Malaise Effect or Virtuous Effect?
The Dynamics of Internet Use and Political Trust in China

XIAOXIAO CHENG
Tsinghua University, China

The rise of the Internet has led to debates regarding the direction of its effect in terms of eroding or enhancing political trust. The current study considers the dispute and focuses on the dynamic relationship between Internet use and political trust in China. The multilevel analysis with pooled data shows that the impacts of Internet use on political trust vary across generations and that the changing social-historical context and Internet context are responsible for the dynamic Internet-trust relationship. This article also bridges the gap in existing theory by showing that both the malaise effect of Internet use and virtuous effect of Internet context act together to impact political trust.

Keywords: Internet use, political trust, dynamic relationship, social-historical and Internet context, media effects

Thus far, the importance of the Internet in both democratic and nondemocratic societies has been widely discussed and has led to extensive literature investigating the role of the Internet and its consequences on political trust. Accordingly, contrasting viewpoints regarding the Internet’s impact have emerged. The optimists follow Norris (2000), who proposed virtuous circle theory, arguing that the use of the Internet can produce a virtuous circle that increases trust in government. In contrast, the skeptics contend that the Internet can generate what Robinson (1976) termed a malaise effect that increases political cynicism and distrust.

Faced with contradictory facts in recent years, numerous cross-national studies have encompassed an increasingly wide array of countries and regions to test and reexamine media effects (e.g., Brosius, van

Xiaoxiao Cheng: alfonsocheng10@gmail.com
Date submitted: 2019–04–25

1 This research was financed by China’s State Major Research Projects under Grant Number 2016ZX08015002. I thank Jianbin Jin and Taiquan Peng for their valuable guidance and insightful comments. I greatly appreciate the support from teachers and colleagues in the Department of Communication at Michigan State University and James W. Dearing in particular, who has hosted me as a year-long visiting scholar during the iterations of this article over the past year. Many thanks also to the anonymous reviewers for providing constructive feedback. The Online Appendix for this article can be accessed at https://figshare.com/s/180b8013c86b105aa3e4

Copyright © 2020 (Xiaoxiao Cheng). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at http://ijoc.org.
Elsas, & de Vreese, 2019; Curran et al., 2014); in addition, there is an emerging strand of research focusing on the conditionality of such effects (e.g., Avery, 2009; Schuck, 2017).

Although I argue that the increasing awareness of comparative studies and the shift in research foci toward conditional media effects are essential to avoid naive universalism (Esser & Hanitzsch, 2012), the current understanding of the media effects on political trust is far from complete. Despite a growing body of research concerning the conditionality of traditional media effects, a critical area of inquiry regarding the conditional effect of Internet use on political trust is missing. More important, "virtually all studies focus on the impact of media use on political trust at one point in time" (Strömbäck, Djerf-Pierre, & Shehata, 2016, p. 89); this line of research is missing a dynamic perspective. This omission is problematic as both media content and the media environment are ever changing; therefore, it is untenable to assume homogeneous media effects over time (Liu, Shen, Eveland, & Dylko, 2013; Strömbäck, Djerf-Pierre, & Shehata, 2013). Although limited, recent research has investigated and confirmed the changing effects of traditional news media on political trust (Strömbäck et al., 2016).

Against this background, this study investigates the changing effects of Internet use on political trust over time in China. Furthermore, this article examines the pattern and mechanism of this dynamic relationship. China provides a window into such dynamics. Compared with most Western societies in which the Internet penetration rate is already advanced, the development of the Internet in China is catching up. According to China’s 43rd Statistical Report on Internet Development (China Internet Network Information Center, 2019), by the end of 2018, China’s Internet penetration rate had climbed to 59.6% compared with 4.6% in 2002. This rapidly changing digital landscape in China should have continuously altered the Internet’s impact. Furthermore, the existing scholarship concerning conditional media effects focuses overwhelmingly on the context of democratic societies; as the world’s largest nondemocracy, it is necessary and useful to observe China’s experience in the interest of evaluating the generalizability of this dynamic phenomenon.

By employing a multilevel modeling technique with pooled data, this article reveals the dynamic pattern of the Internet’s impact on political trust across 60 sequential birth cohorts. Drawing on the lifetime learning model and media ecology theory, I provide substantial empirical evidence that both the changing social-historical context and Internet context are responsible for the Internet–trust dynamics. Therefore, this article bridges and closes the existing theory gap by clarifying that the two perspectives mentioned at the outset are not necessarily at odds with each other as follows: Both the short-term malaise effect of Internet use and the long-term virtuous effect of Internet context act together to impact political trust; in addition, this article discloses that the development of the Internet environment gradually ameliorates the negative impact of Internet use.

**Literature Review**

**Determinants of Political Trust: Culture, Performance, and Media**

Although political trust is a contested concept (Berg & Hjerm, 2010), scholars generally recognize that trust in political institutions is one-dimensional (Kestilä-Kekkonen & Söderlund, 2015; Torcal, 2014).
In this study, political trust refers to an evaluative orientation and belief that citizens hold toward the government (Hetherington & Husser, 2012; Ma & Yang, 2014; Van der Meer & Hakhverdian, 2017).

In the political sciences, there is a wealth of knowledge regarding the sources of political trust as follows: One strand of this knowledge is derived from cultural theory, and the other strand is derived from institutional theory. Culturalism implies that political trust originates outside the political sphere, is influenced by individuals’ innate cultural dispositions, and is socialized during the life course (Mishler & Rose, 2001; Theiss-Morse, Barton, & Wagner, 2015). In contrast, institutionalism hypothesizes that trust in institutions is politically endogenous, involving complex computations or evaluations of objects that meet the requirements of the subject’s criteria or expectations to a certain extent (Miller, 1974; Wong, Wan, & Hsiao, 2011).

Beyond that, since 1970, communications research has produced considerable findings suggesting that media exposure and/or consumption is a determinant of citizens’ political trust (McLeod, 2000). As an essential way of political (self-)socialization (Chaffee, Ward, & Tipton, 1970), the media function not only as the producer and distributor of symbolic macro-level performance, but also as the lens through which citizens gather political information regarding the performance of political institutions, perceive government effectiveness, and adjust their attitudes accordingly (Ceron, 2015; Ceron & Memoli, 2015).

**Conditionality of the Effects of News Media**

Regarding media effects, there are competing arguments regarding the relationship between traditional media use and political trust. On the one hand, the malaise theory suggests that media coverage reinforces political cynicism. Thus, the effect of news media use is in the direction of eroding political trust (Aarts, Fladmoe, & Strömbäck, 2012; Robinson, 1976). Conversely, the virtuous circle theory contends that the consumption of news media is associated with higher trust in politics (Norris, 2000, 2001). Such a dichotomy also exists in Mainland China (e.g., X. Chen & Shi, 2001; Tang, Zhang, & Martin, 2017).

The mixed results reflect the conditional effects of news media (Gross, Aday, & Brewer, 2004). Following this logic, there is an emerging strand of research investigating conditional media effects. The most representative is the study conducted by Avery (2009), who confirmed that the influence of news media (i.e., newspaper or television) on political trust depends on both the news source and individuals’ prior political dispositions. In addition, further research has disclosed that political interests (Strömbäck et al., 2013) and personal preferences and tastes (Ceron & Memoli, 2015) influence the news media–political trust association.

Although interest and empirical studies concerning the conditionality of traditional news media effects have increased (Schuck, 2017), limited attention has been paid to these effects of digital media. Moreover, nearly all studies focus on the impact of media use on political trust at a particular time point (Strömbäck et al., 2016), and a long-term perspective is lacking. In addition, most studies underscore the importance of the individual-level factors reviewed above but fail to consider macro-level contextual factors. In summary, research concerning the conditional media effects is in its infancy, and the current study...
attempts to address the abovementioned limitations to better understand the dynamics of the relationship between Internet use and political trust.

**Dynamics of Internet and Political Trust**

Numerous studies have investigated the political consequences of individual Internet use; however, the debate remains the same. Regarding the Internet’s effect, several studies have found a positive correlation (Bailard, 2012; Tolbert & Mossberger, 2006), whereas other studies have shown that Internet use has an adverse effect on political trust (e.g., Im, Cho, Porumbescu, & Park, 2014; Tang et al., 2017).

A conditional effect of Internet use exists. According to Jennings and Zeitner (2003), “Trying to assess the political impact of the Internet . . . involves shooting at a moving target . . . as the Internet audience enlarges and as the political usage of the Internet evolves, the effects of the Internet are likely to change” (pp. 311–312), which seems to suggest that the Internet’s impact fluctuates over time.

Scholars have realized that prior research often implicitly assumes a relatively homogeneous media use effect over time, which is an untenable and flawed assumption (Liu et al., 2013; Strömbäck et al., 2016). Against this background, by using panel or pooled data, recent studies have investigated the changing relationship between online media use and political engagement (e.g., Kruikemeier & Shehata, 2017) and the use of online tabloid newspapers and political interests (e.g., Strömbäck et al., 2013) across time. In the political sciences, the lifetime learning model (Askvik, 2010; Mishler & Rose, 2001; Schoon & Cheng, 2011) suggests that the generation of political trust is a formative process in which preadult socialization and adult and postadult socialization and experiences coshape one’s political trust (Damico, Conway, & Damico, 2000). Accumulating evidence has shown the heterogeneous impacts of socialization variables (e.g., education, age, and partisanship) on political trust over time (e.g., Dalton, 2005; Marien, 2011; Wilkes, 2015). Because the Internet has become an important way of political socialization, as previously mentioned, it is logical to assume that the association between Internet use and political trust is dynamic over time.

Drawing on the lifetime learning model and considering that Avery (2009) argues that individuals’ prior political dispositions moderate the influence of the media on political trust, this study hypothesizes that the dynamic relationship between Internet use and political trust can be partially attributed to the changing social-historical context. Specifically, an individual’s interaction with major historical events has a cumulative effect (Damico et al., 2000; Schoon & Cheng, 2011) in shaping his or her past life-course experiences and political dispositions, which, in turn, affect the contemporaneous Internet–trust relationship. For example, Tao, Su, Sun, and Lu (2011) statistically verified that the victims of the Great Leap Forward/Famine (1958–1961) and Cultural Revolution (1966–1976) in China have lower political trust. Because these two political events have become the collective memories of Chinese people to a great extent and have been widely discussed on the Internet, such painful memories could trigger far-reaching resonance and arouse stronger negative emotions in cyberspace. Notably, however, the impact of Internet use on political trust likely varies across generations. In this scenario, among individuals in certain groups who underwent these tragic and horrible events, the impact of Internet use on political trust could either be strengthened (if the effect is negative) or attenuated (if the effect is positive), whereas there could be a null effect or modest effects on people who did not experience such events.
RQ1: Does the impact of Internet use on political trust vary across generations? If so, what is the changing pattern of such an effect?

RQ2: Does the social-historical context help explain the dynamic relationship between Internet use and political trust?

Thus far, research concerning the conditionality of the effects of news media has focused overwhelmingly on individual-level factors, but has neglected the influence of the media environment (Marien, 2017; Strömbäck et al., 2016). I argue that the broader Internet context is also helpful for obtaining a better understanding of potential Internet–trust dynamics. The Internet not only functions as a medium, but also acts as a context setting the availability and content of information that can be consumed, defining the range of possible actions that can be taken, and more important, delineating the changes in contexts affecting the influence of individual-level variables (Lu & Yu, 2018; Strate, 2008; Strömbäck et al., 2016). In recent years, the importance of the media context has been increasingly recognized, and “the Internet as a context” has already been incorporated in empirical investigations in political communication research (e.g., Lu & Liu, 2018; Lu & Yu, 2018, 2019).

Given that the Internet is still evolving in China, it is possible that the Internet not only has a direct impact on political trust, but also moderates the relationship between Internet use and political trust. In this study, the Internet context refers to how the Internet is developed to shape the political information production–consumption–distribution system. The Internet context is operationalized as Internet penetration. First, previous research has adopted this type of operationalization (Lu & Liu, 2018; Lu & Yu, 2018, 2019). Second, the production, consumption, and distribution of informational resources are highly dependent on Internet penetration. Scholars argue that as more people access the Internet, informational resources are more widely diffused (Lu & Liu, 2018); thus, there is not only an increase in the volume of information, but also an expansion in information diversity (Lei, 2011). The information disseminated in cyberspace is somewhat decentralized, horizontal, and interactive (Lu & Yu, 2019), which could diminish the symbolic power and control of an authoritarian state (Castells, 2010). Consequently, as interaction with diverse information via the Internet increases, an individual’s political distrust is more likely to increase (Lei, 2011).

RQ3a: Does the increase in Internet penetration impair individuals’ political trust?

In addition to having a direct effect, the changing Internet context could have a moderating effect on the relationship between individual Internet use and political trust. Conventional wisdom suggests that changes in the media environment affect how individual-level factors work (Prior, 2007). However, empirical efforts investigating this hypothesis are scarce; very few have investigated such cross-level effects of the media context (e.g., Shehata & Strömbäck, 2011). For instance, Strömbäck and colleagues (2016) found that the relationship between watching public service TV and political trust becomes slightly weaker over time as media environments transform from low-choice to high-choice environments. Similarly, Arceneaux and Johnson (2013) argue that increasing media choices could lead to a dilution of partisan media effects.
RQ3b: How does Internet penetration moderate the relationship between individual Internet use and political trust?

Research Design

Analytical Strategy

A hierarchical linear model (HLM) was employed in this study. This method was of great importance to the research setting because individuals were nested in specific contexts that constituted the second-level units, and HLM provided an appropriate statistical method to consider both levels and can accurately estimate the standard errors even if the problem of heteroscedasticity existed on both levels (Berg & Hjerm, 2010; Wilkes, 2015). In the working model, individuals were treated as Level 1, and the group variable was treated as Level 2.

The analysis proceeded in two steps. First, I descriptively analyzed the change trend of the Internet’s impacts on individual political trust (RQ1) and attempted to answer whether the social-historical context helps explain such a dynamic relationship (RQ2). The key to conducting the analysis was to select a suitable grouping identifier to minimize the intragroup differences and exaggerate the differences among the groups. I found that the birth cohort was suitable because a birth cohort moves through life together and encounters the same historical and social events at the same ages (Reither, Hauser, & Yang, 2009; Y. Yang & Land, 2008). Birth cohort was constructed according to respondent’s year of birth; cohort years ranged from those born in or before 1934 to 1993; these were then grouped into a one-year interval giving 60 sequential birth cohorts. To address the insufficient observations in each cohort thereby getting a reliable estimation of parameters, I merged five different waves of survey data collected in Mainland China in different years as pooled data.

In the second-step analysis, I examined both the direct contextual and cross-level moderating effects of the Internet context (RQ3a and RQ3b). To this end, I specified varying-intercept and varying-slope HLM models with survey year rather than birth cohort as the Level 2 grouping identifier as respondents were nested within different waves during which macro-level Internet context varied.

Individual-Level Data and Instruments

The individual-level data were pooled from five different waves of surveys collected in mainland China in different years as follows: the 2006 AsiaBarometer Survey (AB 2006), the second and third waves of the AsiaBarometer Survey, the 2010 Chinese General Social Survey (CGSS 2010), and the 2012 World Values Survey. Although these projects were conducted by different institutions, all surveys involved repeated cross-section using a similar multistage probability proportional to size stratified sampling strategy.

2 Previous studies (Jee & Cho, 2016; Reither et al., 2009; Y. Yang & Land, 2008) have adopted various types of cohort intervals (e.g., 1-, 5-, and 10-year) in different research contexts. As the robustness checks, I conducted several replications with different cohort intervals used. The replication results are reported in the Online Appendix (see Figure A1).
with a face-to-face household interview design. The five waves used key questions with very similar wording. Thus, the waves were comparable.

As shown in Table 1, the pooled data have a total weighted sample of 24,306 Chinese adults who were classified into 60 sequential cohorts. The smallest number of cases among the cohorts was 124, ensuring sufficient observations for the HLM estimation. The number of respondents in each cohort is presented in the Online Appendix (see Table A1).

<table>
<thead>
<tr>
<th></th>
<th>AB 2006</th>
<th>ABS 2008</th>
<th>CGSS 2010</th>
<th>ABS 2011</th>
<th>WVS 2012</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cases</td>
<td>2,000</td>
<td>4,961</td>
<td>11,753</td>
<td>3,430</td>
<td>2,162</td>
<td>24,306</td>
</tr>
</tbody>
</table>


**Political Trust**

The respondents were asked to rate their trust in the central government. Among all surveys, there was one discrepancy in an answer category as follows: CGSS 2010 adopted a 5-point Likert scale, but the remaining surveys employed a 4-point Likert scale with the "don't know" or "can't choose" answer being recorded. Consistent with how CGSS 2010 categorized the answers, I recoded the item on a 5-point scale (1 = greatly distrust to 5 = trust highly), and "don't know" and "can't choose" were recoded and labeled 3 (moderate trust). This type of rescaling does not influence the outcome because the proportion of "don't know" or "can't choose" in each of the four other surveys was similar to the percentage of respondents who rated this item as moderate trust in the CGSS 2010 wave. In addition, the summary statistic showed a high level of political trust (M = 4.38, SD = 0.83) in my sample, echoing most previous findings showing that Chinese citizens have a great level of trust in the central government (e.g., Ma & Yang, 2014; Wong et al., 2011).

**Internet Use**

The respondents were asked how often they use the Internet on a 5-point scale ranging from 1 (never use) to 5 (always use). The data show that the level of Internet use was relatively low (M = 1.87, SD = 1.41).

**Control Variables**

Following previous studies (e.g., Hetherington, 1998; Söderlund & Kestilä-Kekkonen, 2009; Tao et al., 2011; Van der Meer & Hakhverdian, 2017), I controlled for the respondents' subjective economic and political performance, authoritarian orientation, and general trust as the dominant predictors of political trust in this study. The measurements of authoritarian orientation and general trust are consistent with

---

3 To be certain, I separated the entire sample into two parts, CGSS 2010 and the other waves, and reran the model as a robustness check; the results presented in the Online Appendix (see Figure A2) indicate the similar patterns of the Internet's effects.
those of Ma and Yang (2014). The indicator of subjective economic performance was based on how the respondents described their families’ economic situation. For the measurement of subjective political performance, the respondents were asked how satisfied they were with the government and/or political situation. All aforementioned variables were measured and recoded using a 5-point scale; the higher the scores, the stronger the authoritarian orientation, the higher the propensity to trust in others, and the more positive the respondents’ evaluations of economic and political conditions. In addition, I controlled for a list of sociodemographic variables, including sex, years of schooling, marital status, and religious faith.

**Group-Level Data and Measures**

To answer Research Question 3, I performed the second-step analysis by incorporating the Internet penetration, which was used to calculate the number of Internet users per 100 people in a certain year in China. In addition, I incorporated group-level economic and political performance to control for the potential contextual effects of objective performances (Rose & Mishler, 2011). The GDP Index, which is a surrogate measure of objective economic performance, was the recalculated index of the GDP per capita in a given year based on the base period of the prior year. Both Internet penetration and the GDP Index can be found on the website of China’s National Bureau of Statistics (http://data.stats.gov.cn/english/easyquery.htm?cn=C01). The Governance Index, as a proxy of objective political performance, was released by the World Bank and measures the quality of governance worldwide since 1996.

**Results**

**Dynamic Relationship Between Internet Use and Political Trust in China**

Research Question 1 asked whether and how the Internet’s impacts on political trust varied across generations. Four models reported in Table 2 were fitted in sequence. The baseline model (Model 1) was applied to prove the rationality and effectiveness of the modeling. The significance of the variance in the intercept indicates that the level of political trust varied across birth cohorts. Based on Model 1, I added the Level 1 predictors to allow for variation in the intercept and define Model 2; the results show that the more positively an individual evaluated the current economic and political conditions, the more this individual preferred deference to authoritarianism and placed trust in others, and the higher the level of political trust he or she had. These findings suggest that both institutional and cultural theory have explanatory power in China’s context. In addition, the model supports the malaise viewpoint of Internet use regarding political trust.

To further examine the potential dynamics of the Internet’s impact, I fitted a varying-slope and varying-intercept model (Model 3a). Notably, considering that the data were pooled from five different waves of surveys spanning seven years from four projects, I further included year and project dummies to control for the possible unobserved aggregate shocks that could lead to biased parameter estimations (Y. Chen & Fan, 2015; Hahn, Kuersteiner, & Mazzocco, 2015). Model 3b included year and project dummies, simply replicating Model 3a; the results show that these two models yielded quite similar estimates. The chi-square

---

4 Centered years of schooling (based on birth cohorts) were included in the model to remove the possible influence of credential inflation.
tests of the variance components suggest a stable or constant positive effect of the performance-based factors on political trust across the time periods, which is identical to the findings reported by Johnson (2005), and the Internet’s impacts varied across generations.

Table 2. Hierarchical Models of Political Trust Across 60 Birth Cohorts.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3a</th>
<th>Model 3b</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet use</td>
<td>-.07***</td>
<td>-.07***</td>
<td>-.07***</td>
<td></td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective economic performance</td>
<td>.02*</td>
<td>.01*</td>
<td>.02**</td>
<td></td>
</tr>
<tr>
<td>Subjective political performance</td>
<td>.12***</td>
<td>.12***</td>
<td>.13***</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.01***</td>
<td>.01***</td>
<td>.01***</td>
<td></td>
</tr>
<tr>
<td>Gender (male = 1)</td>
<td>.05***</td>
<td>.05***</td>
<td>.05***</td>
<td></td>
</tr>
<tr>
<td>Years of schooling</td>
<td>-.01***</td>
<td>-.01***</td>
<td>-.01***</td>
<td></td>
</tr>
<tr>
<td>Marital status (married = 1)</td>
<td>.01</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Religious faith (believer = 1)</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>Authoritarian orientation</td>
<td>.09***</td>
<td>.09***</td>
<td>.09***</td>
<td></td>
</tr>
<tr>
<td>Year and project dummies</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Variance components</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>.0175***</td>
<td>.0021***</td>
<td>.0110**</td>
<td>.0100**</td>
</tr>
<tr>
<td>Internet use</td>
<td>.0006**</td>
<td>.0005**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective economic performance</td>
<td>.0007</td>
<td>.0004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective political performance</td>
<td>.0004</td>
<td>.0003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1 error variance</td>
<td>.6685</td>
<td>.6050</td>
<td>.6034</td>
<td>.6010</td>
</tr>
<tr>
<td>Deviance</td>
<td>62190.19</td>
<td>56869.87</td>
<td>56842.3</td>
<td>56773.4</td>
</tr>
<tr>
<td>Number of observations</td>
<td>24,306</td>
<td>23,201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of groups</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001.

Role of the Social-Historical Context

To answer Research Question 2, I performed a detailed examination of the pattern of the Internet’s impact and the clearly prevalent malaise effects of Internet use were recorded. More important, this study suggests that Internet–trust dynamics covary with the broader social-historical context.
As shown in Figure 1, the trajectory of the Internet’s impact coincides with the occurrences of major historical events and the rise and fall of China’s past economic and political cycles. For example, from 1934 to 1954, various wars occurred during the foundational period of the People’s Republic of China (1949), including the Anti-Japanese War (1931–1945), the Liberation War (1945–1949), and the Korean War (1950–1953); these wars inspired strong patriotism (Gross et al., 2004) that was crystallized into the collective memories of the cohorts who experienced the events (Tao et al., 2011). Thus, patriotic war memories may serve as a buffer against the Internet’s negative impact. Similarly, the horrific memories of the Great Leap Forward/Famine (1958–1961) and the Cultural Revolution (1966–1976) strengthened the malaise effect of the Internet on political trust as the Internet’s impacts on the cohorts associated with these periods were relatively negative.

![Figure 1.](image)

**Figure 1.** Heterogeneous effects of Internet use on political trust across 60 birth cohorts.

During the post-Mao era (1976–1989), China launched the reform and opening-up policy in the late 1970s and achieved great success in economic development; strikingly, however, the malaise effects of Internet use were extremely evident among the 1975–1989 cohorts. This finding is intriguing because these members can be referred to as the "strawberry generation" who enjoy the most benefit from the reform (Lian, 2014), and intuitively, their attitudes toward the party-state should be more positive than those of their parents who grew up in a centralized planned economy. A possible reason may be due to the drastic social transformation and accompanying rising liberal democratic values during which the 1975–1989 cohorts underwent a period of rapid industrialization, modernization, and globalization within their age span of formative socialization; as a result, these cohort members’ ideology and value orientations were more liberated, individualistic, and materialistic, thereby intensifying the trust-eroding effects of Internet use (Egri & Ralston, 2004; Lian, 2014; Norris, 1999; Z. Wang & You, 2016).
Notably, compared with the 1975–1989 cohorts, the Internet’s negative impacts on the post-Tiananmen birth cohorts (1989–1993) suddenly returned to an average level. This finding was expected because of Chinese leader Deng Xiaoping’s 1992 “Southern Tour Speech,” after which China’s economy started to improve following the crackdown on the 1989 Tiananmen Square democracy movement. Subsequently, the economy was transformed and became service-oriented with a growing capacity in terms of governance (Zhong, 2014). In addition, in maintaining regime stability, legitimacy, and authority, the Chinese government gave greater prominence to education in patriotism and started to employ state-sponsored media to deploy Chinese nationalist propaganda (Tang & Darr, 2012). Therefore, the Internet’s malaise effects were mitigated by excellent objective economic and political performance, echoing other scholars’ arguments (e.g., Luqiu, 2018).

**Role of the Internet Context**

Research Question 3a and Research Question 3b addressed the direct and moderating effect of the Internet context on the association between individual Internet use and political trust. As shown in Model 4 (see Table 3), Internet penetration was positively associated with political trust, suggesting that the development of the Internet environment promoted individuals’ political trust.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet use</td>
<td>−.08*</td>
<td>−.07*</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective economic performance</td>
<td>.04</td>
<td>.04</td>
</tr>
<tr>
<td>Subjective political performance</td>
<td>.19*</td>
<td>.19**</td>
</tr>
<tr>
<td>Age</td>
<td>.02**</td>
<td>.02**</td>
</tr>
<tr>
<td>Gender (male = 1)</td>
<td>.06***</td>
<td>.06***</td>
</tr>
<tr>
<td>Years of schooling</td>
<td>−.05***</td>
<td>−.05***</td>
</tr>
<tr>
<td>Marital status (married = 1)</td>
<td>.03</td>
<td>.03</td>
</tr>
<tr>
<td>Religious faith (believer = 1)</td>
<td>−.04*</td>
<td>−.04*</td>
</tr>
<tr>
<td>General trust</td>
<td>.09***</td>
<td>.09***</td>
</tr>
<tr>
<td>Authoritarian orientation</td>
<td>.12***</td>
<td>.12***</td>
</tr>
<tr>
<td>Group level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet penetration</td>
<td>.15***</td>
<td>.16*</td>
</tr>
<tr>
<td>GDP Index</td>
<td>.16***</td>
<td>.16*</td>
</tr>
<tr>
<td>Governance Index</td>
<td>.11***</td>
<td>.12*</td>
</tr>
<tr>
<td>Cross-level interaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Penetration × Internet Use</td>
<td></td>
<td>.05**</td>
</tr>
<tr>
<td>Variance components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>.0060</td>
<td>.0078</td>
</tr>
<tr>
<td>Internet use</td>
<td>.0033**</td>
<td>.0110**</td>
</tr>
</tbody>
</table>
I plotted a marginal effect graph to show the significant cross-level correlation (see Model 5) between the Internet context and Internet use. As shown in Figure 2, as the process of Internet diffusion proceeded in Chinese society, the malaise effect of Internet use gradually decreased.

![Figure 2. Marginal plot of the Internet use (IU)--political trust (PT) association by Internet penetration.](image)

**Robustness Checks**

Given that far too limited attention has been paid to the dynamic and heterogeneous effects of the Internet, the preliminary results derived from this somewhat exploratory research need to be interpreted with caution. To verify whether the findings were robust, several sensitivity tests were desperately needed. Specifically, I conducted two sets of additional analyses to determine the validity of pooling multiple surveys and the possibility of a spurious association between the Internet and political trust.
Testing the Validity of Pooling Multiple Surveys

As previously mentioned, because the results were derived from pooled data, I included year and project dummies to rule out potential unobserved aggregate shocks. The results confirm that aggregated shocks had almost no effect in this study. In addition, another potential issue that could pose a threat to the existing findings was the choice of birth cohort interval. To relax this, I selected several cohort intervals (3-, 5-, and 10-year) to verify whether the results were sensitive to different grouping identifiers. The results are presented in the Online Appendix (see Figure A1) and indicate very similar and constant patterns of effects. In summary, all results highlight the validity of pooling multiple surveys.

Considering Confounders in the Internet–Trust Relationship

Nevertheless, one may argue that the dynamic Internet–trust relationship may not be consistent because of the following two major sources of confounding. First, the observed heterogeneous effects of Internet use could simply be the result of the generational digital divide; thus, the differences in the accessibility of Internet usage and digital fluency between digital natives and digital immigrants (Hargittai, 2002; Van Volkom, Stapley, & Amaturo, 2014; E. Wang, Myers, & Sundaram, 2012) might have affected not only the level of Internet use, but also the politics-related outcomes (Shelley, Thrane, & Shulman, 2006). Second, the effects of Internet use could be conditioned on the individuals’ online activities and/or Internet usage preferences (e.g., news information and entertainment; Prior, 2005).

To address these two concerns, I added two control variables to rule out the possible confounding effects. If the estimations markedly differ from the existing results, the preliminary findings may not be robust and are prone to be affected by the aforementioned confounders. The CGSS 2010 offers the opportunity to conduct such an analysis as it is the only qualified data set containing several Internet use-related items. To determine whether the generational digital divide influenced the dynamic Internet–trust relationship, I employed the “total number of home computers purchased” as a proxy measurement of individuals’ accessibility to the Internet and/or digital skills. Similarly, I used the dummy variable “Internet as the primary informational source” as a proxy for individuals’ Internet usage preference and/or online activities.

The robustness checks presented in the Online Appendix (see Figure A3) yielded quite similar and constant results after controlling for these two variables, suggesting that the analysis in the main text is robust and reliable.

Discussion

This study reveals a dynamic relationship between Internet use and political trust in China and discloses the potential reasons for and mechanisms underlying such a dynamic association. A key insight highlighted by this article is that the Internet context exerts a positive effect on political trust, which contradicts the finding of the malaise effects of Internet use identified in both the current study and previous studies (e.g., D. Chen, 2017; Im et al., 2014; Lei, 2011). In this regard, the contradictory effects of Internet use and the Internet context on political trust merit further exploration and interpretation.
Such a contradictory result seems to suggest that the mechanisms of personal Internet use and the Internet context that affect political trust differ, further leading to totally different versions of the story.

Regarding how personal Internet use impairs political trust, from a more general perspective, I consider that especially in the social media era, the content we are exposed to in cyberspace is a mixture of information with a large amount of opinion-based content that constitutes a relatively "low-choice media environment" (Bode, 2016, p. 42). The massive amount of emotion-based truth that is available in such an environment is polarized (Ksiazek, Malthouse, & Webster, 2010), biased, and pronegativity, achieving a more extensive and faster spread in cyberspace. In this case, people are more likely to be exposed to negative political information, and consequently, the more a person uses the Internet, the less trust he or she will have in politics.

Except for the general characteristics of online information flow, the specific formats and meanings of contents, political expression in particular, on cyberspace may explain the trust-eroding effects of Internet use (You & Wang, 2019). In a nondemocracy society in which information is censored by the state, such as China, grassroots fully embrace "pop activism," that is, a set of creative, artful, and playful cyber expressive tools, to evade censorship and express political disaffection (Han, 2018a). The widely used format of such pop activism is online political satire, for example duanzi (段子, i.e., political joke), which has been observed as a networked and ritualized practice in Chinese cyberspace (G. Yang & Jiang, 2015); moreover, the cynical effect of political satire on political trust has been identified and confirmed in China’s context (e.g., Shao & Liu, 2019). Overall, although this study does not provide empirical evidence regarding whether and how the Internet–trust relationship is dependent on the specific political content/expression, the above discussion may to some extent deepen our understanding of the content-induced malaise effects of Internet use in a nondemocratic context.

In contrast, this study captures the virtuous direct effect of the broader Internet context, contradicting the expectation that the development of Internet ecology may diminish the symbolic power of the government (Castells, 2010; Lei, 2011) and, thus, impair individual political trust. Seemingly paradox, as I speculated, this finding might be related to the short and discrete timescales given that the data used in the HLM model were cross-sectional. To test this proposition, I further conducted a macro-level time series analysis by specifying a vector-autoregressive model. The Granger causality test statistically confirmed that the Internet penetration caused aggregated political trust ($\chi^2 = 4.449, p < .05$). Furthermore, the impulse-response function suggests that a one standard deviation shock to the Internet penetration rate led to significant increases in the aggregated political trust, which is consistent with the findings of the HLM model and reaffirms the reliability of the virtuous effect of the Internet context. The details and results of the vector-autoregressive model are reported in the Online Appendix (see Table A2 and Figure A4).

To understand the trust-enhancing impact of the Internet context in China, the basic premise of media ecology theory should be recapitulated. As previously reviewed, the media environment not only determines the media structure and content, but also affects individuals' thoughts, feelings, and behavior (Isla & Bernal, 2016; Prior, 2005). Currently, the state–society interactions in Chinese cyberspace have entered a stage of pluralism as follows: The structure and online expression of cyber politics represent a story of not merely "cat-and-mouse" censorship, but also of diverse and even polarized discourses.
competing with each other (Han, 2018a). As Internet penetration increases, this type of ever-growing fragmented and pluralistic cyberspace has become an emerging public arena for citizens' social and political life. Consequently, in this process of continuous discourse competitions, individuals are becoming politically empowered (Lei, 2011) and more knowledgeable about and familiar with politics (Brosius et al., 2019). In the long run, the development of the Internet context could spark political interests, stimulate communication with the government, promote civic engagement in politics and, thus, generate a relaxed political atmosphere in which political trust is formed. More important, the Chinese party-state is actively and creatively adapting to digital challenges, such as by increasing its online presence, embracing popular cyber culture, deploying nationalist propaganda online, and employing an “ideotainment” strategy (Guo, 2018; Han, 2018a, 2018b). Meanwhile, the Chinese government has been transformed to “fragmented authoritarianism 2.0” (Mertha, 2009), and the ever-expanding e-government platforms (Zhong, 2014) help facilitate government responsiveness (Li, Liu, & Meng, 2019; Su & Meng, 2016), foster transparency in governmental affairs, and encourage public political participation (Tolbert & Mossberger, 2006; Torcal, 2014). Taken together, in this regard, the higher the Internet penetration rate, the higher the level of trust in government. Simultaneously, the malaise effects of individual Internet use on political trust are mitigated by the evolving Internet environment as a result of relative freer online expression. The result showing that the coefficient of the interaction between Internet use and Internet penetration was statistically positive supports this argument; furthermore, such dilution of the media use effect resonates with other studies (e.g., Arceneaux & Johnson, 2013; Strömbäck et al., 2016).

Conclusion

The political consequences of the Internet have attracted considerable scholarly attention from both the political sciences and political communication. However, a consensus has not been reached regarding the Internet’s effects on political trust. Considering the case of China, this article offers a dynamic perspective and explores the pattern and mechanisms of the changing Internet–trust relationship.

The approach used in the current research makes contributions. Specifically, by adopting a cohort-based multilevel modeling technique with pooled data, the prevalent malaise effects of Internet use are observed across all sequential birth cohorts, which to some extent contributes to the dispute regarding the malaise versus virtuous effect of individual Internet use. Moreover, this study adds to the existing knowledge of the Internet–trust association in the world’s largest nondemocracy, China, which remains relatively unexplored compared with Western countries.

This study also contributes to the media effect and political communication literature in three ways. First, this study discloses that the magnitude of the negative effect of Internet use differs across birth cohorts, introducing a new avenue for future research to explore the heterogeneous media effect and pay more attention to the phenomenon of population heterogeneity. Second, this study shows that the occurrences of major historical events and the rise and fall of China’s economic and political cycles covary with the Internet–trust dynamics, reminding us that we may not neglect the broader social-historical context when estimating the media effect. Third, this article decomposes the Internet’s impacts into two distinct but interrelated parts and finds that the malaise effects of personal Internet usage and the virtuous effects of the Internet context coshape the level of political trust.
The limitations of this study should be noted. The use of secondary data somewhat constrains this study. Although the pooled data were national probability samples and key questions with very similar wording were used, there were still discrepancies in the answer categories and sequencing. The use of cross-sectional data for longitudinal purposes could also be criticized. I argue that the current data are the best that could be obtained and used. Specifically, politics-related surveys were restricted in China before the 1990s; it was not until the early 2000s that questions of institutional trust have been incorporated into some nationwide surveys (Shi, 2001). Moreover, in contrast to the United States, where various types of longitudinal surveys (e.g., ANES) concerning political trust exist, there is no such nationwide tracking survey available in China. Regarding the ever-changing nature of the digital landscape in China, the relatively old data used here might be criticized as another possible limitation because the generalizability of the results to the current environment could be questioned. However, as this article focuses mainly on the pattern and mechanism of dynamic associations between the Internet and political trust, the generalization problem is no longer important.

References


