group. In addition to participating in public life via the venues of collectivity, we also include individuals' expressive activities such as writing to media organizations and posting one's comments on an issue in a blog. While these are activities carried out

individually without the need to coordinate with others as in group or associational activities, they are among the activities that constitute “discursive participation” (Delli Carpini et al., 2004), and they contribute to building the political capital—perceptions, attitudes, and skills of a participating citizen (Cook et al., 2009). In addition, they are also actions that shape the public sentiment, which, increasingly, the government finds difficult to ignore (e.g., Hung, 2006).

### Factors Contributing to Citizen Participation

Participation in public life, namely individuals going beyond their private realm, is demanding on and costly to individuals. It requires that individuals be equipped with necessary resources, strong-enough motivation, and civic skills; it also needs manifested opportunity structures (see Cook et al., 2009; Verba et al., 2005). From a sociological perspective, citizen participation is foremost constrained by sociological resources, in both structural and material terms (Brady, Verba, & Schlozman, 1995). The amounts of human and financial resources that they are able to utilize in participation dictate the scope and extent of individuals’ voluntary engagement (Wilson & Musick, 1997). The material and basic civic skill resources are usually measured with regard to people’s demographic characteristics (e.g., education, income, age). Generally, higher levels of political participation are found among those with higher education, more income, and in occupations of higher status (Cohen, Vigoda & Samorly, 2001; Verba et al., 1995). These variables are believed to index material resources, social contacts, normative pressures in one’s background and social surroundings, as well as action opportunities.

Other studies, focusing on the channeling forces of the sociological determinants, highlight psychological factors. For instance, it is found that self-esteem, political

efficacy and political interests are all positively predictive of participation (Bekkers, 2005; Carlson and Hyde, 1980; Niemi, Craig & Mattei, 1991, Verba et al., 1995), even though the participation-directed attitudes and participatory behavior may strengthen each other reciprocally (Gastil & Xenos, 2010). Verba et al., (1995) argue that the same objective status index by the readily measured demographic variables may imply different citizenship meanings for different people. While social positions provide opportunities for citizens to be engaged, utilization of these resources is contingent on their psychological factors. Those who are more concerned about and have stronger or clearer expectations of their political environment are more motivated to be involved in order to exert influences on political processes and outcomes (Krampen, 1991). Those with higher political efficacy are more likely to believe that they have the ability to yield impacts as a “meaningful player” in the political game (Verba et al., 1995).

The third line of theoretical explanations of citizen participation focuses more on social capitals. Coleman (1990) argued that civic and political participation is inherently in the structure of social relations between and among actors, and it could be an unintended by-product of informal interactions with friends and family members. La Due Lake & Huckfeldt (1998) confirmed that the politically relevant social capital, measured as communication about politics within an individual’s different types of social networks, empowers a citizen to participate in politics. The rationale is that social connections enhance social trust in strangers and foster the sense of community (Putnam, 1995), which may motivate citizens to participate in politics even if it seems irrational at the individual level to do so (Downs, 1957).

The general proposition of social capital possession being positively related to individuals' participation has been demonstrated in numerous studies (e.g., Cook et al., 2009; Wilson & Musick, 1999). Therefore, as shown in La Due Lake and Huckfeldt's (1998) study, network size multiplies the effects of frequency of social interaction on the development of politically relevant social capital. They argue that larger networks are expected to include more independent sources of information, which in turn foster the heterogeneity and richness of informational transmission (Huckfeldt et al., 1995). Consequently, people nested in larger networks are more likely to encounter politically relevant information that mobilizes collective activities (Verba et al., 1995). By a logical extension, in today's "network society," those who use social media for news and information are more likely to activate their social connections around civic and political activities and consequently, they also participate more (de Zuniga, Jung, & Valenzuela, 2012).

Despite the empirical support of the positive relationship between social capital and participation in public life is well established, their causal relationship remains uncertain. While some scholars emphasize the effect of social connections and trust on behavioral outcomes (e.g., Cook et al., 2009; La Due Lake & Huckfeldt, 1998), others also view social capital as the product of participation in social organizations (e.g., Putnam, 1995). In a democratic society, the two are likely to be in a reciprocally causal system (Brehm & Rahn, 1997) in that while social capital possession makes it easier and more beneficial to participate in public life, the latter in turn is a key venue in the production of social capital. In this study, we will explore whether this positive relationship also exists in an authoritarian society.

## Internet Use and Civic Participation

With the advent of the Internet, recent studies have begun to examine its role in citizen participation. While some have examined online engagement as part of or an extension of citizens' civic and political participation in the Internet age (e. g., Jensen, Danziger, & Venkatesh, 2007), others focus on the potential impact of online communication on citizen participation (e. g., Krueger, 2002; Tolbert & McNeal, 2003). But the causal impact of the Internet defies any sweeping generalization. While Internet use may facilitate participation in several ways (Polat, 2005), it may also, as some have cautioned, negatively affect the production and maintenance of social capital and other kinds of resources needed in participation (Kraut et al., 1998; Nie, 2001; Nie & Erbring, 2000). A recent meta-analysis (Boulianne, 2009), based on 166 effects reported in 38 studies, provides solid evidence against the negative effect of the Internet on engagement, while its positive effect is not established yet.

The seemingly inconsistent patterns of "Internet effects" open a possibility that it may not be effective to view the Internet as a unitary platform on which everyone plays identical games at the same pace. We may need to take seriously the claim that the Internet is an ever-evolving intersection of changing technologies and institutional as well as regulatory configurations (DiMaggio, Hargittai, Newmann, & Robinson, 2001) and thus, it is socially embedded (Warschauer, 2003).

Such conceptual recognition has sensitized scholars of some methodological deficiencies in studies on the Internet effects (Pasek, More, & Romer, 2008). For example, attempting to get a nuanced picture of Internet effects, recently, many scholars have abandoned the simplistic approach that defines Internet use as time spent online.

Rather, they view Internet use as a multi-dimensional concept and differentiate various types of online activities according to distinctive functions they serve (Moy, 2005). Specifically, informational uses (e.g., information search) and communicative uses (e.g., sending emails and chat with friends) are consistently found to have positive effects on internal efficacy, political knowledge, and civic participation (Boulianne, 2009; Moy, 2005), while recreational use and consumer-oriented activities have no bearings on engagement (Moy, 2005; Shah, Kwak, & Holbert, 2001).

In this study, our research context is a transitional authoritarian society. We start with the recognition that in this society, the authority has a successful tradition of control over informational flow and the uses of information technologies (Hung, 2006; Zheng & Wu, 2005). The first logical consequence of this recognition is that our analytical lens zooms in on the potential democratizing effects of the Internet in Chinese society. One group of scholars, observing online expressive and organizing activities by activists and glaring moments of public outcries over policy failures or eruptions of social injustice, argued that the Internet's democratizing impact is on display; this is possible due to the fact that the widespread uses of the Internet broadens the horizontal flow of information to counter the regime's propaganda, facilitates voluntary social interactions, and establishes an infrastructural basis for identity politics on the cyber-sphere (Hung, 2006; Yang, 2009; Zheng & Wu, 2005). Another group of scholars, investigating the general public's usage of the Internet, are much more cautious about the democratizing promises of the Internet, given the fact that it is much more often used for entertainment rather than information (China Internet Network Information Center, 2009; MacKinnon, 2008) and its effect must be assessed in the context of those who are equipped with more material

and literacy skills benefit from the advent of the Internet sooner and in broader scopes (e.g., Pan, Yan, Jing, & Zheng, 2011).

Our focus in this study is not to resolve the conflicts between the optimists and pessimists in investigating the democratizing effects of the Internet in China. Rather, we attempt to explore whether there are systematic differences among Internet users and non-users in their participatory and expressive behaviors that have been the prime bearers of citizen engagement in democratic societies (Cook et al., 2009; Verba et al., 1995). Synthesizing the various perspectives in the extant literature on what facilitate citizen to participate in public life, we aim to explore the relationship of three sets of determinants and civic participation as well as expressive engagement in urban China: sociological factors (resources), psychological factors (e.g., political interest and efficacy), and formal and informal communicative variables, including those on both social networks and Internet use.

## Methods

### *Data*

The data analyzed came from a nationwide representative sample survey conducted in Mainland China between July and October of 2010. The sample was drawn from the residents in 31 provinces (including four municipalities directly under the central government). In each province, the same multi-stage stratified probability sampling procedure was utilized to select respondents. Local residents were recruited and trained as interviewers. They conducted the interviews in the needed dialect with the selected respondents in their respective locale. The final merged dataset contains 37,279

complete interviews. Computed based on WAPOR's recommended equation, the overall response rates were at 62% (in provincial capital cities) and 69% (other cities or towns).

This study utilized a subset of the whole national sample by selecting only the urban residents in Shanghai ( $n = 736$ ) and six other major cities in different economic regions in China. These are all either municipalities directly under the central government (e.g., Beijing and Chongqing) or provincial capital cities (e.g., Guangzhou, Shenyang, Wuhan, and Xi'an). The combined sample size of the seven cities is  $n = 4,230$ . Table 1 shows the basic characteristics of the seven cities and the corresponding sample size from each.

The design of the dataset analyzed thus is based on this analytical logic: We will treat each city as a case with the potentials for heterogeneity in all the aspects of the relationships examined in this study. Thus, we will start with Shanghai with the idea that as China's largest and arguably, the most economically developed and cosmopolitan city, Shanghai is where the impact of the three sets of contributors on citizen participation is most likely to be stabilized for manifestations in survey data. But, we recognize that even urban China is likely a heterogeneous composite. Mega-cities in different economic and geographic regions may vary in many ways. As a result, effects observed in Shanghai may not be generalized to other cities. Taking a "maximizing variance" step, the six other cities are included covering a wide spectrum of variations within the category of "urban China." Exploring the degrees of fitness of the same predictive models among the seven cities enable us to see whether the observed patterns in Shanghai vary or are consistent across the cities. Such evidence will strengthen our interpretative claims in terms of "urban China" as a whole.

## *Measurement*

*Civic participation.* Fifteen dichotomous questions asked whether (0 = no, 1 = yes) respondents participated in each specific activity. The items covered formal and informal activities organized by voluntary associations, professional groups, amateur hobby groups, residential committee, and online groups. The level of civic participation was a sum across the items. Some items were about participation in online groups and they were not applicable for those who did not use the Internet. To create a participation index comparable to both Internet users and non-users, we divided the summed score by the number of applicable items for each respondent respectively. The final score represents the proportion of applicable civic activities asked about in the survey taken up by each respondent (Table 2).

*Expressive engagement.* Seven questionnaire items were used to measure how often (0 = never, 5 = often) respondents had expressed their views. The items included posting opinions on online forums, calling and writing to media to express, petitioning to governmental departments, etc. Following the same rationale as that stated above, the proportion of applicable items for Internet users and non-users respectively was used to index each respondent's expressive engagement.

*Political Efficacy.* Seven items with 5-point Likert scale were used to measure political efficacy. An exploratory factor analysis of these items yielded two clear-cut factors that correspond to the internal ("my ability in handling political issues") and external efficacy ("system responsiveness") respectively. Averaging the scores of the

three items in each factor led to the internal ( $\alpha = .671$ ) and external political efficacy ( $\alpha = .804$ ) indices.<sup>1</sup>

*Subjective Social Status.* Nine questions was used to assess how respondents placed themselves in China's social stratification system. The scale ranged from 1 as the lowest stratum to 7 as the highest stratum. The questions covered nine different areas, ranging from financial income to social circles and lifestyles. Respondents' scores on these items were averaged into a single index of perceived social status ( $\alpha = .94$ ).

*Political Interest.* Three items were used to assess on a 5-point Likert type scale (1 = strongly disagree, 5 = strongly agree) the extent to which respondents were interested in public issues, thinking about national issues, and local policies. Averaging the three items generated a single index of political interest ( $\alpha = .78$ ).

*Internet Use.* Internet use was measured with a set of questions. Relevant to this paper were questions on how many days per week and how many minutes per day they use Internet. Those answering they did not use the Internet (recorded as zero in the days per week question) were coded as non-users (0 = non-users), and those using Internet above one or more days per week were coded as users (1 = users). Following that question, Internet users were asked to report how often they were engaged in 13 online activities (0 = never, 5 = often). This study only utilized those items that related to informational and social connectional usages. Averaging across the frequencies of browsing online news, using search engine, browsing and posting on forums of blogs, and using email ( $\alpha = .769$ ). Another set of variables was used to measure how people use Internet for social connection. Respondents were asked to report how frequently they

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<sup>1</sup> The scales were created based on the whole sample.  $\alpha$ 's are created from the whole sample.

connect with acquaintances (i.e., family, friends and peers, other acquaintances) and strangers (i.e., net friends and celebrities) (0 = never, 5 = often). Averaging five items generated two indices of online social connection, one with acquaintances (three items,  $\alpha = .81$ ) and the other with strangers (two items,  $r = .00$ ).

*Breadth of Offline Social Network.* Ten items were used to assess how frequently people interacted with those from different sectors, including party officials, professionals, clerks, staff, industrial works etc. (0 = never, 5 = often). The percentage of people in the sample reported having interacted with someone from a sector would be regarded as an indication of the social centrality of that sector. If a person interacts with those in less centrally placed sectors, the broader the person's social network is likely to be. Based on this rationale, for each respondent, the breadth of social network is a weighted average of the frequencies of interacting with those in each of the 10 sectors and the weight is the percentage of zero for each sector (least centrally placed).

*Socio-demographic variables.* Five socio-demographic variables were included in this study, including age, sex, years of formal schooling, Communist Party membership, and monthly personal income.

### *Analyses*

Given the distributional characteristics of the dependent variables with a large portion of zero in civic participation and expressive engagement (Table 2), a series of Tobit regression models were estimated. In estimating these models, we conceived each index as capturing two kinds of information: 1) likelihood of participating in each category and 2) the frequency of participation for those who have passed the threshold of engagement. Therefore, the Tobit regression model combined the probit model of the

likelihood and the linear regression model of the frequency (intensity). And as a result, the Tobit regression coefficient for each predictor can be decomposed into two distinct effects (McDonald & Moffitt, 1980): (1) the effect on probability of participating civic activities and expressive engagement among those who score above zero on the scale, and (2) the effect on frequency of engagement among those who had already participated. A hierarchical procedure was followed to enter the four sets of predictors: socio-demographics, psychological, social network and Internet use variables.

Since some predictors relevant to Internet use are not applicable for non-Internet users, in Tobit regression models, we only added the dichotomous variable on whether using the Internet or not in the full sample to test the unique effects of Internet adoption on civic participation and expressive engagement. The other two models limited to subsamples with only Internet users tested the effects of online informational activities and social connections.

The same models were replicated in the sample with the respondents from the seven urban cities as a whole. A set of six dummy variables was used to capture the between-city differences in the average levels of participation and expressive engagement respectively.

## Results

### *Levels of Civic Participation and Expressive Engagement*

Descriptive statistics (Table 2) showed that both civic participation and expressive engagement among urban Chinese are quite low. Only 75.4% of respondents in Shanghai reported that they had participated in at least one of the applicable civic activities in the past 12 months. The level was considerably lower in the other cities with 67.1% of the

seven-city sample had participated in at least one of the activities asked about in the survey. The average proportion of activities engaged among those who had passed the threshold of participation is 0.19 ( $SD = .18$ ). The corresponding figure for the whole seven-city sample is 0.14 ( $SD = .15$ ).

Similarly, only 66.7% of the Shanghai respondents engaged in at least one of the opinion expressive activities asked about in the survey. The level was similar in the other cities, as the percentage was 68.6% from the whole seven-city sample. Among those who engaged in any opinion expression activity, the average frequency of expression across different channels is 0.96 ( $SD = .76$ ) on a 5-point scale. The corresponding figure for the whole seven-city sample is 0.96 ( $SD = .79$ ).

#### *Results from Shanghai: Predicting civic participation*

Tables 3 showed the Tobit regression results on civic participation among all respondents and Internet users respectively. The first column showed the standardized Tobit regression coefficients, and the next two columns presented the respective decomposed effects on 1) the probability of participation and 2) the frequency of participation once they passed the threshold. The coefficients from the final model with all the predictors in the equation were presented. Using  $R^2$  calculated by taking the squared correlation coefficient of the model-predicted values of a dependent variable with the observed values, it was possible for us to assess the improvement of model fit with additional predictors added. The amount of improvement then was tested via the log likelihood ratio test ( $\chi^2$ ).

The three columns of Table 3 on the left showed that people with higher levels of education and being a Communist Party member were more likely to participate in civic

activities and participated more. But the age effect and gender gap were not significant. Personal income exhibited a negative relationship with civic participation, contrary to the expectations from the SES model of citizen participation.

The tendency shown by the effect of income was also confirmed by the effect of subjective social status. It showed that those who perceived themselves as having higher social status were less likely to participate and participated less. Consistent with the motivation argument (e.g., Bekkers, 2005), political interest was a significant predictor of civic participation, but neither external nor internal validity showed the same pattern.

As predicted, the breadth of doffline social network was a strong predictor of civic participation. The more heterogeneous individuals' social connections were in terms of various social sectors and the more frequently one interacted with them, the more likely they would participate in civic activities. The effect of Internet adoption was in the predicted direction but does not show significant influence on engagement.

When we restricted sample within Internet users, resource-related variables exhibited the same pattern as in full sample, while the effects of psychological predictors disappeared and the regression coefficients were all small. The regression coefficient of offline social network became much smaller and was no longer significant in this model. All three Internet use variables showed positive coefficients as predicted, but only that of using the net to connect with acquaintances reached the statistical significance. More online interactions with people one knew corresponded to higher likelihood and levels of civic participation.

Fitness statistics of hierarchical model testing showed that the sociological indications of individuals' possession were the strongest predictors of civic participation.

In the full sample model, offline social network was a much stronger predictor than Internet adoption, while among Internet users, their online activities could explain more variance in civic participation than offline social network. The two models would account for 19.6% and 18.0% variance in the participation respectively.

*Results from Shanghai: Predicting expressive engagement*

Table 4 presented the results from the Tobit regression model predicting expressive engagement among all respondents and Internet users respectively. The first three columns of Table 4 on the left showed the results from the whole sample and the three columns on the right show the results from the Internet user sample. For each sample, the regression coefficients were from the final equation.

The expressive engagement models were more predictive than the parallel models of civic participation. Overall, the four types of variables accounted for 33.5% and 36.6% of variance in expressive engagement in the whole sample and Internet user sample respectively.

The results from the full-sample model showed that education and personal income exhibited the same pattern as they were in the civic participation model: While education had a significant positive effect on expressive engagement, income had a negative one. Different from the civic participation model, Communist Party membership had a positive but non-significant effect on expression engagement.

Compared with the results from the civic participation models, the block of psychological variables had more robust effects on expressive engagement. Among these variables, subjective social status was a negative predictor, consistent with its effect on civic participation. External and internal variables were both significant predictors of

expressive engagement. While external political efficacy, namely, perceived responsiveness of the government, was a positive predictor of expressive engagement, respondents' perceived ability to influence policy process or internal political efficacy was surprisingly a negative predictor. Similar to the results from the civic participation model, political interest was a significant positive predictor of expressive engagement.

Offline social network and Internet adoption both had significant positive effects on expressive engagement. The results showed that those who had more heterogeneous networking interactions in the offline world were more likely to take up an opinion expression activity and would engage in opinion expressive activities more frequently. Independent of the offline social networking effect, Internet users had a higher probability to engage in expressive activities and expressed their opinions more frequently once they had passed the threshold of expressive engagement.

The results from the model fitted to the sample of Internet users show that the effect patterns of the three sets of predictors, demographic, psychological, and offline social network, largely remained consistent with those obtained from the whole sample. The three newly included online activity variables were all significant positive predictors. Together, they accounted for 4.4% variance in expressive engagement. Using the Internet to interact with acquaintance or with strangers and to obtain information more frequently each corresponded to higher likelihood of and more frequent expressive engagement.

#### *Extension of the models to seven cities*

The results presented so far were obtained from Shanghai. What are the degrees of their generalizability to other cities to give us an empirical foundation to talk about

citizen participation and what would predict that in “urban China?” To address this question, we fitted the same series of Tobit regression models to the seven-city sample. All variables entered in these models to predict outcomes were the same as those in the Shanghai-only models except that six dummy variables were included to control for average between-city differences. When entering the predictors hierarchically, they were included in the first block, together with the other demographic variables. The results are shown in Tables 5 and 6 respectively.

Table 5 showed that demographic variables in this larger sample have consistent effects on civic participation except for the effect of personal income. In the model for the whole sample, personal income had a non-significantly positive effect on civic participation, while the effect is negative non-significantly in the model of the users-only sample. Likewise, subjective social status also generated weak but positive effects on the outcome, which was inconsistent with results from Shanghai sample. Results of Internet adoption and offline social network echoed the findings in Shanghai sample. While the magnitude of Internet effect on civic participation ( $\beta = .110, p < .001$ ) was smaller than in Shanghai sample ( $\beta = .141, p > .05$ ), it reached statistical significance. Among Internet users, the breadth of offline social network was weakly predictive of civic participation. While online informational use had no effects on civic participation, similar to the observation from the Shanghai-only model, online social interaction with both acquaintance and strangers positively predicted the outcome.

Table 6 presented the results predicting expressive engagement in the seven-city sample. Results of demographics were almost consistent with Shanghai data, which explained largest variance ( $R^2 = 16.8\%$  for full sample and  $R^2 = 10.1\%$  for Internet users)

in the outcome. Similar to the models from the Shanghai-only model, education, and personal income were the significant predictors of expressive engagement. Subjective social status, consistent with results in the civic participation model, had a significantly positive effect on expressive engagement. In both whole-sample and Internet user-only sample, Internal efficacy consistently had negative effects on expressive engagement, while the effect of external efficacy was significant and negative only in whole sample. Similar to the models on civic participation, Internet use and offline social network positively predicted expressive engagement in the model on the whole sample. Among Internet users, Internet use for information had a larger magnitude of effect on expression ( $\beta = .166, p < .001$ ) than it had in Shanghai sample ( $\beta = .036, p < .001$ ).

### Conclusions and Discussion

Democratic potentials of the Internet in China have been a major topic of scholarly inquiries (e.g., Lei, 2011; Yang, 2009; Zheng, 2008). But, with a few rare exceptions (e.g., Lei, 2011; Shyu, 2009), research evidence in this area has been mostly based on case studies of activities of civic organizations or politically active netizens' opinion expression and political mobilization at some particular moments. While extremely valuable, these studies tend to depict an image of democratically intoned active participation among net users in China.

Such an image needs to be balanced with those based on representative sample survey data that would take into consideration not only social embeddedness (DiMaggio et al., 2001; Warschauer, 2003) of the Internet, namely, Internet is deployed and used in a specific social, cultural, and institutional context, and thus subject to influences of various social processes of a place, but also the multi-faceted heterogeneity of the vast

country. Based on these considerations, in this paper, we took a tentative step to explore the possible empirical linkage between Internet use on one hand and civic participation and opinion expression, focusing on the urban China. The multivariate statistical control was used to partially address the issue of socially embeddedness of the Internet, while the urban focus was to take at least rural-urban divide out of the scope of this exploratory study. In this exploration, we made no causal claim about citizen participation. Our only “ambition” was to outline a profile of people who were engaged in the activities of civic associations and opinion expressions, in terms of variables in three explanatory frameworks: those in the resource enabling, psychological motivating and communicative facilitating frameworks.

We took a case-study approach by starting with one city, Shanghai, and then extending the same models to the whole sample that included respondents from six additional cities. The results support two broad conclusions. First, different from what had been observed among the politically active netizens, among the general public in urban China, the overall levels of civic participation and expressive engagement are quite low. Second, by and large, there are same general patterns across all the seven cities. These include: citizens with higher education and Party membership tended to be more engaged in both outcome measures than those with lower education and without Party membership. Personal income, however, was negatively related to civic participation and expressive engagement in urban China. This last observation contradicts those from the democratic countries where people with more economic resources are able to participate more (e.g., Verba et al., 1995) and possession of more economic resources enables people

to make more monetary investment in collective activities and be more likely to be recruited by civic organizations (Cohen, Vigoda & Samorly, 2001).

The puzzling negative effect of personal income from urban China should not, however, be interpreted to mean that possession of more economic resources undermines citizens' abilities or interests to get engaged. Additional observation from the data shows that possession of amounts of modern household appliance was positively related to both civic participation and expressive engagement. Therefore, it is likely that the self-reported personal income in China could index some results of complex processes beyond individuals' possession of economic resources. We will need more data on the factors related to the self-reported income in order to have a clearer understanding of the empirical property and conceptual meaning of this variable.

There are other indications for us to question the meaning of the personal income variable. Also included in our analyses is the subjective status variable. In Shanghai sample, it was found to have negative effects on both civic participation and expression. However, in the seven-city sample, subjective social status became a positive predictor of both outcomes. To resolve this substantial inconsistency, we ran parallel models in each of the other six cities and found that in most, if not all, cities, subjective social status was positively related to participation. Although with the limitation of the data, we could not isolate the reasons accounting for this exception to the overall cross-city consistency observed in this study, but it does suggest the possibility that a variable could mean different things in different local contexts. This is possible for both income and subjective status perception variables.

There are other puzzling observations, although consistent across the seven cities. Although political efficacy is often found to predict participation positively in the contexts of established democracies (e.g., Gastil & Xenos, 2010), in our study, internal efficacy exhibited negative or no effects on civic participation and expressive engagement. The impact of external efficacy was also inconsistent. It was only positively related to expressive engagement in Shanghai sample. The results were also inconsistent with earlier findings from China (e.g., Shyu, 2009). We will need to explore further to render a meaningful interpretation of such inconstant results.

Another finding consistent across all seven Chinese cities is that, as predicted by the social capital theory, the breadth of social network was a robust positive predictor of civic participation and expressive engagement. It might be said that civic participation and opinion expressions are inherently social. As Coleman (1990) argued, civic participation might be the unintended by-product of informal social interactions in citizens' life. The perceptions of community, sense of belonging, mutual trust and common experience formed in informal interactions may boost coordination among different social groups and promote expression of common appeals. People are more willing and confident to form a collective unit to act upon public issues. Following this line of reasoning, the outcomes examined in this study, civic participation and expressive engagement may be more rooted in the societal rather than the political realm. They capture citizens' engagement in the aspects of the public life that are not overtly political.

The evidence from this study is conclusive for us to conclude about Internet effect. Across all seven cities, Internet users were more likely and more frequently to engage in civic and opinion expression activities. To this extent, the results are consistent with

those reported in Lei's (2011) study. Among the Internet users, the social networking uses of the Internet were also related to both civic participation and expressive engagement, a finding that would support the extension of the social capital logic to the Internet mediated contexts. But causal relationships could not be established with the cross-sectional data, despite our rigorous multivariate control. For that, more statistical treatments of the endogeneity of Internet use would be necessary. Still, the results were consistent with the view that people utilize the Internet as a communicative tool to have a voice in the public life and to connect with others.

These findings enrich our understandings of the inherent nature of citizen participation in urban China. First, the results imply a conceptual differentiation of participation and expression. Inherently, expression is the behavior, which could be enacted, in both collective and individual settings. Therefore, psychological variables measured at the individual level are more powerful to predict expression than civic participation. What really motivate and enable citizens to be involved in collective action is the breadth and depth of interactions across different social circles in the society.

Second, the differentiation between the two outcomes also extends to how political efficacy operates in the Chinese context. Expressive engagement might be a venue for some people to express their high expectations of the government's responsiveness but low confidence in their own ability to influence public policy. They might be well educated but have a relatively low economic status. In contrast, those with more economic resources and confident in their own ability were reluctant to express their opinions publicly. Clearly, more efforts need to be made to inquire about the nature of internal efficacy and how it might be translated into actions in the Chinese context.

Third, we should be cautious in interpreting the Internet effects. In addition to the issue of causality, we must also consider the political environment in China. While the authorities have been highly vigilant in restricting the scope and extent of collective actions organized by citizens, people have enjoyed some latitude of autonomy in expressing their views on topics not overtly related to political matters. This condition might partly account for the observation from our study that the Internet use had a much more robust relationship with expressive engagement than with civic participation. However, this interpretation also suggests that we need to consider the real democratizing implications of expressive engagement. To what extent the expressive engagement without accompanied with more direct and overt political actions could indicate or even lead to vitalization of a civic society should be explored both theoretically and empirically.

## Reference List

- Bakker, T., & de Vreese, C. (2011). Good News for the Future? Young People, Internet Use, and Political Participation. *Communication Research*, 38(4), 451-470. doi: 10.1177/0093650210381738
- Bimber, B. (1999). The Internet and Citizen Communication With Government: Does the Medium Matter? *Political Communication*, 16(4), 409-428. doi: 10.1080/105846099198569
- Bonfadelli, H. (2002). The Internet and Knowledge Gaps A Theoretical and Empirical Investigation. *European Journal of Communication*, 17(1), 65-84. doi: 10.1177/0267323102017001607
- Boulianne, S. (2009). Does Internet use affect engagement? A meta-analysis of research. *Political Communication*, 26(2), 193-211. doi: 10.1080/10584600902854363
- Brady, H. E., Verba, S., & Schlozman, K. (1995). Beyond SES: A resource model of political participation. *American Political Science Review*, 89(2), 271-294. doi: 10.2307/2082425
- Breese, E. B. (2011). Mapping the variety of public spheres. *Communication Theory*, 21, 130-149. doi: 10.1111/j.1468-2885.2011.01379.x
- Brehm, J., & Rahn, W. (1997). Individual-level evidence for the causes and consequences of social capital. *American Journal of Political Science*, 41(3), 999-1023. doi: 10.2307/2111684
- Carlson, J. M., & Hyde, M. (1980). Personality and Political Recruitment: Actualization or Compensation? *The Journal of Psychology*, 106(1), 117-120. doi: 10.1080/00223980.1980.9915177
- Cawson, A. (1986). *Corporatism and political theory*. Oxford, English: Basil Blackwell.
- China Internet Network Information Center (2009). *Statistical survey report on the internet development in China*. Retrieved on Sept. 23, 2009, from <http://www.cnnic.net.cn/en/index/00/index.htm>.
- Coleman, J. (1990). *Foundations of Social Theory*. Cambridge, Mass: Harvard University.
- Conge, P. T. (1988). The concept of political participation: Toward a definition. *Comparative Politics*, 20(2), 241-249. doi: 10.2307/421669
- Cohen, A., Vigoda, E., & Samorly, A. (2001). Analysis of the mediating effects of personal-psychological variables on the relationship between socioeconomic status and political participation: A structural equation framework. *Political Psychology*, 22(4), 727-757. doi: 10.1111/0162-895X.00260

- Craig, S. C., Niemi, R. G., & Silver, G. E. (1990). Political efficacy and trust: A report on the NES Pilot Study items. *Political Behavior*, 12(3), 289-314. doi: 10.1007/BF00992337
- Delli Carpini, M. (2000). Gen. com: Youth, civic engagement, and the new information environment. *Political Communication* 17(4), 341-349. doi: 10.1080/10584600050178942
- Delli Carpini, M. X., Cook, F. L. & Jacobs, L. R. (2004). Public deliberation, discursive participation, and citizen engagement: A review of the empirical literature. *Annual Review of Political Science*, 7, 315-344. doi: 10.1146/annurev.polisci.7.121003.091630
- De Zuniga, H. G., Jung, N., & Valenzuela, S. (2012). Social media use for news and individuals' social capital, civic engagement and political participation. *Journal of Computer-Mediated Communication*, 17, 319-336. doi: 10.1111/j.1083-6101.2012.01574.x
- DiMaggio, P., Hargittai, E., Neumann, W. R., & Robinson, J. P. (2001). Social implications of the Internet. *Annual Review of Sociology*, 27, 307-336. doi: 1146/annurev.soc.27.1.307
- Dryzek, J. K. (2000). *Deliberative democracy and beyond: Liberals, critics, contestation*. Oxford, UK: Oxford University Press.
- Esarey, A., & Xiao, Q. (2008). Political expression in the Chinese blogosphere. *Asian Survey*, 48(5), 752-772. doi: 10.1525/AS.2008.48.5.752
- Fung, A., & Wright, E. (2001). Deepening democracy: innovations in empowered participatory governance. *Politics & Society*, 29(1), 5-41.
- Gastil, J., & Xenos, M. (2010). Of attitudes and engagement: Clarifying the reciprocal relationship between civic attitudes and political participation. *Journal of Communication*, 60, 318-343. doi: 10.1111/j.1460-2466.2010.01484.x
- Green, M. C. & Brock, T. C. (2005). Organizational membership versus informal interaction: Contributions to skills and perceptions that build social capital. *Political Psychology*, 26(1), 1-25. doi: 10.1111/j.1467-9221.2005.00407.x
- Guo, G. (2007). Organizational involvement and political participation in China. *Comparative Political Studies*, 40(4), 457-482. doi: 10.1177/0010414005285751
- Huckfeldt, R., Beck, P. A., Dalton, R. J., & Levine, J. (1995). Political Environments, Cohesive Social Groups, and the Communication of Public Opinion. *American Journal of Political Science*, 39(4), 1025-1054. doi: 10.2307/2111668

- Jacobs, L. R., Cook, F. L., & Delli Carpini, M. X. (2009). *Talking together: Public deliberation and political participation in America*. Chicago, IL: University of Chicago Press.
- Jensen, M. J., Danziger, J. N., & Venkatesh, A. (2007). Civil society and cyber society: The role of the internet in community associations and democratic politics. *The Information Society*, 23, 39-50. doi: 10.1080/01972240601057528
- Kann, M. E., Berry, J., Grant, C., & Zager, P. (2007). The Internet and youth political participation. *First Monday*, 12(8-6).
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? . *American Psychologist*, 53(9), 1017-1031. doi: 10.1037/0003-066X.53.9.1017
- Krueger, B. S. (2002). Assessing the potential of Internet political participation in the United States. *American Politics Research*, 30, 476-498. doi: 10.1177/1532673X02030005002
- La Due Lake, R., & Huckfeldt, R. (1998). Social Capital, Social Networks, and Political Participation. *Political Psychology*, 19(3), 567-584. doi: 10.1111/0162-895X.00118
- Lei, Y. W. (2011). The political consequences of the rise of the Internet: Political beliefs and practices of Chinese netizens, *Political Communication*, 28(3), 291-322. DOI: 10.1080/10584609.2011.572449
- Lieberthal, K. (2004). *Governing China: From revolution to reform (2<sup>nd</sup> ed)*. New York: Norton.
- MacKinnon, R. (2008). Flatter world and thicker walls? Blogs, censorship and civic discourse in China. *Public Choice*, 134, 31-46. doi: 10.1007/s11127-007-9199-0
- McCormick, B., Su, S., & Xiao, X. (1992). The 1989 Democracy movement: A review of the prospects for civil society in China. *Public Affairs*, 65(2), 182-202.
- McDonald, J. F. & Moffitt, R. A. (1980). The uses of Tobit analysis. *The Review of Economics and Statistics*, 62, 318-321. doi: 10.2307/1924766
- Moy, P., Manosevitch, E., Stamm, K., & Dunsmore, K. (2005). Linking dimensions of Internet use and civic engagement. *Journalism and Mass Communication Quarterly*, 82(3), 571-586. doi: 10.1177/107769900508200306
- Niemi, R. G., Craig, S. C., & Mattei, F. (1991). Measuring Internal Political Efficacy in

- the 1988 National Election Study. *American political science review*, 85(4), 1407-1413.
- Pan, Z., Yan, W., Jing, G., & Zheng, J. (2011). Exploring structured inequality in the Internet use Behavior: Evidence from a Chinese metropolis. *Asian Journal of Communication*, 21(2), 116-132. doi: 10.1080/01292986.2010.543555
- Pasek, J., More, E., & Romer, D. (2009). Realizing the Social Internet? Online Social Networking Meets Offline Civic Engagement. *Journal of Information Technology & Politics*, 6(3-4), 197-215. doi: 10.1080/19331680902996403
- Patterson, T. E. (2001). *The vanishing voter: Public involvement in an age of uncertainty*. New York: Alfred A. Knopf.
- Polat, R. K. (2005). The Internet and political participation: Exploring the explanatory links. *European Journal of Communication*, 20, 435-459. doi: 10.1177/0267323105058251
- Putnam, R. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, New Jersey: Princeton University Press.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6, 65-78.
- Read, B. L. (2008). Assessing variation in civil society organizations: China's homeowner associations in comparative perspective. *Comparative Political Studies*, 41(9), 1240-1265. doi: 10.1177/0010414007302340
- Salisbury, R. H. (1975). Research on political participation. *American Journal of Political Science*, 19(2), 323-341.
- Shah, D. V., McLeod, J. M., & Yoon, S. H. (2001). Communication, context, and community: An exploration of print, broadcast, and Internet influences. *Communication Research*, 28(4), 464-506. doi: 10.1177/009365001028004005
- Shyu, H. (2009). Psychological resources of political participation: Comparing Hong Kong, Taiwan, and Mainland China. *Journal of International Cooperation Studies*, 17(2), 25-47.
- Tolbert, C. J., & McNeal, R. S. (2003). Unraveling the effects of the Internet on political participation? *Political Research Quarterly*, 56(2), 175-185. doi: 10.1177/106591290305600206
- Unger, J. (2008). *Associations and the Chinese State: Contested Spaces*. Armonk, NY: M.E. Sharpe.

- Verba, S., Scholzman, K. L. & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*. Cambridge, MA: Harvard University Press.
- Ward, S., Gibson, R., & Lusoli, W. (2003). Online Participation and Mobilisation in Britain: Hype, Hope and Reality. *Par*
- Warschauer, M. (2003). *Technology and social inclusion: Rethinking the digital divide*. Cambridge, MA: The MIT Press.
- Wilson, J., & Musick, M. (1997). Who cares? Toward an integrated theory of volunteer work. *American Sociological Review*, 62(5694-713). doi: 10.2307/2657355
- Wilson, E., & Segal, A. (1999). Effects of Volunteering on the Volunteer. *Law and Contemp. Probs*, 62,
- Wuthnow, R. (1998). *Loose connections: Joining together in America's fragmented communities*. Cambridge, MA: Harvard University Press.
- Wyatt, R. O., Katz, E., & Kim, J. (2000). Bridging the spheres: Political and personal conversation in public and private spaces. *Journal of Communication*, 50, 71-92. doi: 10.1111/j.1460-2466.2000.tb02834.x
- Xenos, M. & Moy, P. (2007). Direct and differential effects of the Internet on political and civic engagement. *Journal of Communication*, 57, 704-718. doi: 10.1111/j.1460-2466.2007.00364.x
- Yang, G. (2009). *The Power of the Internet in China: Citizen Activism Online*. New York: Columbia University Press.
- Zhang, X., & Baum, R. (2004). Civic society and the anatomy of a rural NGO. *The China Journal*, 52, 97-107. doi: 10.2307/4127886
- Zheng, Y. & Wu, G. (2005). Information technology, public space, and collective action in China. *Comparative Political Studies*, 38(5), 507-536. doi: 10.1177/0010414004273505
- Zukin, C., Keeter, S., Andolina, M., Jenkins, K., & Delli Carpini, M. X. (2006). *A new engagement? Political participation, civic life, and the changing American citizen*. Oxford, UK: Oxford University Press.

Table 1  
 Characteristics of the Seven Cities<sup>1</sup>

City	Administrative Status	Economic Region	Population Size (M)	GDP per Capita (\$)	Sample Size
Shanghai	Directly governed municipality	East	23.019	11,238	736
Beijing	Directly governed municipality	East	19.612	11,218	736
Chongqing	Directly governed municipality	West	28.846	4,076	736
Guangzhou	Provincial capital	East	12.701	12,882	510
Wuhan	Provincial capital	Middle	9.785	8326	504
Shenyang	Provincial capital	Northeast	8.106	9405	504
Xi'an	Provincial Capital	West	8.468	5654	504

Note:

1. The statistics on population size is obtained from the National Bureau of Statistics of People's Republic of China on 6th national population census, conducted in 2010 and GDP per capita (Shanghai, Beijing, Chongqing, Guangzhou and Shenyang) were obtained from statistical yearbook of each city. GDP per capital of Wuhan and Xi'an were calculated by dividing the total amount of GDP, obtained from their statistical yearbooks, by the population size of each city in 2010. The sample size includes only the respondents selected from the urban districts of each city.

Table 2  
Descriptive statistics of key variables in Shanghai sample and 7-city sample

Variables	Shanghai Sample ( <i>n</i> = 736)		7-City sample ( <i>n</i> = 4287)	
	Est.	<i>SD</i>	Est.	<i>SD</i>
Percentage of having participated in at least one	75.41	--	67.14	--
Civic participation (among the participants, 0-1)	0.19	.18	0.14	.15
Percentage of having engaged in at least one	66.67	--	68.56	--
Expressive engagement (among the engaged, 1-5)	.96	.76	.96	.79
Age	43.56	15.86	42.99	15.77
Sex (% female)	51.90	--	50.00	--
Education	11.00	3.42	10.56	3.97
Party-member (%)	11.68	--	10.73	--
Subjective social status	2.72	.97	2.63	1.11
Internal self-efficacy	2.94	.78	2.94	.87
External self-efficacy	2.44	.82	2.48	.92
Internet users	2.97	.88	2.96	.95
Social network	17.08	9.71	17.57	8.81
Online contact with acquaintance (among users)	3.20	1.30	2.99	1.34
Online contact with strangers (among users)	0.73	.95	0.65	.82
Informational usage of Internet (among users)	2.98	1.16	2.78	1.22

Table 3  
Tobit Regression models predicting civic participation with Shanghai sample<sup>1</sup>

Predictors	Full sample ( <i>n</i> = 736)			Internet users ( <i>n</i> = 370)		
	beta	Prob.	Freq.	beta	Prob.	Freq.
<b>Demographics</b>						
Age	.059	.034	.014	.045	-.013	-.005
Female	.050	.029	.012	.087	.017	.007
Education	.158***	.092	.037	.087*	.055	.022
Party	.295***	.172	.069	.201*	.087	.035
Personal income	-.069*	-.040	-.016	-.069**	-.006	-.002
$\Delta R^2$	.103***			.085**		
<b>Psychological factors</b>						
Subjective social status	-.069*	-.040	-.016	.047	.056	.022
External efficacy	.029	.017	.007	.011	-.006	-.003
Internal efficacy	.032	.019	.007	.038	-.010	-.004
Political interest	.067*	.039	.016	.049	.024	.010
$\Delta R^2$	.036**			.040		
<b>Social network</b>						
Offline	.195***	.114	.045	.030	.055	.022
$\Delta R^2$	.055***			.015		
Internet Adoption	.141	.082	.033			
<b>Online activity</b>						
Contact with known				.077*	.031	.012
Contact with strangers				.047	.026	.010
Informational use				.039	.017	.007
$\Delta R^2$	.002			.040		
$R^2$	.196***			.180***		
$\chi^2$	82.2			36.2		
Log(sigma)	-.406***	-.237	-.095	-.730***	-.331	-.132

Notes:

1. Following the hierarchical model testing logic, the difference in the log likelihood between a less restrictive model and a more restrictive one was a  $\chi^2$  – value with the degree of freedom being the difference in the number of parameters between the two models. For each model, the  $R^2$  – value was obtained by taking the squared correlation coefficient of the model-predicted values of a dependent variable with the observed values.

\*  $p \leq .05$ ;  $p \leq .01$ ;  $p \leq .001$ .

Table 4

Tobit Regression models predicting expressive engagement with Shanghai sample<sup>1</sup>

Predictors	Full sample ( <i>n</i> = 736)			Internet users ( <i>n</i> = 370)		
	beta	Prob.	Freq.	beta	Prob.	Freq.
<b>Demographics</b>						
Age	-.014	-.008	-.003	-.038	-.022	-.009
Female	.000	.000	.000	.010	.006	.002
Education	.085*	.050	.020	-.002	-.001	-.001
Party	.107	.062	.025	.014	.008	.003
Personal income	-.088**	-.051	-.021	-.100***	-.058	-.023
$\Delta R^2$	.099***			.022		
<b>Psychological factors</b>						
Subjective social status	-.111***	-.065	-.026	-.021	-.012	-.005
External efficacy	.110***	.064	.026	.108***	.063	.025
Internal efficacy	-.093**	-.054	-.022	-.096**	-.056	-.022
Political interest	.186***	.108	.043	.165***	.096	.038
$\Delta R^2$	.104**			.152***		
<b>Social network</b>						
Offline	.315***	.184	.073	.232***	.135	.054
$\Delta R^2$	.117***			.148***		
<b>Internet Adoption</b>						
Online activity	.307***	.179	.072			
Contact with known				.080*	.047	.019
Contact with strangers				.083**	.048	.019
Informational use				.036***	.021	.008
$\Delta R^2$	.015**			.044*		
$R^2$	.335***			.366***		
$\chi^2$	141.9			82.0		
Log(sigma)	-.388***	-.226	-.091	-.662***	-.386	-.154

Notes:

- Following the hierarchical model testing logic, the difference in the log likelihood between a less restrictive model and a more restrictive one was a  $\chi^2$  – value with the degree of freedom being the difference in the number of parameters between the two models. For each model, the  $R^2$  – value was obtained by taking the squared correlation coefficient of the model-predicted values of a dependent variable with the observed values.

\*  $p \leq .05$ ;  $p \leq .01$ ;  $p \leq .001$ .

Table 5  
Tobit Regression models predicting civic participation with 7-city sample<sup>1</sup>

Predictors	Full sample ( <i>n</i> = 4,230)			Internet users ( <i>n</i> = 2,083)		
	beta	Prob.	Freq.	beta	Prob.	Freq.
<b>Demographics</b>						
Age	.037*	.022	.009	-.024	-.014	-.006
Female	.079**	.046	.018	.030	.017	.007
Education	.163***	.095	.038	.095***	.055	.022
Party	.278***	.162	.065	.150***	.087	.035
Personal income	.023	.013	.005	-.010	-.006	-.002
$\Delta R^2$	.172***			.096***		
<b>Psychological factors</b>						
Subjective social status	.092***	.054	.021	.096***	.056	.022
External efficacy	-.008	-.005	-.002	-.011	-.006	-.003
Internal efficacy	.013	.008	.003	-.017	-.010	-.004
Political interest	.062***	.036	.014	.041**	.024	.010
$\Delta R^2$	.032***			.043***		
<b>Social network</b>						
Offline	.141***	.082	.033	.095***	.055	.022
$\Delta R^2$	.026***			.030***		
<b>Internet Adoption</b>						
	.110***	.064	.026			
<b>Online activity</b>						
Contact with known				.053**	.031	.012
Contact with strangers				.045***	.026	.010
Informational use				.030	.017	.007
$\Delta R^2$	.001*			.017***		
$R^2$	.231***			.186***		
$\chi^2$	563			208		
<b>Log(sigma)</b>						
	-.309***	-.180	-.072	-.567***	-.331	-.132

Notes:

- Following the hierarchical model testing logic, the difference in the log likelihood between a less restrictive model and a more restrictive one was a  $\chi^2$  – value with the degree of freedom being the difference in the number of parameters between the two models. For each model, the  $R^2$  – value was obtained by taking the squared correlation coefficient of the model-predicted values of a dependent variable with the observed values. The six dummy variables representing the seven cities were included in the first block. The coefficients associated with the dummy variables are not shown here for simplicity.

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .

Table 6  
Tobit Regression models predicting expressive engagement with 7-city sample<sup>1</sup>

Predictors	Full sample (n = 4230)			Internet users (n = 2083)		
	beta	Prob.	Freq.	beta	Prob.	Freq.
<b>Demographics</b>						
Age	-.114***	-.066	-.027	-.089***	-.052	-.021
Female	.013	.008	.003	.022	.013	.005
Education	.085***	.050	.020	.045*	.026	.010
Party	.069	.040	.016	.004	.002	.001
Personal income	-.016**	-.009	-.004	-.048***	-.028	-.011
$\Delta R^2$	.168***			.101***		
<b>Psychological factors</b>						
Subjective social status	.040**	.023	.009	.041**	.024	.010
External efficacy	-.022*	-.013	-.005	.013	.008	.003
Internal efficacy	-.051***	-.030	-.012	-.039**	-.023	-.009
Political interest	.164***	.096	.038	.118***	.069	.028
$\Delta R^2$	.063***			.069***		
<b>Social network</b>						
Offline	.197***	0.115	0.046	.163***	.095	.038
$\Delta R^2$	.055***			.079***		
<b>Internet Adoption</b>						
	.215***	0.125	0.050			
<b>Online activity</b>						
Contact with known				.038*	.022	.009
Contact with strangers				.055***	.032	.013
Informational use				.166***	.097	.039
$\Delta R^2$	.009***			.065***		
$R^2$	.295***			.314***		
$\chi^2$	702			373		
Log(sigma)	-.406***	-.226	-.091	-.595***	-.347	-.139

Notes:

- Following the hierarchical model testing logic, the difference in the log likelihood between a less restrictive model and a more restrictive one was a  $\chi^2$  – value with the degree of freedom being the difference in the number of parameters between the two models. For each model, the  $R^2$  – value was obtained by taking the squared correlation coefficient of the model-predicted values of a dependent variable with the observed values. The six dummy variables representing the seven cities were included in the first block. The coefficients associated with the dummy variables are not shown here for simplicity.

\*  $p \leq .05$ ;  $p \leq .01$ ;  $p \leq .001$ .