Creating Democratic Citizens? The Political Effects of the Internet in China*

Narisong Huhe† Min Tang‡ Jie Chen§

*The replication dataset and codes will be available online.

†University of Strathclyde. Email: narisong.huhe@strath.ac.uk.

‡Corresponding author. Shanghai University of Fiance and Economics. Email: tang.min@mail.shufe.edu.cn.

§James Madison University. Email: chen9jx@jmu.edu.

Abstract

This study explores the perplexing role of the Internet in authoritarian settings. We disentangle the political impact of the Internet along two distinct dimensions, indirect effects and direct effects. While the direct effects of the exposure to the Internet shape political attitudes in a manifest and immediate way, the indirect effects shape various political outcomes via instilling fundamental democratic orientations among citizens. In authoritarian societies such as China, we argue the indirect effects of the Internet as a value changer tend to be potent, transformative and persistent. But the direct effects of the Internet as a mere alternative messenger are likely to be markedly contingent. Relying on the newly developed method of causal mediation analysis and applying the method to data from a recent survey conducted in Beijing, we find strong empirical evidence to support our argument on the two-dimensional impacts of the Internet on authoritarian nations.

Keywords: Internet; political support; democratic values; causal mediation analysis; China

Despite some earlier optimism about the Internet's roles in undermining authoritarian rule and promoting democratization, many recent studies suggest that the actual political impacts of the Internet have been overstated (e.g., Margolis and Resnick, 2000; Xenos and Foot, 2005; Morozov, 2011; Lynch, 2011; Gunitsky, 2015). Bellin (2012), for example, argues that the contribution of the Internet and new media in the Arab Spring is only "permissive." Moreover, she warns that the qualities that allow social media to mobilize the mass could be "precisely the qualities that undermine its ability to help build the institutional foundation of a working democracy" (p. 139). After a systematic comparison of countries like Russia, Ukraine, Egypt, and Tunisia, Beissinger (2017) argues that the new technologies, though have markedly lowered the threshold of collective popular movements, tend to recruit "diverse individuals toward the lowest common denominator of what they oppose" (p. 367). Such ad hoc negative coalitions tend to lack the necessary democratic commitments that are prerequisite for meaningful political changes and successful regime transitions (e.g., Gibson, Duch and Tedin, 1992; Przeworski, 1996; Bermeo, 1997; Bellin, 2000; Peffley and Rohrschneider, 2003; Svolik, 2013; Welzel, Inglehart and Kruse, 2017). Swift and massive mobilizations such as the Arab Spring that are presumably aided by the Internet could have masked the public's underdeveloped intrinsic support for democratic norms and institutions.

These new developments point to two critical yet unanswered questions about the bewildering roles of the Internet in authoritarian societies: Do people become more committed to democratic promotions when they are increasingly exposed to the Internet? If yes, are they hence more likely to withdraw their support for the ruling government and thus ready for political changes such as democratization? Indeed, scholars have long noted that the global pervasiveness of democratic norms had caused a fundamental challenge to the legitimacy of authoritarian regimes that collapsed during the third wave of democratization (Huntington, 1991, p. 47). In more recent years, a large body of literature further suggests that citizens' adherence to democratic principles is a key determinant of political support in both democratic and nondemocratic countries (e.g., Bratton, Mattes and Gyimah-Boadi, 2005; Chu et al., 2008;

Dalton, 2004; Lagos, 2003; Lewis-Beck, Nadeau and Foucault, 2013; Przeworski, 1996; Rose, Mishler and Munro, 2011). In particular, in authoritarian countries where there is a lack of supply of democratic institutions, democratically-oriented citizens are less likely to extent their support for the regime and the government (Gibson, 1996; Wang, Dalton and Shin, 2006; Huhe and Tang, 2017).

However, studies of the Internet's role in this literature are regrettably scare. This in part has a lot to do with the challenges in disentangling the complex impacts of the Internet. On the one hand, as highlighted by Bellin (2012) and Beissinger (2017), the Internet can tactically and logistically facilitate mass pro-democratic mobilization without inducing any fundamental value changes. On the other hand, the public's democratic commitment may affect their mobilization, but such value changes may not be driven by their exposure to the Internet.[1] Given these, the relationship of the public's democratic commitment to the Internet is far less straightforward than that to other factors. Until now, few empirical research has parsed out and tested these possible mechanisms. It remains unclear if the Internet could cultivate the public's intrinsic democratic orientation and thus contribute to changes in authoritarian politics.

To fill this gap, this study takes China as a critical case, where the Internet diffusion is remarkably fast but large-scale popular protests are absent. We explore if the Internet could promote democratic changes by serving as a *value changer*. Specifically, we argue that the Internet is able to nurture its users' democratic values, which in turn undermine the legitimacy basis of authoritarian regimes. This is so not only because the Internet expands the access to plurality of information and views, but, more importantly, it enables new modes of political communication and cultivates pro-democracy habits of sociopolitical life among its users. In a word, the Internet nurtures a democratic citizenry that does not sit well with authoritarian politics.

Taking advantages of recent developments in causal mediation analysis (Imai et al., 2011;

[1]For instance, many studies suggest that it is the social groups' dependence on the state that fundamentally shapes their democratic support and mobilization against authoritarian regimes (also see, Chen and Lu, 2011; Rosenfeld, 2017).

Imai and Yamamoto, 2013), we investigate how the Internet usage affects ordinary Chinese people's political support (i.e., evaluation of government performance and affective support for the Communist regime) *with* and *without* inducing their democratic commitment (i.e., indirect and direct effects). Based on data from our representative survey in the Beijing metropolitan area (see Appendix A), we find that via enhancing the public's democratic values, the Internet consistently erodes both their specific support for the government and diffuse support for the regime. On the other hand, the direct effect of the Internet exposure on one's evaluation of government performance is negative, but its effect on diffuse support for the regime is not significant in any direction. These findings indicate that the role of Internet as a value changer is consistent. But due to state's varying control over issues of different political sensitivities, the direct effect of the Internet as a mere alternative messenger is contingent. Therefore, a sole focus on the direct logistical and tactical effect of the Internet could have concealed the more nuanced contribution of the Internet.

This study complements the current literature in important ways. First, our study extends the literature of political dynamics of authoritarian countries. It suggests that in the new era of political communication, the Internet helps the development of pluralism and public sphere and induces fundamental value changes. It thus constitutes another important factor of potential political changes in authoritarian countries. The role of the Internet as a value changer has not received adequate attention in the literature of democratization in particular.

Second, our study highlights the necessity to study different mechanisms via which the Internet promote democratic changes. As noted by Farrell (2012), the extant scholarly debate on the political implications of the Internet focuses on the manifest outcomes, such as popular protests and regime breakdown. Less attention is paid to how the daily consumption of the Internet reshapes the fundamental value orientations of the users. The Internet produces "change over years and decades, not weeks or months" Shirky (2011, p. 30). One such change, our study indicates that, is the emergence and strengthening of democratic values, which poses a great challenge to the ruling basis of the authoritarian regime.

Finally, by exploring the more nuanced effects of the Internet in authoritarian countries, we move beyond the long-standing debate between optimistic and pessimistic interpretations of Internet's political implications and find evidence that links the Internet usage to potential political changes. While attitudinal change itself is not sufficient for collective actions or any other behavioral outcomes, the diffusion of the Internet makes its due contribution in that it alienates the citizens from the regime by transforming the attitudinal landscape of the population.

I Literature Review: The Internet in Democratization

The diffusion of the Internet in nondemocratic societies has been remarkably rapid and has triggered profound sociopolitical changes (Milner, 2006; Rød and Weidmann, 2015; Beissinger, 2017). Recognizing the importance of mass mobilization in democratization (Haggard and Kaufman, 2016), a large body of the literature has focused on the role of the Internet as an alternative tool for information and investigated how it enables "connective actions" (Bennett and Segerberg, 2013) and facilitates popular movements in toppling down authoritarian regimes (e.g., Diamond, 2010; Shirky, 2011; Farrell, 2012; Tufekci and Wilson, 2012). Some recent studies further show that the pubic online participation contributes to the creation of democratic institutions (e.g., the 2012 Egyptian Constitution, Maboudi and Nadi, 2016). In light of this, the Internet has been viewed as an *alternative messenger*, and its democratizing role lies in its ability to lower costs of mass mobilization and participation.

In the literature, much less attention has been paid to the Internet's role as a *value changer* in authoritarian societies. Despite some earlier optimism (Dahlgren, 2000; Shah, Kwak and Holbert, 2001; Papacharissi, 2004), scholars have been increasingly questioning the Internet's ability to develop a civic culture and cultivate the public's intrinsic support for democratic norms and principles. The problem has become particularly acute in societies experienced the Arab Spring (Bellin, 2012). Lynch (2015) argues that the Internet fosters self-selection and echo chambers and fails to build a civic culture. Such a "destructive" the Internet has "trashed the transitions."

Beissinger (2017) further argues that while the Internet as an alternative messenger could succeed in overturning nondemocratic regimes, it falls short in building a civic culture that is critical to successful democratic transition and consolidation.

For many other scholars, the Internet's ability to cultivate value changes in authoritarian societies is further constrained by the existence of government censorship (Taubman, 1998; Boas, 2006; MacKinnon, 2011; King, Pan and Roberts, 2013; Gunitsky, 2015). Lorentzen (2014), for instance, suggests that authoritarian regimes, by adjusting both the targets of and amounts of government-guided online denunciations, can actually benefit from the growth in the expansion of access to the Internet. Similarly, Gunitsky (2015) argues that using Internet-based strategies such as elite coordination and strategic counter-mobilization, authoritarian regimes can transform the Internet "from an engine of protest to another potential mechanism of regime resilience" (p. 42).

It is fair to say that little consensus exists today as to whether the Internet is able to nurture the public's democratic support or merely another largely neutral communication platform which can benefit both ordinary people and authoritarian regimes. This lack of consensus likely arises from the fact that the Internet's roles as a value changer and as an alternative messenger are closely intertwined in shaping observable political outcomes. Moreover, the relative salience of these two roles may vary with issues and the levels of government censorship. This in turn makes the overall impacts of the Internet seemingly idiosyncratic in authoritarian societies and poses serious challenges for scholars to clarify its nature. This is where our research intends to contribute.

II Internet Use and Political Support in China

Recognizing the Internet's dual roles as a value changer and an alternative messenger, in this study, we parse the effect of the Internet use on the public's attitudes towards the authoritarian rule in China into indirect effect and direct effect, respectively. The indirect effect of the Internet is realized through aspiring its users' democratic orientations; and the direct effect is the

immediate influence of the message on the Internet as an alternative tool of information. We develop hypotheses with regard to the two effects in tandem in this section.

The emergence of vibrant public sphere and the public's democratic commitment have been found critical to democratic transition. An idealized democratic citizen, as characterized most convincingly by James Gibson (1996), is one "who believes in individual liberty and who is politically tolerant, ... who is obedient but nonetheless willing to assert rights against the state, who views the state as constrained by legality, and who supports basic democratic institutions and processes." However, either as a partial result of totalitarian atomization (e.g., the Communist rule, Brzezinski, 1961) or a strong legacy of primordial societies (e.g., strong yet highly parochial social networks, Coleman, 1993), many authoritarian societies feature pervasive social fragmentation and social isolation. In such "un-civil" societies (i.e., weak civil society elements), every individual is either "disconnected from every other" or trapped in "strong but closed social networks" (Gibson, 2001, p. 53). The lack of social interaction and political discourse across and within different social groups has been the key impediment to successful democratic transition (Gibson, 2001; Mishler and Rose, 2001).

Scholars of authoritarian politics have long noticed that the public's exposure to different types of media affects their political orientations (Geddes and Zaller, 1989; Kennedy, 2009). The diffusion of the Internet can facilitate the development of democratic orientations among ordinary citizens by substantially altering the existing patterns of communication. The personalized Internet communication phenomenon can overcome such social fragmentation, enabling and fostering interactions among ordinary people who were social isolates or trapped within stultifying tight networks of communication. On the one hand, user-generated agendas and frames of political debate tend to be considerably more heterogeneous than those offered by traditional media. This kind of online interaction, on the other hand, allows thoughts and information circulated on the Internet, particularly on mass forums, to reach and influence a great number of individuals quite easily, both those engaged in discretionary search of political information and in those contacted in inadvertent exchanges on hobbies and the like (Wojcieszak

and Mutz, 2009). The diffusion of the Internet, therefore, exposes ordinary people to diversity in political views and diversity in forms of argument about public life. Such exposure tends to lead in due course to greater tolerance of differences and more meaningful political discourse (Mutz, 2002; Huckfeldt, 2007). Through the Internet, therefore, ordinary people are exposed to pluralistic views about public affairs and can become engaged in political discourse with the non-like-minded persons, experiences that are critical to the ultimate formation of support for democratic practices among the mass public.

Recent evidence from analyses of big data tend to confirm the incidence of such pro-liberalization attitudinal formation through the Internet in authoritarian societies such as China. Drawing upon a dataset of 145,000 posts by 40,000 influential bloggers on *Sina Weibo* (China's leading micro-blog), Cairns and Carlson (forthcoming) investigated Chinese online opinion about Sino-Japanese conflict over the Diaoyu/Senkaku Islands. Consistent with our argument, they found significant heterogeneity in the opinions and sentiments expressed by ordinary *Weibo* users, ranging from virulent and even violent posts to the views of moderate and cautious voices. More importantly, Cairns and Carlson's analysis showed that the virulent posts surged rapidly at the early stage of the event, but subsequently moderate voices gradually came to dominate *Weibo* traffic as the event and related debate unfolded. The personalized Internet communication forum not only makes the expression of pluralistic views possible, but it also helps cultivate a level-headed and deliberative understanding of public affairs in an authoritarian environment.

It was also shown that even if there is tight state censorship the user-based Internet communication forum can nonetheless contribute substantially to the development of mass support for democratic thought. Tang and Huhe (2014) showed that in a censored environment "[o]nline discussion of the sanctioned issues or seemingly safe topics ... can go as rogue as do subversive news facts." For example, the death of Steve Jobs, the former Chief Executive Officer of Apple Inc., triggered a heated online discussion in China. By asking the question of why China did not have a gifted innovator such as Steve Jobs, many Internet users framed the issue as a

political one. A widely shared blog post stated the following: "If Apple is a fruit on a tree, its branches are the freedom of thinking and to create, and the root is the constitutional democracy" (Tang and Huhe, 2014).[2] Similarly, Cairns and Carlson (forthcoming) also found that when commenting on the Sino-Japanese island disputes, a large number of ordinary *Weibo* users made use of a wide variety of anti-government rhetorical expressions.

The frequent online user-based discussions and interpretations of sanctioned news events occur because politically relevant issues are inherently ambiguous and allow for different interpretations (Iyengar, 1990; Entman, 1993). The diffusion of the Internet allows ordinary citizens to discuss and publicize their own understandings of sanctioned news. These user-generated frames and interpretations tend to be markedly varied, and usually are different from — or even opposite to — those offered by the official media (Hassid, 2012; Tang and Huhe, 2014). With increasing exposure to such pluralistic approaches and viewpoints, people are more likely to adopt and endorse democratic values which place value on the free expression of individual views on public affairs. What really matters for online discussions of public life, therefore, are not the *facts* per se but the *ways* in which the facts are disseminated and being discussed. Censorship programs targeting information content can do little to alter the individualized and decentralized nature of the online discussion made possible by the Internet.

In sum, even with the presence of government censorship, the Internet in China could still contribute to democratic changes by cultivating the public's democratic commitment. From the perspective of causal analysis (Baron and Kenny, 1986; Imai et al., 2011), the effects of the Internet are thus mediated by the fundamental democratic values they come to possess over time. As individuals' Internet usage changes, their democratic orientation should move in the same

[2]In China, the prominent role of online discussion on the officially sanctioned news is heightened by the fact that the permitted Internet sites are directly prohibited from transmitting original reports (Hassid, 2011). These sites are allowed to relay only the news items coming from the state-run *Xinhua* or several other traditional news units, all operating under the direct control of the government.

direction, which in turn causes changes in their attitudes towards the authoritarian rule of the Chinese Communist Party (CCP). Numerous studies have shown that in authoritarian countries where there is a lack of supply of democratic institutions, a more democratically oriented citizen is less likely to support his or her government (Gibson, 1996; Wang, Dalton and Shin, 2006; Huhe and Tang, 2017). Although relaxing its control over citizens' private lives, the post-Mao CCP regime remains far from democratic in its general approach to governance. The CCP has by no means given up its insistence on one-party rule, nor ceased its harsh repression of political dissidents. Overall, the current Chinese regime's norms and practices have thus far worked against most democratic norms and principles investigated, such as elections with multi-party competition and rights of free speech, demonstration and assembly. We therefore develop the following main hypothesis of this study.

Hypothesis 1 As citizens are exposed more to the Internet, they become more committed to democratic norms and principles, which in turn make them withdraw their support for the CCP's authoritarian rule.

The effects of the Internet are not, or at least not solely, induced or mediated by value changes. As warned by Bellin (2012, also see Lynch, 2015; Beissinger, 2017), the Internet could has a logistical and tactical impact without inducing any acquisition of democratic core values. Perhaps the most important reason for such a direct impact is that the Internet significantly reduces transaction costs and minimizes spatial boundaries of communication among ordinary citizens (Lynch, 2011; Farrell, 2012). Such a lower-cost communication channel can not only reduce societal disparity in information access (Benkler, 2006), but can also expose malfeasance and corruption of the ruling regime (Diamond, 2010; Zhu, Lu and Shi, 2013). The diffusion of the Internet, therefore, could deplete popular support for authoritarian regime without inducing the public's democratic commitment.

From the perspective of causal analysis, these direct effects can be documented by examining the extent to which the public's support for the CCP regime changes while democratic

values remain fixed (Imai et al., 2011). In other words, the direct effects cannot be attributed to change in democratic orientations. Users changes their attitudes towards the government and political system directly due to alternative information presented on the Internet. As an alternative messenger, the Internet in China generally exposes more negative information than the traditional media (King, Pan and Roberts, 2013, 2017). Therefore, a general negative direct effects can be expected.

However, the direct effects of the Internet in authoritarian settings can be rather effectively monitored and quickly censored by the state. All authoritarian regimes attempt to shape the flow of information (Geddes and Zaller, 1989), and many of them have learned to use various monitoring and censorship programs to manage online information flows (Boas and Kalathil, 2003; Gunitsky, 2015; Rød and Weidmann, 2015). These programs are selective and strategic, aiming to limit the ability of citizens to gain access to news facts, especially those deemed harmful for regime stability. As demonstrated by King, Pan and Roberts (2013), the Chinese censorship program, one of the most sophisticated in the world, is content-based. Such a program removes content with anticipated undesirable collective action potential, but allows many forms of criticism over some specific governmental policies. Chen (2017*b*) further shows such public criticism can be used by the central government to monitor local officials and ensure local compliance. The direct effects of the Internet, therefore, would indeed be strongly affected by the design, selectivity and operation of the censorship program in place at any point in time. We therefore develop the hypotheses about the direct effects of the Internet as follows.

Hypothesis 2a As citizens are exposed more to the Internet, they are less likely to extend their support for the government.

Hypothesis 2b. The direct effect of the Internet is contingent; The direct effect on the support for more specific aspect of the government is more likely to be negative than the support for the communist regime as a whole.

To this point, we can see that the Internet's indirect effect via inducing the public's

democratic commitment is theoretically distinct from its direct effect. Yet, these two kinds of effects are closely intertwined in shaping the public's attitudes towards the authoritarian rule of the CCP regime. Moreover, the relative salience of these two effects may vary with the extent of state control over the Internet. In the following sections, with the aid of the newly developed causal mediation analysis, we parse out these two effects of the Internet empirically.

III Variables and measurements

The indirect and direct effects of the Internet on people's political attitudes and behavior have been identified here as distinct areas of concern. We will now specify each of the key variables investigated in this study, and then empirically examine the two effects of the Internet on people's evaluation of government performance and affective support for the regime in China.

A Internet usage: the independent variable

As for how to gauge people's usage of the Internet, there has been three empirical approaches: (1) *access* to the Internet (i.e., "Do ordinary Chinese citizens have easy access to the broadband Internet?"); (2) *political use* of the Internet (i.e., "When acquiring political information, do ordinary Chinese citizens use the Internet as a substitute for traditional media or simply a supplement?"); and, (3) *general use* of the Internet (i.e., "How often do they use the Internet in their daily life?").

Access to the Internet is perhaps the most conventional empirical approach. It commonly examines whether the respondents have reliable access to the Internet at home or in their workplace. However, sometimes using the measure of Internet access as the measurement of the Internet usage can be misleading, and potentially problematic for the determination of political impacts. Particularly in China where the Internet has diffused rapidly, the measure of Internet access per se tells us little about the underlying pattern of media consumption.[3] Even with easy

[3]According to CNNIC (2014), the number of people with Internet access in China has grown

access to the Internet, people may still rely heavily on mass media such as TV news and interpersonal communication heavy with grapevine rumors. Most likely, people will use all these different channels simultaneously. When a majority of people enjoy easy access to the Internet and other media at the same time, the fact of ongoing overlapping exposure to different media becomes inevitable. Specific to our Beijing sample, we find that very nearly nine in ten respondents (89.1%) in the Beijing metropolitan area had access to the broadband Internet. Given such a high rate of Internet access, most of our respondents would be subject to a highly mixed media environment wherein Internet-based communication would be one of many influences on their thinking and attitude formation.

Recognizing this, we then explore the kinds of channels through which people tend to acquire their political information by asking the respondents a question indicating the extent to which they use channels such as television, the Internet, newspapers, grapevine chat, radio, and popular magazines to acquire political information. Figure 1 reports survey findings which indicate that over 70 percent tend to acquire their political information from the television, and around 40 percent of the survey respondents tend to learn political information through the Internet. In addition, newspapers were also used by a substantial number of respondents (30 percent).

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from 111 million in 2005 to 649 million in 2014. The Internet penetration rate has increased from 8.5% to 47.9% during this time period.

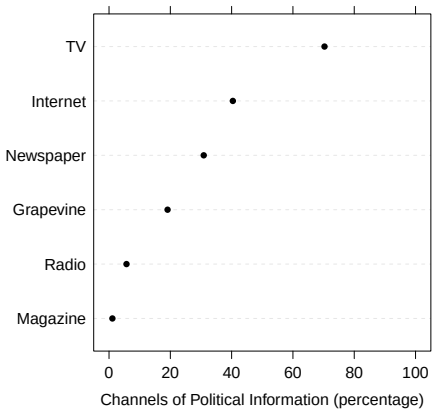

Figure 1: Acquisition of political information

[Figure 1 is about here.]

To clarify the underlying patterns of media exposure, we conducted latent class analysis (LCA) on respondents' reported usage of the several types of media for the acquisition of their political information. The results of LCA indicate that the Internet users, television watchers, and newspaper readers overlap substantially in the same latent group.[4] Our findings documenting this strong tendency to overlapping media exposure is consistent with the patterns noted in other societies featuring a complex, multi-channel media environment (Goldman and Mutz, 2011; Webster and Ksiazek, 2012). People generally do not avoid opinion challenges from different sources, and there is generally little systematic selective exposure to a particular type of media (Garrett, 2009).

Given both the high Internet access rate and the clear pattern of overlapping media exposure in our sample, we come to the conclusion that the best approach is to focus on Beijing respondents' reported level of general use of the Internet. Specifically, we asked the following question featuring a "1" to "4" graduated scale of reported use: "How frequently do you use the Internet?" While "1" denotes "Never," "4" stands for "Quite often (almost every day)." Our

[4]For detailed results of LCA, see Appendix B.

survey results show that among our Beijing area respondents roughly one quarter (26.6%) did not use the Internet on a daily basis. On the other hand, over fifty percent (52.1%) of the respondents reported that they used the Internet almost daily.

In light of this finding, it is clear that the Internet access question is quite likely biased, over-reporting the respondents' likely true exposure to the Internet. Besides its apparent advantages over the Internet access question, the frequency-based measure of the extent of Internet exposure is preferred because the Internet can affect people's political attitudes through both sought-after and inadvertently contacted channels. As discussed above (Section II), many non-political issues can be reframed into political ones by Internet users. Earlier empirical studies also show that most political deliberation occurs primarily in online groups where politics comes up only incidentally, where political life is not the central purpose of the discussion space (Wojcieszak and Mutz, 2009). Given the prominence of inadvertent political exposure on the Internet, the survey items based on explicit political use of the Internet tend to under-report respondents' general exposure. However, it should be noted that respondents may have varying understandings about these frequency-based questions. Moreover, through traditional networks, the Internet could also reach people who do not use it at all. To avoid the following analyses from being biased by our choice of measurement, the explicit political use of the Internet is incorporated as an important check in our analysis of robustness (more details see Section IV and V).

B Democratic values: the intermediate variable

In this study, we conceptualize democratic values based mainly on the conceptualization developed by Gibson (1996). It should be noted that the CCP propaganda apparatus tends to advocates its own conception of democracy (Lu, Aldrich and Shi, 2014), for instance, by stressing the "elections" of leaders and participation in local People's Congress elections. Drawing on empirical works of both Chinese and other authoritarian settings (Gibson, 1996; Chen and Dickson, 2008), we operationalize the concept of democratic orientation as holding positive

attitudes toward a set of core democratic norms and social institutions. Specifically, we measure such support among our respondents by tapping into their attitudes toward three core democratic norms — rights consciousness, valuation of political liberty, and popular participation — and toward one fundamental democratic institution, the popular and competitive election of political leaders. While these norms and institutions do not exhaust all of the democratic principles one might reasonably stipulate, we believe they do serve as the core universal elements of democracy and hence serve as a good test of democratic orientation among the Chinese public.

To examine the interrelatedness of these four sub-dimensions of democratic values, we conducted a factor analysis (factor scores extracted as indicated in Appendix C) of the four sub-dimensions. The results from this confirmatory factor analysis (CFA) showed that the four sub-dimensions loaded heavily on a single dominant factor, one which accounted for about 58.6 percent of the total variance. In light of this finding, there is evidence of a reasonable amount of coherence among the attitudes of our respondents toward these sub-dimensions of democratic values and associated institutions. The factor score from this confirmatory factor analysis is used as the general index of democratic orientation.

C Government performance, and regime support: dependent variables

In this study, we aim to explore how the Internet affects people's core political attitudes. Specifically, we examine two key dimensions of Internet political effects: (1) evaluation of government performance and (2) affective support for the CCP regime. Not only do these two dimensions capture key aspects of people's attitudes towards their government and regime, but more importantly they constitute a *continuum* that moves from the less politically sensitive (i.e., evaluation of government performance) to the most politically sensitive (i.e., support for the regime) issues.

Performance evaluation Government performance has been commonly and openly discussed across different platforms on the Internet, ranging from popular blogs to Twitter-like *Weibo*

(Hassid, 2012; Lorentzen, 2014). As documented by King, Pan and Roberts (2013), the Chinese censorship program actually tolerates a wide variety of criticisms against the government, specific public officials, and specific policies. In this study, we measure survey respondents' evaluation of government performance by asking them to grade government performance on a "1" (low) to "5" (high) scale, i.e., "How do you evaluate government performance in the following policy areas?". Citizens are asked about ten prominent public policy areas: inflation control, employment promotion, income equality, housing market conditions, social order, medical care, taxation policy, social security, environment protection, and control of corruption. Yet, as revealed in many survey studies, the Chinese public tends to make a clear distinction between the central and local governments. Chen (2017*a*), for instance, reveals that respondents frequently display less satisfaction with local governments, who implement central policy. Therefore, it is possible that while the central government enjoys support for policy initiatives, it is the local government implementation that is evaluated for the specific issues we surveyed here. Unfortunately, our survey did incorporate survey instruments help to disentangle this central-vs-local distinction. And most of the policy areas surveyed in this battery of questions are not clearly the responsibility of either central government or local government. Our reliability analysis based on mean inter-item covariance shows that the respondents' evaluations across these ten public policies were highly consistent.[5] Viewed in combination, we believe that the overall evaluation of these ten policies can provide a good indication of one's assessment of government performance.

Regime support Political scientists have long noted that affective popular support is of critical importance to regime stability and viability (Geddes and Zaller, 1989; Chen, 2004; Kennedy, 2009). As a person's conviction that the political system conforms to one's moral or ethical principles, diffuse political support not only encompasses citizens' affect for the values and norms that a regime stands for, it also strongly influences their view about whether political actors or institutions produce outcomes consistent with their interests. Given its importance to regime

[5]The Cronbach's α is 0.85.

stability, online discussions regarding whether the existence and functioning of the CCP regime conforms to ordinary citizens' moral or ethical principles are strictly censored. Taking into consideration our foregoing discussions of governmental monitoring and censorship of the Internet, we hypothesize that exposure to the Internet can affect respondents' political attitude formation only via the shaping of their democratic orientation in an indirect fashion, one resulting in lasting core value change; we further hypothesize that the direct and immediate effects of the Internet tend to be weak and transitory.

In this study, we include a set of measures of diffuse support for the CCP regime. Following earlier empirical works conducted in China (Chen, 2004; Kennedy, 2009), we used the following six questions to gauge our respondents' level of diffuse support: "I believe that People's Congress in China serves for the vast majority of the people"; "I believe that the PLA is able to defend our nation"; "I believe that the police forces in China guarantee impartial law enforcement"; "I believe that the courts in China guarantee fair trials"; "I have an obligation to support the current political system"; "I feel that my personal values are the same as those advocated by the government." These six questions are designed to determine the extent to which survey respondents believe the CCP regime conforms to their expectations of rightful conduct of the political system. We create an additive index of regime support by the unweighted summing of the responses to these six statements.

IV Gauging the indirect and direct effects of the Internet

To estimate the indirect and direct effects involved accurately we need to be able to assess two counterfactual scenarios simultaneously: (1) subjective democratic values changed despite no change in individuals' exposure to the Internet; and, (2) exposure to the Internet changed while subjective democratic values were held constant. Unfortunately, neither of these two counterfactuals can be directly observed. In this study, we employ the causal mediation analysis method proposed by Imai et al. (2011) to disentangle the two types of effects of the Internet.

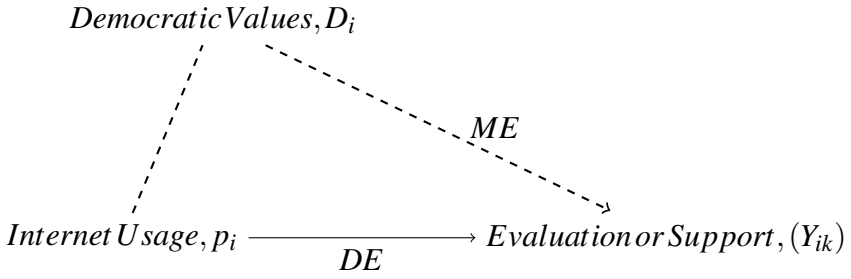

Figure 2: Decomposing the effects of the Internet

[Figure 2 is about here.]

Figure 2 maps our proposed causal mediation relationship. Specifically, let Y_k denote one of our two dependent variables (indexed by $k, k \in \{1,2\}$, that is, performance evaluation and regime support), and let P denote the measure of an individual's Internet exposure. Different counterfactual values of Internet exposure are denoted by p_i and p_i'. For example, the Internet exposure of an individual may be "Never", and the counterfactual value may be "Quite often." For a survey respondent, indexed by i, the effect of Internet exposure on the dependent variable (Y_k, performance evaluation or regime support) is simply the difference between the probability that the respondent's reported value of the dependent variable given Internet exposure p (e.g., "Never") and the probability that the respondent's reported value of the dependent variable given a counterfactual value of Internet exposure p' (e.g., "Quite often"). Therefore, the combined total effect of the Internet can be formally expressed as,

$$TE \equiv Y_{ik}(p_i') - Y_{ik}(p_i). \tag{1}$$

where Y_{ik} denotes respondent i's reported value of the dependent variable (indexed by k) as a function of Internet exposure. The total effect averaged over all respondents in a survey is the quantity of interest in most studies of the Internet. Following Imai et al. (2011), we term this key calculation the *average total effect* (ATE) of Internet exposure.

However, the ATE of Internet exposure, , expressed as a combined effect, masks important

differences between the indirect and direct effects present. Let $D_i(P = p_i, X_i = x_i)$ denote the reported democratic orientation of respondent i, which is a function of the extent of Internet exposure, P, and a set of covariates, X_i. For instance, the same person, who is less democratically oriented when the Internet exposure is "Never," might have middle level democratic values if the Internet exposure is "Quite often." By considering both the respondents' extent of Internet exposure and democratic values, we can conceptualize respondent i's reported value of the dependent variable (indexed by k) as a function of (1) the extent of Internet exposure P, (2) democratic value $D_i(P, X_i)$, and (3) a set of plausible covariates which should be controlled in the analysis X_i.[6] We thus can denote this value as $Y_{ik}(P, D_i(P, X_i))$.

For a given respondent i, the indirect value-mediated effects of the Internet, therefore, can be defined as the difference in the probability of respondent i's reported value for the dependent variable (indexed by k) caused by a difference in democratic values from a baseline level of Internet exposure (p) to a different level (p'), while holding the controls and actual Internet exposure values constant:

$$ME \equiv Y_{ik}(p_i, D_i(p_i'|x_i)) - Y_{ik}(p_i, D_i(p_i|x_i)), \tag{2}$$

The indirect mediation effect thus captures *the magnitude of the causal effect of the extent of Internet exposure on the dependent variable that can be attributed to the exposure-induced changes in democratic values*. The average causal mediation effect (AME) then aggregates the individual mediation effects and captures how much the dependent variable changes if respondents' democratic orientation changes from the baseline value of the extent of Internet exposure, $D_i(p_i|x_i)$, to the counterfactual value, $D_i(p_i'|x_i)$. Following our earlier arguments, we thus expect that AMEs of the extent of Internet exposure are strong and significant for both

[6]It should be noted that the covariates shaping democratic values and the dependent variable need not be identical. In this study, we assume them identical for heuristic purposes, and that assumption is signified by the term X_i.

respondents' evaluation of government performance and affect support for the regime.

While the indirect mediated effect suggests that the effect of Internet use can operate through individuals' rising democratic orientation (i.e., AME), the direct effect captures all residual channels through which the Internet may affect our dependent variables. It reflects changes in the probability of a particular outcome holding individual democratic values D_i fixed while varying extent of Internet use (P):

$$DE \equiv Y_{ik}(p_i', D_i(p_i|x_i)) - Y_{ik}(p, D_i(p_i|x_i)), \tag{3}$$

In other words, the direct effect denotes *the causal effect of Internet exposure on the dependent variables that can be attributed to causal mechanisms other than the one represented by democratic values*. The average direct effect (ADE) is the effect of the Internet exposure on our dependent variables that does not involve changes in respondents' democratic value. Following our earlier discussion, we hypothesize that ADE of the Internet exposure is strong and significant on politically less sensitive issues such as government performance, but weak and insignificant on issues such as regime support.

Compared to traditional methods such as structural equation models (SEM), the current causal mediation framework is explicit about underlying assumptions which are key to the analysis of complex change phenomena. The central analytical issue here is that both the indirect and direct effects imply a counterfactual that can never be observed in real world settings. In other words, while ATE can be directly identified in experimental or observational studies, the AME and ADE cannot be so directly identified. Traditional methods have paid inadequate attention to the implications of such critical counterfactuals for causal mediation analysis, and thus are likely to generate biased findings (Imai et al., 2011). A clarification of the underlying counterfactuals in the causal pathways also allows us to assess systematically the robustness of empirical patterns to alternative causal mediation relationships. Imai et al. (2011) propose a form of sensitivity analysis in this regard. If the empirical results of a particular mediation relationship were found to be

sensitive, a slight change in the causal model may lead to substantively different conclusions.[7]

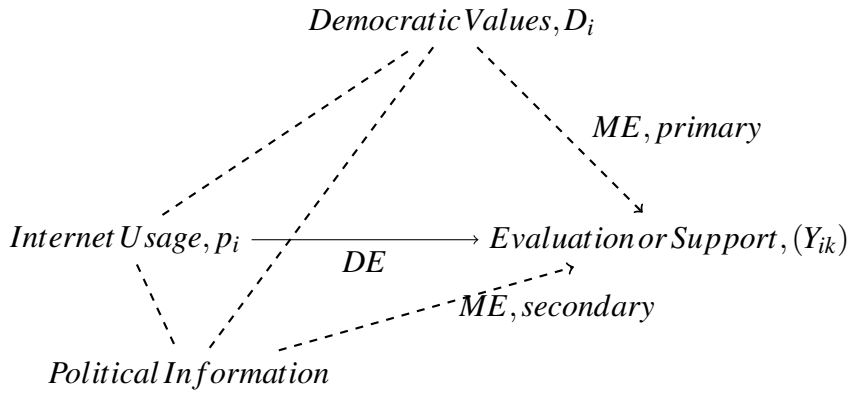

Figure 3: Decomposing the effects of the Internet with two mediators

[Figure 3 is about here.]

Finally, our analysis of the mediating role of democratic values potentially can be confounded by the presence of multiple mediation mechanisms. In this study, a possible confounding mediator between extent of use of the Internet and the dependent variables is whether respondents use the Internet to acquire political news and information or eschew such use (see Section III.A). As presented in Figure 3, the Internet usage related to political information not only can mediate the impacts of the Internet exposure on citizen's evaluation of government performance and support for their political regime, but it also can affect individuals' formation of democratic values. Recognizing this possibility, this study adopts an extended form of causal mediation analysis to quantify the mediation effect that flows through the pathway of democratic values (i.e., "ME, primary" in Figure 3) and the direct effect (i.e., "DE" in Figure 3). The empirical strategy illustrated above allows us to test quite systematically: (1) the fitness of our proposed causal mediation relationship against empirical observations; (2) its sensitivity to alternative model specifications; and, (3) its robustness when there are multiple mediators.

[7]For more details about sensitivity analysis, see Appendix C.

V Analysis and results

We first examine the indirect and direct effects of the extent of Internet use when democratic values are the only mediator variable present (see Figure 2). The causal mediation analysis proceeds in two distinct steps, first estimation, and then prediction.[8] First, we estimate separate regression models for the mediator variable (i.e., democratic values) and the two dependent variables (i.e., performance evaluation and regime support). Specifically, we fit OLS regressions for both the mediator model and the outcome models. As presented in Table 1, we also control for a number of important control variables.

[8]For more details about the general estimation algorithm, see Imai et al. (2011) and Imai and Yamamoto (2013).

Table 1: OLS Regression Results of Mediator and Outcome Models

	Dependent variable:		
	Democratic values	Evaluation	Support
	Mediator model	*Outcome model*	
Democratic values		-0.608^{***}	-1.162^{***}
		(0.153)	(0.087)
Internet usage	0.074^{**}	-0.417^{**}	0.00003
	(0.031)	(0.168)	(0.095)
Gender	0.026	-0.276	-0.385^{**}
	(0.053)	(0.292)	(0.166)
Age group			
age between 30 and 39	0.0001	0.328	-0.241
	(0.085)	(0.464)	(0.263)
age between 40 and 49	0.050	-0.209	-0.523^{*}
	(0.090)	(0.495)	(0.281)
age between 50 and 59	0.151	-0.256	-0.721^{**}
	(0.102)	(0.560)	(0.317)
age between 60 and 69	0.082	0.981	-0.339
	(0.128)	(0.699)	(0.396)
age 70 and up	0.110	-0.321	-0.062
	(0.188)	(1.029)	(0.583)
Education			
middle school	0.112	-0.291	-0.333
	(0.086)	(0.471)	(0.267)
high school	0.120	0.429	-0.023
	(0.106)	(0.582)	(0.330)
college and higher	0.319^{***}	-0.928	-0.545
	(0.112)	(0.617)	(0.350)
CCP membership	-0.165^{**}	0.096	0.523^{**}
	(0.083)	(0.455)	(0.258)
Hukou status	0.482^{***}	0.343	-1.144^{***}
	(0.081)	(0.451)	(0.256)
Socioeconomic status	-0.252^{***}	-0.529^{*}	-0.340^{**}
	(0.049)	(0.271)	(0.153)
Life satisfaction	0.048	1.170^{***}	0.275^{**}
	(0.041)	(0.226)	(0.128)
Political efficacy	0.148^{***}	0.357^{***}	-0.181^{***}
	(0.018)	(0.103)	(0.058)
Constant	-1.123^{***}	27.890^{***}	31.390^{***}
	(0.178)	(0.988)	(0.560)
Observations		1,289	
R^2	0.134	0.070	0.214
Adjusted R^2	0.124	0.059	0.204
Note:			$^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$

[Table 1 is about here.]

Second, based on the regression parameters presented in Table 1, we compute the average indirect (AME), direct (ADE), and total effects of the degree of Internet exposure, and the confidence intervals are calculated based on a non-parametric bootstrap process entailing 1,000 randomized re-samples (see Table 2). As expected, the causal mediation analyses confirm the significant and consistent role of democratic values in mediating the impacts of the extent of Internet exposure on people's evaluation of both government performance and support for the CCP regime. It is noteworthy that while the degree of Internet exposure has a significant and negative direct effect on regime performance evaluation, it exerts no strong direct impact on regime support. Additional sensitivity analysis confirms that the statistical model is robust and worthy of confidence.[9]

Our measurement of the degree of Internet exposure is made along a four-point scale, which makes the interpretation of the results in Table 2 less straightforward than desirable. We thus calculate and plot how the average indirect (AME), direct (ADE), and total effects of the degree of Internet exposure change when the level of the Internet exposure varies in Figure 4. Specifically, the category of "Never" is used as the baseline, and we calculate its respective contrasts with the categories of "A few times (one or two days per week)," "Sometimes (three to four days per week)," and "Quite often (almost everyday)."

[Table 2 is about here.]

The three figures in the first column plot the estimated results of the average mediation effect (AME), the average direct effect (ADE), and the average total effect (ATE) of the degree of Internet exposure on respondents' evaluation of government performance. The results show that AMEs are consistently significant and negative for all three contrasting categories. That is, increasing exposure to the Internet can significantly erode people's evaluation of government

[9]For detailed results of sensitivity analysis, see Appendix D.

Table 2: Results of Causal Mediation Analysis

	Estimate	95% CI Lower	95% CI Uppoer	p-value
		Performance evaluation		
AME	−0.045	[−0.095,	−0.005]	0.03
ADE	−0.417	[−0.717,	−0.103]	0.01
Total Effect	−0.462	[−0.773,	−0.146]	0.00
		Regime support		
AME	−0.086	[−0.156,	−0.012]	0.01
ADE	0.00003	[−0.174,	0.179]	0.99
Total Effect	−0.086	[−0.267,	0.105]	0.39

performance via their acquisition of democratic core values. We also observe similar patterns for ADEs, which is the case because online criticisms against specific policies are quite common on the Internet due to the practice of "strategic" (purposely selective) censorship in China (King, Pan and Roberts, 2013; Lorentzen, 2014). Ordinary Internet users in China are frequently exposed to negative comments and information about specific policies of the government. Therefore, without affecting people's fundamental democratic orientation, increased exposure to the Internet could still directly erode people's evaluation of government performance. It should be noted that there are limited differences between the categories of "A few times" and "Sometimes." It is noteworthy, however, that for survey respondents who used the Internet quite often both AME and ADE are particularly strong.

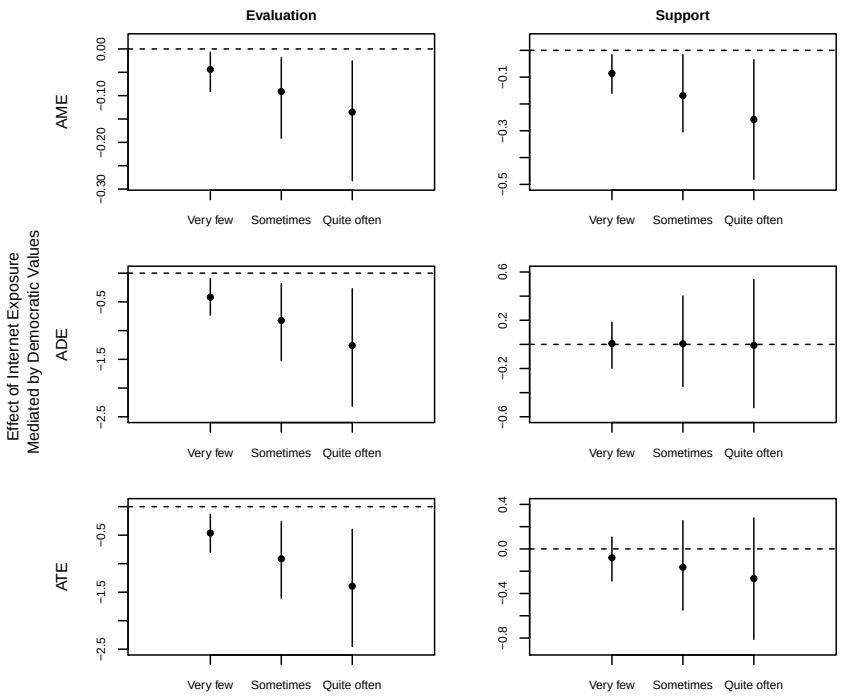

Figure 4: Predicted Effects of the Internet Exposure on Evaluation and Support

[Figure 4 is about here.]

As for the estimated results presented in the second column, we find interesting dynamics about how the extent of Internet use shapes people's affective support for the CCP regime. The results first show that AMEs on regime support are consistently statistically significant and negative for all three contrasting categories. In other words, the diffusion of the Internet can significantly undermine the public's regime support via the enhancement of core democratic orientations. In contrast, we find that all ADEs for regime support remain statistically insignificant. These results, to a certain extent, confirm the effectiveness of the Chinese censorship program. Ordinary people's exposure to the Internet does not directly affect their level of regime support.

Row-wise comparisons set forth in Figure 3 can yield important findings about the combined total impact of the use of the Internet in China. First, across both governmental performance evaluation and regime support we find consistently significant indirect mediated effects. This

finding lends strong support to the liberation thesis that the diffusion of the Internet is indeed reshaping authoritarian societies by enhancing the core democratic orientations of citizens making use of this powerful form of social communication. Second, as the dependent variables become more politically sensitive, the direct effects of the extent of Internet exposure (ADEs) become less substantively noteworthy and less statistically significant. This important finding highlights the instrumental nature of the Internet as suggested by the neutrality thesis. As another important social communication medium, the Internet not only benefits the public but also can be used to support the ruling regime. Third, a comparison of ATEs of the extent of Internet exposure helps explain why the total effects of the Internet appear to be highly idiosyncratic and seemingly inconsistent across different kinds of political attitudes. This finding also confirms the necessity of carefully decomposing the total effects of citizen exposure to the Internet in authoritarian countries.

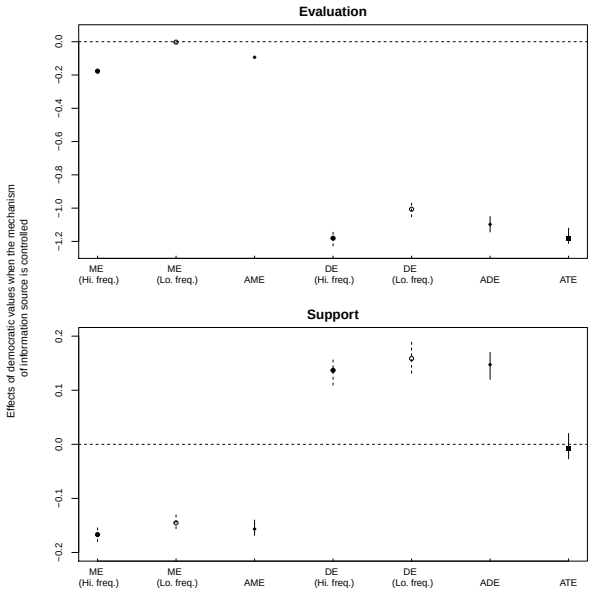

Figure 5: Effects of the Internet Exposure on Evaluation and Support with Two Mediators

[Figure 5 is about here.]

As illustrated earlier in Figure 3, the mediating role of core democratic values can be

confounded by another mediator variable, that is, the respondents' explicit usage of the Internet for the acquisition of political information. Using similar procedures described above, we estimate the average mediation effect (AME) associated with democratic values, and we control for the mediating effect of the Internet being used specifically for political information retrieval. The results are plotted in Figure 5. Specifically, we combine the categories of "Never," "A few times," and "Sometimes" as the baseline category (i.e., "Low frequency"), and we calculate its contrasts with the category of "Quite often" (i.e., "High frequency"). As expected, the patterns in Figure 5 are highly consistent with findings when democratic values is the only mediator. In other words, whether or not survey respondents used the Internet specifically to acquire political information does not affect the mediating role of democratic values in citizen assessments of government performance and affective attachment to the CCP regime. This analysis confirms earlier findings that inadvertent exposure to political information and public affairs discussion is quite ubiquitous on the Internet in authoritarian counties (Wojcieszak and Mutz, 2009). Moreover, given the particular highly censored Internet environment in China, such inadvertent exposures can be even more important than the discretionary ones.

VI Conclusion and discussion

In this study we have examined several critical issues in the current debate on the role of the Internet in authoritarian settings. Specifically, we have identified two key mechanisms through which use of the Internet affects people's political attitudes and behavior, those being the indirect mechanism of value-mediated change and the direct mechanism of alternative political messaging. We have also highlighted the role of China's rather unique sociopolitical context in affecting the saliency of these two Internet impact mechanisms. We argue that in authoritarian societies such as China the Internet often directly influences people's evaluation of government performance in ways supportive of improvements in performance, but more importantly use of the Internet by citizens indirectly impacts their level of support for the CCP regime through its

effect on enhanced support for core democratic values. It is the varying interplay of these two social mechanisms that makes the overall effects of the Internet seemingly inconsistent. Rather than being exclusively a neutral messenger, the Internet in authoritarian China is simultaneously serving as a value changer toward increased appreciation of core democratic governance principles.

Our study points to the importance of the overall sociopolitical context in conditioning the linkages which come to exist between social communication mechanisms affected by the Internet and the manifest political outcomes attributed to the introduction of the Internet into authoritarian countries. Particularly in the case of authoritarian China, while it is the combination of a previously fragmented society and a newly emerged user-based communication that makes the indirect mediated mechanism consistently potent, the direct mechanism of message dissemination and issue framing is contingent upon the regime's active monitoring and systematic censorship in the country's cyberspace. Our study suggests that the real determinants of the political effects of the Internet may reside beyond the Internet *per se*, and are to be found in the broader sociopolitical settings of authoritarian and transitional societies. Our study focus solely on the roles of the Internet, and future work can examine how the online and offline networks intersect with each other and promote democratic changes in authoritarian societies.

By demonstrating how the two types of effects vary with different political attitudes and citizen assessments of their government, this study highlights the possibility of an integrative analytical framework to be used in addressing the rival liberation thesis and neutrality thesis explanations of the political impact of the Internet. This requires us (1) to explore the particular mechanisms of the Internet, and (2) to specify the conditions (e.g., China's unique sociopolitical condition in this study) under which these mechanisms operate. In doing so, we are able to not only offer a possible resolution to the debate between the liberation and neutrality rival views of Internet impacts, but, more importantly, bridge studies of the Internet conducted under different sociopolitical contexts (e.g., autocracy vs. democracy).

This study also has some important implications for sociopolitical development in

authoritarian China. On the one hand, our findings of the contingent direct effects of the Internet on people's regime support suggest that the government censorship program is indeed effective and its strategic use of open critical assessment of some governmental shortcomings has achieved its purpose. Certain key political attitudes of ordinary Chinese people are being shaped by the CCP regime through Internet-mediated messaging and subsequent individualized social media interactions. On the other hand, the consistently significant indirect effects (mediated by citizens' growing support for core democratic principles) of the Internet highlight the inherent limits of government censorship programs. That is, these monitoring and censorship programs, however effective and sophisticated in design, can do little to alter the newly emerged individualized and decentralized mode of political communication enabled by the Internet, engagement with which serves to cultivate fundamental value changes toward democratic principles in authoritarian societies.

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Supporting Information
Political Effects of the Internet in Authoritarian China*

*The replication dataset and codes will be available upon request.

Appendix A: 2012 Beijing Survey

The data used in this study came from a public opinion survey conducted by the authors in Beijing between November 2011 and February 2012. The survey targeted those who lived in the Beijing metropolitan region, covering both urban and rural population in the area. The survey was carried out in cooperation with the Beijing Academy of Social Sciences (BASS), and well-trained college students were employed as field interviewers. The samples were selected with a combination of probability proportional to size (PPS) and multistage sampling techniques. In the first stage, street-level units (*jiedao*, or township equivalence in Beijing) were selected within each of 10 surveyed district units (*qu*, or county equivalence in Beijing) using the PPS technique, in which the probability of selection is proportional to the population size of the district based on China's 2010 census data. In this sampling step a total of 36 street-level units were randomly chosen. In the second sampling stage, 4 residential communities (or villages) were randomly selected from each sampled street-level unit. At the final stage, 10 individuals were chosen randomly from each sampled community as the interviewee. The adjusted response rate of this survey was 92 percent (1318), which was quite similar to the response rates from other surveys conducted in Beijing (Shi, 1997; Chen, 2004).

As with other survey studies based upon regional and local samples, the descriptive findings of this research can only be said to apply to the population in the Beijing area. However, these findings can also help establish some needed baselines against which the findings from other areas of China can be compared. More important, as revealed in many earlier studies, the relational findings to be presented in this paper could have strong implications for other parts of China (Manion, 1994, 2010). Since most, if not all, of the relationships observed in this study are generic in nature, the findings emerged from this study can yield important generalizable inferences about the patterns of political trust and its relationships with other important sociopolitical variables in China.

Appendix B: Latent Class Analysis (LCA) of Media Usage

When obtaining political information, how do the Chinese public use different media? With its rapid diffusion, is the Internet challenging the role of traditional mass media? To answer these questions, earlier empirical studies in China classify people into different groups based on their usage of the Internet and other traditional mass media. Lei (2011), for example, defines "netizens" as "those who use the Internet to obtain information, regardless of their traditional media use" (p. 299). The underlying assumption is that the more people on the Internet as a news source, the less they will rely on traditional news media such as television and newspapers (Althaus and Tewksbury, 2000). Moreover, this assumption seems to be supported by the literature on "selective-exposure," that is, individuals are commonly drawn to information sources that reinforces their opinions. In a word, the Internet is replacing the traditional media in political communication.

Table S1: Model fit statistics of LCA

	BIC	G^2	χ^2
2-group latent model	6912.2	108.4	385.9
3-group latent model	6918.8	64.8	73.3
4-group latent model	6943.5	39.1	45.1
5-group latent model	6984.9	30.3	29.6

However, our empirical analysis does not support this "replacement" view of the Internet. Rather, we find that our respondents used the Internet in parallel with traditional mass media like television and newspapers. Our findings, therefore, are consistent with recent reexaminations of selective exposure (Garrett, Carnahan and Lynch, 2013; Wojcieszak and Mutz, 2009). As Garrett (2009) puts it, although people will be drawn to information sources of opinion-reinforcing, but they "do not exhibit a systematic bias against opinion-challenging information." In other words, we should expect a strong tendency of overlapping media usage.

Specifically, we use latent class analysis (LCA) to explore the underlying patterns of media use of the respondents. We first identity the number of the latent groups that can best describe the patterns of similarity in media usage responses. We start with a two-group model and then sequentially increase the number of groups to five (see Table S1). The Bayesian information criterion (BIC) is the most widely adopted criterion, and the general principal in determining the number of groups is to minimize BIC. We also report their respective statistics of Pearson's χ^2 goodness-of-fit and likelihood ratio Chi-square (G^2). Based on BIC, a two-latent-group solution is the best one to describe the respondents' usage of different media.

Table S2: Conditional Item Response Probabilities

		Group 1	Group 2
TV	Pr(0)	0.8461	0.1396
	Pr(1)	0.1539	0.8604
Internet	Pr(0)	0.9355	0.4994
	Pr(1)	0.0645	0.5006
Radio	Pr(0)	0.9878	0.9303
	Pr(1)	0.0122	0.0697
Papers	Pr(0)	1.0000	0.6029
	Pr(1)	0.0000	0.3971
Magazine	Pr(0)	0.9984	0.9868
	Pr(1)	0.0016	0.0132
Grapevine	Pr(0)	0.8994	0.7829
	Pr(1)	0.1006	0.2171
Estimated population share		0.2223	0.7777

The two-group solution is not only parsimonious, but also substantively meaningful. Table S2 reports the conditional item response probabilities for the two groups. Specifically, respondents in Group 1 have low probabilities to use all types of media. In other words, Group 1 consists of the political "alienated," who are not interested in politics and do not regularly check political news and information. In contrast, respondents of Group 2 used a variety of methods to obtain political information.

Appendix C: Factor Analysis of Democratic Values

To detect the strength of rights consciousness, we asked our survey respondents to indicate whether a series of rights (six items) ought always to be protected, or whether such protection depends on the circumstances. To gauge the value attached to individual liberty, we fashioned questions that postulated a tradeoff between the exercise of political freedom and the maintenance of social order. To measure views of multi-party competition, we used two items. One item was designed to gauge respondents' support for multi-party competition, and the second was intended to detect their views of the current situation of one-party rule. Finally, we included two more survey items to assess the level of support for this participatory norm. One item relates to citizens' participation in government decision making in general, and the second concerns their role in initiating major political change.

Table S3: The Subdimensions of Democratic Value: Factor Analysis

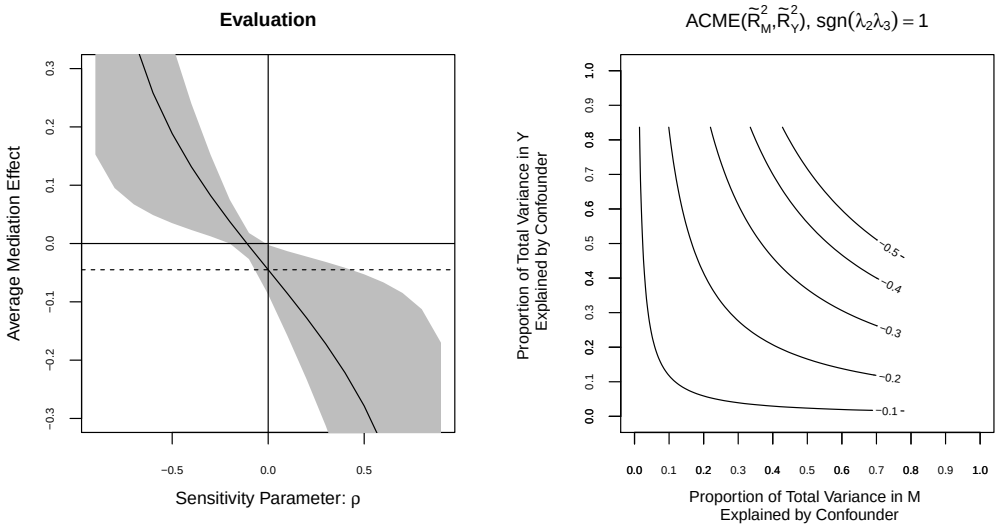
	Supportive response (%)	Factor loading
Rights consciousness		
Right to work	94.0	0.707
Right to education and training	94.6	0.875
Right to privacy of personal correspondence, telephone conversations, and so on	93.2	0.794
Right to travel abroad	91.7	0.733
Right to reside anywhere in the country	90.5	0.679
Religious liberty and freedom of conscience	89.6	0.702
Valuation of political liberty (versus order)		
In general demonstrations should not be allowed because they frequently become disorderly and disruptive. (Disagree)	22.7	0.821
The harmony of the community will be disrupted if people form their organizations outside the government. (Disagree)	24.5	0.821
Support for participatory norm		
Government leaders are like the head of a family; we should all follow their decisions and don't need to participate in government decision making. (Disagree)	24.2	0.830
Measures to promote political reform should be initiated by the party and government, not by ordinary people like me. (Disagree)	26.1	0.830
Support for competitive election		
Government officials at various levels should be selected by multi-candidate elections. (Agree)	70.2	0.716
Competition among several parties in election of government leaders should not be allowed. (Disagree)	25.6	0.716

Appendix D: Sensitivity Analysis

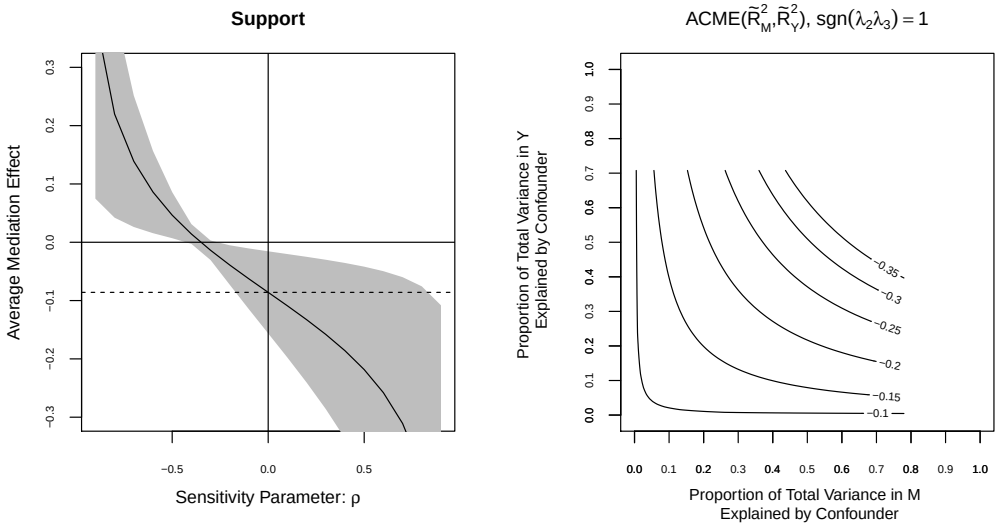
Two assumptions are needed to identify the average mediation effect. They are similar to the traditional exogeneity assumptions familiar to users of most regression models. The first assumption requires that after controlling for pretreatment covariates, the Internet exposure is independent of all potential outcomes for the mediator variable (i.e., democratic value) and the dependent variables (i.e., government performance and regime support). This exogeneity assumption is supported not only by the general literature on media usage (Garrett, Carnahan and Lynch, 2013; Wojcieszak and Mutz, 2009), but also by our empirical analysis (see Appendix B).

The second assumption is that observed democratic value are independent of all potential outcomes given the observed values for Internet exposure (and controls). In particular, this assumption implies that there are no individual-specific differences that are not accounted for by the random intercepts. In other words, democratic value can be regarded as if they were randomized among respondents who are exposed to the same Internet exposure. This additional assumption is not required for an analysis that is only interested in the total effect of the Internet exposure.

Our goal of a sensitivity analysis is to quantify the exact degree to which the key identification assumption must be violated for our original conclusion to be reversed. For out study, sensitivity analysis can be conducted by calculating the correlation ρ between ε_{i2} (the error for the mediation model) and ε_{i3} (the error for the outcome model), under a standard linear structural equation model (LSEM). If the above assumptions hold, all relevant pretreatment confounders have been conditioned on, and thus ρ equals zero. In contrast, nonzero values of ρ imply departures from the sequential ignorability assumption and that some hidden confounder is biasing the AME estimate.



(a) Performance evaluation



(b) Regime support

Figure S1: Sensitive analyses for performance evaluation and regime support

Appendix E: Additional Mediation Analysis

Previous studies have shown that among daily Internet users, there are marked differences in their online activities (e.g., social recreation; see Shah, Kwak and Holbert 2001). In our study, the respondents could browse the Internet primarily for non-political purposes such as entertainment and social networking. The potential differences in their political use of the Internet may lead to notable biases in the causal mediation analysis. We thus introduce two robustness strategies to ensure our analyses and findings are not biased by the variations in respondents' political use of the Internet. First, as presented in the main text, we treat respondents' political use of the Internet as a second *mediating* variable, along with our key mediating variable, i.e, the democratic values (see Figure 3 in Section III and Figure 5 in Section V). This extended multi-mediator analysis allows us to control potential mediating effects of the political use of the Internet.

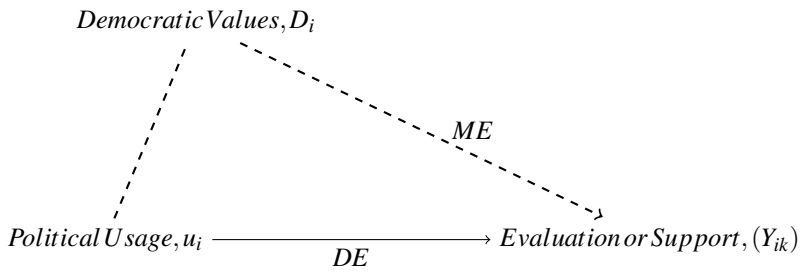


Figure S2: Causal mediation analysis (the political use of the Internet as the treatment)

Second, in this SI appendix, we examine the robustness of our analysis by assuming the political use of the Internet as the *treatment* variable. Specifically, as shown in Figure S2, the political use of the Internet can both directly and indirectly affect its users' political attitudes (i.e., evaluation of government performance and affective support for the regime). The indirect effect of the Internet is mediated through changed democratic values.

To measure the political use of the Internet, we use the following question: "When obtaining the information about politics, which of the following ways is the most important?" We recoded the choice of the Internet as 1 and other choices as 0. As Figure S3 indicates, this additional

analysis yielded results that confirm the significant mediating effect of democratic values in the relationship between the Internet use and political attitudes including both government performance evaluation and affective support for the regime.

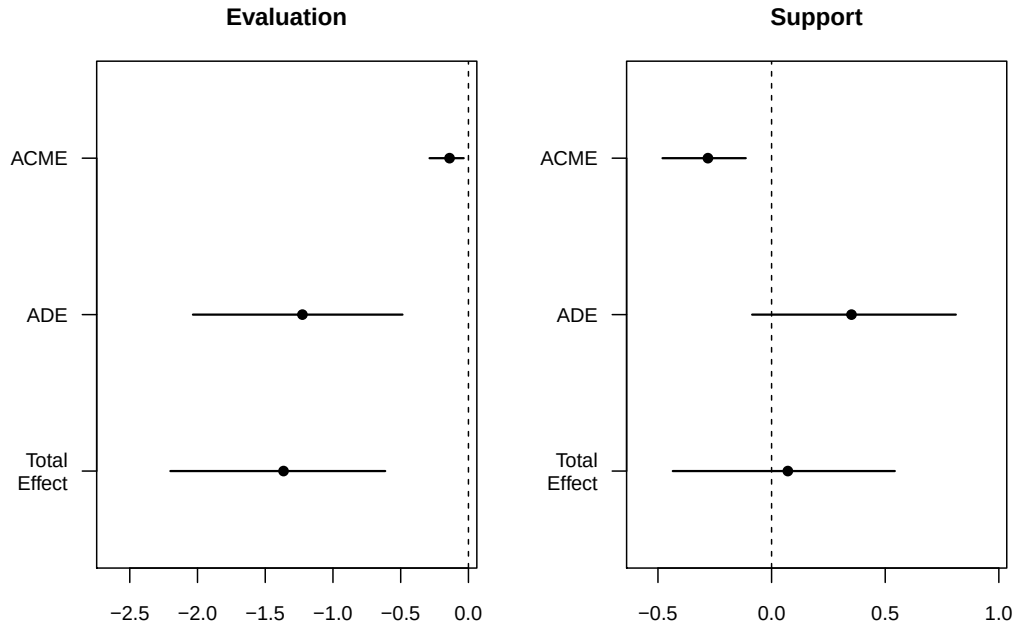
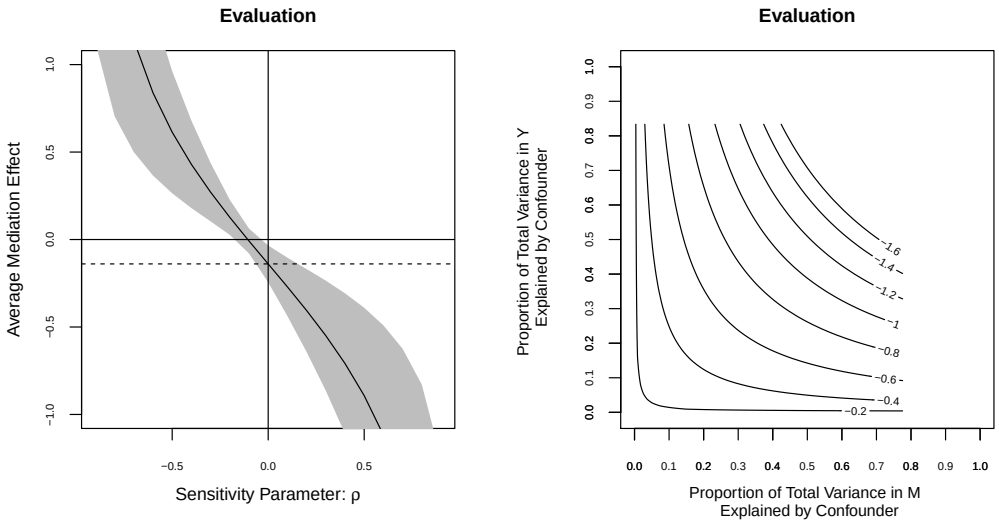
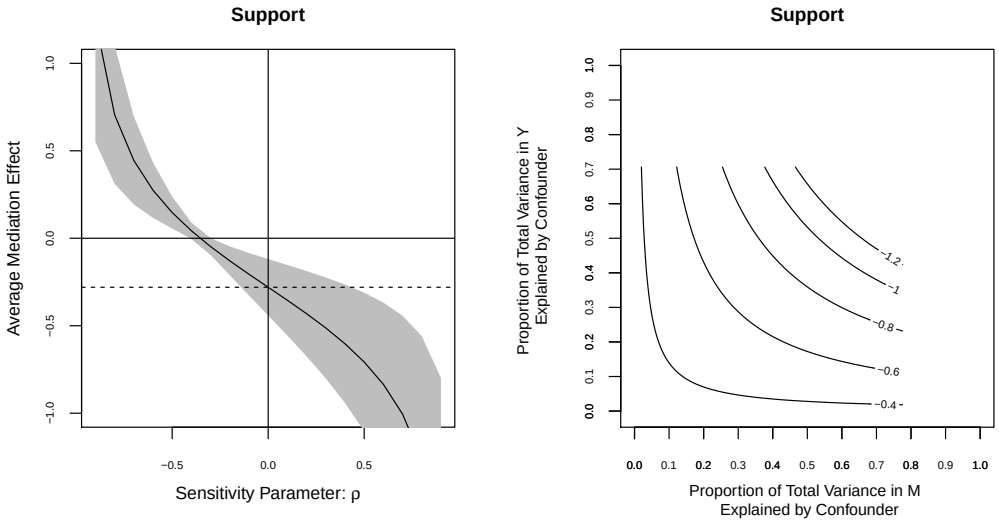


Figure S3: Graphical summary of causal mediation analysis

For both attitudes, ACME is negative and statistically significant. It indicates that the political use of the Internet decreases one's evaluation of government performance and regime support by enhancing his or her aspiration for democracy. As for the direct effect, as captured by ADE, the political use of the Internet directly decreases performance evaluation, but it does not directly cause significance change in regime support. The total effect of the Internet is negative and significant for the former and not significant for the latter as well. Figure S4, like Figure S1 of this SI Appendix, shows the results of sensitivity analysis of this additional mediation analysis. This finding is by and large consistent with our main analysis and thus confirms our expectation, particularly with regard to the mediating effect of the Internet use.



(a) Performance evaluation

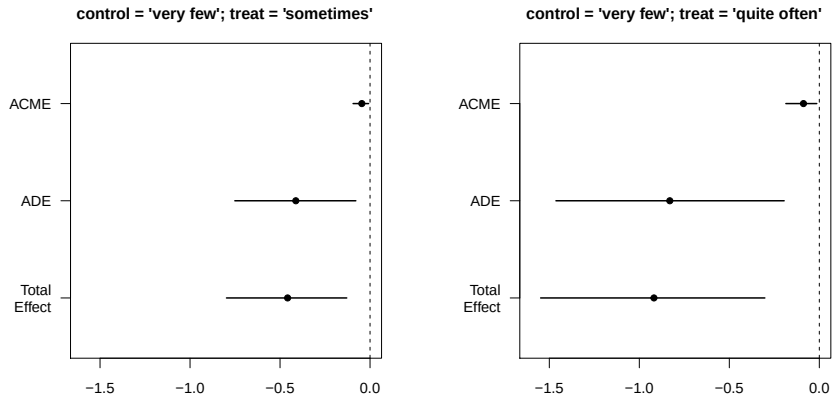


(b) Regime support

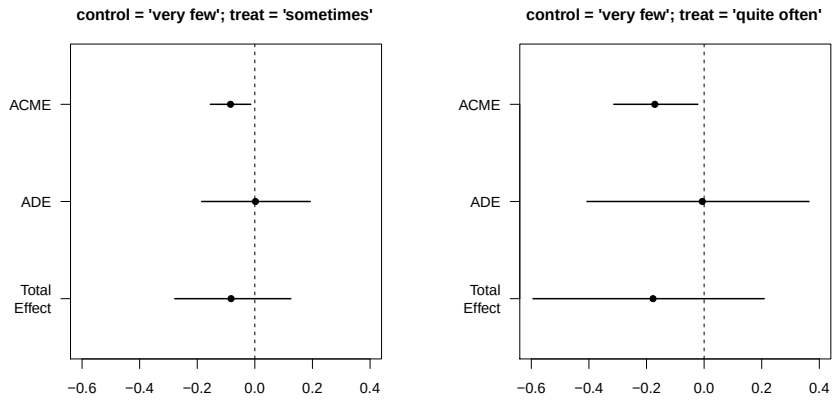
Figure S4: Sensitive analyses for performance evaluation and regime support

Appendix F: Additional Results

In this additional analysis, we demonstrate the robustness of our findings of the main analysis by using a different category of frequency of the Internet use, "a few times a week," as the baseline. In Figure S5, the results show that AMEs are consistently significant and negative for both contrasting categories between the base and "sometimes (three to four days a week)" and between the base and the "quite often (almost every day)."



(a) Performance evaluation



(b) Regime support

Figure S5: Comparison between different treatment and control values

Appendix G: Descriptive Statistics

Table S4: Distribution of performance evaluation

	Very Poor (1)	Poor (2)	So-so (3)	Good (4)	Very (5)
Controlling inflation	42 (.03)	400 (.30)	577 (.44)	291 (.22)	6 (.00)
Providing job security	35 (.03)	295 (.22)	574 (.44)	398 (.30)	14 (.01)
Minimizing inequality	161 (.12)	567 (.43)	467 (.35)	115 (.09)	6 (.00)
Improving housing	93 (.07)	347 (.26)	557 (.42)	308 (.23)	12 (.01)
Maintaining order	14 (.01)	92 (.07)	377 (.29)	763 (.58)	71 (.05)
Providing medical care	17 (.01)	64 (.05)	350 (.29)	697 (.53)	189 (.14)
Taxation policies	23 (.02)	176 (.13)	635 (.48)	399 (.30)	82 (.06)
Providing welfare for the needy	16 (.01)	132 (.10)	474 (.36)	645 (.49)	48 (.04)
Combating pollution	41 (.03)	222 (.17)	510 (.39)	510 (.39)	33 (.03)
Fighting corruption	214 (.16)	485 (.37)	462 (.35)	144 (.11)	11 (.01)

Table S5: Distribution of regime support

	Strong disagree (1)	Disagree (2)	So-so (3)	Agree (4)	Strongly agree (5)
Believe in the Party	5 (.00)	26 (.02)	115 (.09)	768 (.58)	404 (.31)
Believe in the People's Congress	4 (.00)	12 (.01)	97 (.07)	768 (.58)	436 (.33)
Believe in the PLA	0 (.00)	4 (.00)	79 (.06)	538 (.41)	697 (.53)
Believe in the police force	4 (.00)	28 (.02)	273 (.21)	641 (.49)	370 (.28)
Fair courts	5 (.00)	36 (.03)	354 (.27)	703 (.53)	220 (.17)
Personal vs. government values	2 (.00)	28 (.02)	261 (.20)	782 (.59)	244 (.19)

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