

MOBILIZATION IN THE INTERNET AGE: INTERNET ACTIVISM AND CORPORATE RESPONSE

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Civil society's inability to hold powerful businesses accountable in authoritarian regimes is a grand challenge in today's global environment. We propose that the development of Internet activism provides a novel mechanism to pressure for corporate response in those societies. Internet activism is dispersed, fast moving, and interactive, and hence can effectively focus public attention and potentially undermine a company's public image by generating social comparison. In addition, firms with public image vulnerability may experience magnified pressure from Internet activism, as well as more intense social comparison. We explore this framework in the setting of corporate donations made in the wake of the 2008 earthquake in the Sichuan Province of China, which triggered Internet activism that challenged corporations to contribute to the good of the community. Analysis based on 613 large publicly listed Chinese firms supports our framework.

In Western democracies, civil society helps to hold corporations accountable to society through press and social movements (Den Hond & de Bakker, 2007; Marquis, Toffel, & Zhou, 2016). However, close to half of the world's population (44%) live in countries with no press freedom¹, and 52 countries (representing 37.6% of the global population) are considered authoritarian regimes where organized activism is outlawed (The Economist, 2015). Under these regimes, civil society has limited capacity to exercise its voice and control over businesses. The consequences of this are heightened social inequalities, disproportionate gains to politically connected business elites, and little

regard for corporate social responsibility (CSR). Whether and how civil society can check powerful businesses in authoritarian regimes is therefore a grand challenge in today's global environment, because without such a counter force, as Tocqueville (1835) observed more than 180 years ago, business prosperity will eventually harm societal wellbeing.

Use of the Internet by activists in the past two decades provides some potential to address this challenge. Compared with traditional media, the Internet is much harder to regulate. Social media and digital communication significantly reduce the costs of participating in collective action (Kollock, 1999), as shown by the protests against the World Trade Organization meetings in Seattle in 1999 and the mobilization during the "Arab Spring" (Lotan et al., 2011; Van Aelst & Walgrave, 2002). Many online activist campaigns are directed at corporations (e.g., Carty, 2002). However, while researchers in multiple fields have begun to study how the Internet enables and enhances collective action (Earl & Kimport, 2011), some have expressed concerns that the difficulties in maintaining ongoing interaction and identity in online communities may result in limited impact (e.g., Kollock, 1999). In particular, in societies with restrictions on mobilization and press freedom, corporations have rarely been challenged

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¹ https://freedomhouse.org/report/freedom-press/freedom-press-2015#.V_OhXv4VgDX

to attend to social issues. Whether and how Internet activism can elicit firm response thus remains unclear.

In this study, we draw insights from literature on the social characteristics of the Internet and social movements to develop a theory that explains how and why Internet activism can affect corporate response. We propose that Internet activism can damage a company's public image by focusing attention and intensifying social comparison, and this is a key lever by which Internet activism can grab executive attention and spur a quick response. Prior research on social movements has identified the important role of traditional media in legitimating the movement and tarnishing corporate image (King, 2008), which may in turn result in the withdrawal of primary stakeholders' support (Vasi & King, 2012). In authoritarian regimes, the Internet can serve as a grassroots mobilizing structure, aggregating attention and the voice of dispersed, unorganized, and underprivileged civil society. Thanks to online tools that allow anonymity, interaction, and a fast and wide reach, online messages can rapidly gain influence, thus increasing corporate attention to the issue concerned (Earl & Kimport, 2011).

Our framework highlights an important but less examined mechanism of image threat from Internet activism—social comparison. To the extent that the material attributes of the technology make established social norms more salient, the technology can significantly affect individual and organizational experiences (Barley, Meyerson, & Grodal, 2011; Orlikowski & Scott, 2008). We propose that a particularly potent tactic of Internet activists is triggering and intensifying social comparison, defined as the comparison of firms made by Internet users to evaluate firm behavior (Festinger, 1954; Strang & Soule, 1998). By focusing public attention on salient information, Internet activism evokes norms of social comparison (Merton, 1968). Once Internet users and the public form a negative view of a firm (unfavorable comparisons with other firms), its image is damaged. Speed is thus essential to preempt or alter a negative public impression. Some firms, because of their specific characteristics, may be more vulnerable than others to social comparison and public image damage. We suggest that such vulnerability is akin to a political opportunity structure (Amenta, 2006; King, 2008; Soule, 2012), and can magnify the pressure from Internet activism and hasten firms' concession to activist demands.

We apply our theoretical framework in the context of Internet activism demanding corporate

charitable donations following the catastrophic earthquake in Sichuan Province, China, in 2008. This is an appropriate setting to examine firm reaction to Internet activism. First, by 2008, the Internet had become the primary channel through which the Chinese public expressed its voice (Chinese Academy of Social Science, 2005), because traditional movement tactics (such as social movement organizations and organized protests) are largely restricted and traditional media (such as press and TV) are controlled by the government. Although the government may not actively restrain traditional media from reporting the public demand for corporation donation to disaster relief, the state control over civil society and media has made it less likely for the public to resort to traditional media to mobilize against corporations. Second, the absence of a culture of corporate philanthropy makes firms in China a "greenfield" context for examining the impact of Internet activism on corporate giving triggered by a natural catastrophe (Liu, 2008). As an exogenous event, the disaster provides a natural experiment setting (Tilcsik & Marquis, 2013). Third, not only does the Internet offer a new technology that enables rapid collective action, it also generates fine-grained and real-time archival data on Internet users' tactics and firms' responses (Smith, 1999), providing a rare opportunity to examine how Internet activism elicits firm responses in terms of donation.

Our study provides the first theoretical account of why and how Internet activism has the potential to address the challenge facing weak civil societies in authoritarian regimes. We shed light on how the spontaneous self-organization of Internet activism can draw a corporate response, and in particular we reveal the powerful force of social comparison that Internet activism can unleash. Our study suggests that Internet activism can be an important alternative to strengthen civil society under tight government control, check powerful businesses, and produce social change. In addition, our study identifies a new mobilizing structure, tactics, and mechanisms for social movement scholars, extending the generalizability of past research and highlighting the difference in institutional contexts.

INTERNET ACTIVISM AFTER THE SICHUAN EARTHQUAKE

The earthquake (measuring 8.0 on the Richter scale) in Sichuan Province, China, on May 12, 2008 left 69,226 known dead, 17,923 missing, and at least

4.8 million people homeless (Zhang, Rezaee, & Zhu, 2010). Although the disaster took place in a relatively unknown and remote area (the county of Wenchuan), it triggered pervasive Internet activism against large corporations (Zhang & Luo, 2013). With the rapid rise of Internet use in China, users were more active in exercising their voice—in June 2008 there were an estimated 253 million Internet users in China, 68.6% of whom were below the age of 30, and 206 million of whom read news via the Internet, second only to the number who used Internet for music (China Internet Network Information Center, 2008). This user base was increasingly important in exerting public pressure on matters ranging from corruption to corporate opportunism.

Shortly after the earthquake, a handful of firms donated to disaster relief. This created an important cleavage between firms that gave and those that did not—one that online activists were able to exploit. Internet users quickly started to voice expectations about corporate philanthropy on various websites, such as online communities, blogs, and bulletin boards. The number of online articles grew rapidly, calling on firms to give, reporting on donating firms, and criticizing failures to contribute (Zhang & Luo, 2013). The key cultural framing used by Internet activists was that “the rich” had a responsibility to aid “the deprived” in times of disaster, a Confucian principle traditionally applied mainly to individuals. Internet users extended it to firms, claiming that as firms had been able to get rich during China’s market transition, they were expected to share their wealth (Zhang, 2008). Special forums on corporate giving were established on all the major Chinese Internet portals and search engines, including Sina, Sohu, Netease, Yahoo-China, QQ, and Baidu. For instance, the Sina site opened a space called “Corporate Citizens in Action,” (<http://finance.sina.com.cn/blank/zzqyxd.shtml>) and in about 50 days, it covered 2,729 reports on corporate donation.

In addition, rankings of corporate donations based on the amount given were compiled by Internet activists, mostly anonymously. The first ranking appeared on a major community site, *Tianya*, on May 14, and was instantly and widely circulated. In the following days, different rankings appeared on other major sites, reflecting updated donation information and again becoming immediately popular. Through articles and rankings, Internet users praised generous companies and criticized those considered stingy. For example, when the company *Jia Duo Bao* responded quickly with a donation of RMB 100 million (USD 14.43 million), 3,122 positive

comments were received within a month on the Sina site alone (Huang, Li, & Zhu, 2008). Very soon, slogans spread nationwide, such as “Donate 100 million if you donate; drink Wang Lao Ji (a brand of soft drink produced by this company) if you drink.” (Wang & Yin, 2008)

Conversely, when Vanke—whose chairman, Wang Shi, was regarded as a pacesetter in the world of Chinese business—donated RMB 2.2 million (USD 317,460), it met with harsh criticism from Internet users who considered the amount too small. Wang’s efforts to justify the donation as reasonable only triggered further disapproval, including 368 posts on the Sina site within a month (Huang et al., 2008). In the five days following his statement, Vanke’s share price dropped by 12% (Sohu, 2008). Employees distanced themselves from the chair’s comments, including one who “cannot accept what the chairman said from his heart” (Hao, 2008).

Due to the interactive nature of online technology, online articles and rankings on donations were often followed by online comments from Internet users (Huang et al., 2008), thus creating a platform for the public to build consensus and pressure on firms.

THEORY AND HYPOTHESES

Internet Activism and Corporate Image Vulnerability

The unique characteristics of social media and digital technology can help overcome some of the critical obstacles to mobilization in authoritarian regimes, enabling Internet activism to mount a formidable attack on corporate public image. The literature on traditional social movements has emphasized the importance of participation, organization, and central coordination, such as through social movement organizations (Davis, McAdam, Scott, & Zald, 2005). These elements are particularly challenging in tightly controlled environments, but the Internet can be used to build a virtual community and focus attention quickly.

The first important characteristic is the drastically reduced costs of participation, which allow rapid self-organization of a huge number of participants (Carty, 2002; Salter, 2003). For Internet activism to grow in influence, writing or publishing, viewing, forwarding, commenting, and talking to friends all contribute, and can be counted as various forms of organization and participation (the distinction between the two becomes blurred compared with offline activism). Anonymity allays concerns about

reprisals (cf. traditional movements), and Internet users from all walks of life, including the less powerful, get involved. This virtual community has flexible, ever-extending boundaries as more and more people view and disseminate the messages. Internet activism can thus be scaled up quickly and at very low cost, as online tools afford fast and easy communication and information-sharing (almost) for free (Earl & Schussman, 2004).

Second, due to the interactive features of Internet media, public attention can become quickly focused. Viewers of online articles can interact with writers and potential viewers by simply adding to the number of viewers recorded below the article, making comments, or forwarding. Such interactions not only spread information more quickly and broadly, but lead to consensus building and attention focusing (Gurak, 1999). Salganik, Dodds and Watts (2006) found that when people viewed choices of songs made by others, they were more likely to make the same choices. In this way, a small number of songs became highly popular (compared with a scenario where others' choices were not known). In the same vein, since Internet users can see how many times an article has already been clicked, forwarded, and commented on, attention converges on a few Internet publications that become highly popular. Indeed, this process may have made the online rankings of corporate donation quickly become the center of attention.

Third, online technology aggregates individual actions into large-scale collective action across time and space (Earl & Schussman, 2008)—people do not have to be physically present (in time and space) in order to exert collective pressure. With asynchronous communication tools, users can interact with one another without requiring a co-presence. Even the smallest fragment of time can be efficiently used to grow the influence of the campaign (e.g., forwarding a link through a click of the mouse). Online articles can be easily archived, reused, and recombined to exert a persistent influence. This has enabled geographically dispersed Internet users to coordinate and work toward a common goal even in the absence of social movement organizations to perform central coordination (Shirky, 2008).

Aided by these characteristics of online technology, Internet activism triggers immediate social comparison across firms, thus threatening corporate image and eliciting firm responses. Internet activists frequently compare poorly performing with better performing firms. In our context, this took the form of online rankings of firm generosity following the

earthquake. By focusing attention on a common metric of information and disseminating such comparative information at an unprecedented speed and scale, Internet activism made social comparisons salient and urgent to dispersed Internet users and firms, and facilitated the comparison process. When objective measures of evaluation are unavailable, social comparison is typically used to arrive at meaningful assessment (Erickson, 1988; Festinger, 1954). Lacking prior social norms of corporate philanthropy, Internet users resorted to comparison across firms to evaluate firm behavior and form impressions about the firms' character. Through the social comparison process, information about other firms can affect public impressions of a focal firm, which may undermine its image. As the comparison process is imposed on the targets of activism—i.e., corporations (Wood, 1989)—corporate decision makers become alert to these mounting social forces, and enact the higher-order routine of following others to avoid lagging behind.

Given that the threat to a firm's public image is the key lever to elicit a corporate response, we propose that firms with greater public image vulnerability will more urgently align their action with Internet activist demands. Social movement scholars have argued that political opportunity structures allow a movement to have stronger influence on targets (Amenta, 2006). Soule (2012) called such structures "corporate opportunity structures" when the target is corporations. These can be characteristics that make firms more vulnerable to attack, or circumstances that make firms more open to change (King, 2008; Soule, 2012). Prior studies have identified firm characteristics such as size and reputation, which activists tend to target strategically to grow a movement's influence (Bartley & Child, 2011). We identify a series of corporate public image vulnerability characteristics based on China's social structure and the features of Internet activism.

Furthermore, firms with image vulnerability may be particularly susceptible to the social comparison process unleashed by activism. When public attention is focused on the same metric of information, executives at vulnerable firms may perceive a higher likelihood of being compared or more severe consequences of unfavorable comparison, thus hastening their response. Our framework thus views the potency of Internet activism not only through its direct influence but also its indirect influence in terms of magnifying the threat to firms with image vulnerability.

Pressure from Post-earthquake Internet Activism and Corporate Response

While in democratic contexts Internet activism is often used to support offline movement campaigns (such as organized protests) (Earl & Kimport, 2011), the unique characteristics of social media and digital technology described above allow activism to occur entirely online in tightly controlled environments. The post-earthquake Internet activism exerted pressure on firms mainly through two tactics: online ranking of donations and online articles on corporate donation. Online rankings generated strong social comparisons across corporations. The rankings provided aggregate and comparative information, promoted good role models, and exposed “laggards.” Espeland and Sauder (2007) argued that rankings, even for the purpose of providing objective information, can change organizations’ resource allocations because they channel organizational attention to the same simple metric and facilitate interorganizational comparison. The publication of rankings made firms concerned about unfavorable comparisons. Social comparisons undermined their public image, as happened in the instances of laggards being criticized for their inadequate response. Previous studies have shown that firms introduce certain policies to fend off attacks from activists who have already attacked other firms (Baron, 2001; Reid & Toffel, 2009). Executives may anticipate criticism from Internet users and primary stakeholders, and engage in preemptive management of their public image.

Specifically, online rankings may have got the attention of executives from firms that were ranked low and firms that did not appear in the rankings. Donors who ranked low were explicitly compared with more generous givers. Hence, executives were concerned about repeatedly appearing below their peers, and may have donated again in order to improve their ranking. Chatterji and Toffel (2010) found that corporate environmental ratings published by social rating agencies spurred poorly rated firms to improve their subsequent environmental performance. Firms not listed in the rankings were implicitly compared with the firms that donated. Thus, executives were constantly reminded that they did not measure up to public expectations and may have felt pressured to make a donation.

As an important tactic of Internet activism, online rankings are distinct from the “naming and shaming” tactics used in traditional movement campaigns, as well as the growing number of rankings and ratings published by third-party agencies. Compared with

“naming and shaming” tactics, online rankings do not specifically target selected firms and single them out for public ridicule. However, they are nonetheless powerful because of the insidious social comparison processes generated that undermine the public image of the firms unfavorably compared. While third-party agencies rank firms on various dimensions, ranging from “best places to work” to financial performance, the effectiveness of these rankings is premised upon the credibility, independence, or prestige of the third-party agency. In contrast, rankings by Internet activists were made by anonymous Internet users. In addition, whereas third-party rankings typically have the backing of prevailing industry or social norms that have already made the criteria acceptable to corporate executives (Chatterji & Toffel, 2010), the online rankings were made to challenge the lack of a norm of corporate social responsiveness. It was the unprecedented speed and reach of dissemination on an interactive media platform that gave the rankings their damaging power, which pressured executives to donate quickly to preempt (further) damage to their public image. We hence propose the following:

Hypothesis 1. Firms that compare unfavorably in online rankings by Internet activists will subsequently make donations faster than other firms.

The second main tactic was the publication of online articles on corporate donations. Given the lack of a social norm of CSR, it is critical to raise public awareness and establish the legitimacy of the activism’s demands in order to increase corporate attention (Eesley & Lenox, 2006). Prior studies have suggested that traditional media can confer legitimacy (Deephouse, 1996; Pollock & Rindova, 2003) and that media coverage of movement campaigns helps to convey activists’ message and raise corporate attention (King, 2008). However, in an authoritarian regime, online media is much more likely to achieve such ends compared to traditional media, which is generally constrained by government censorship and technical limitations (e.g., outlet constraints, space limits, printing logistics, etc.). Persistent government control of traditional media may lead to public suspicion about its credibility, and indeed may partly explain the rapidly growing readership of Internet media. Surveys have shown that prior to the earthquake, 81.5% of Internet users read news from the Internet in China, compared to 71% in the U.S. (CINIC, 2008). Hence, the volume of information released online is likely to drastically

overtake that in traditional media, and the large amount of online information and discussion on corporate donations may rivet public attention on corporate giving.

In addition, Internet media allows more timely release of information and response to ongoing events compared to traditional media, giving rise to a surge of interest. While news-based public attention tends to decline over time, digital technologies can relatively delay the decline through aggregating individuals' efforts across time and space. This is particularly important in the critical initial period when momentum needs to be built to attract corporate attention. In comparison, traditional media is characterized by "slow news days" over the weekend, which can break the momentum of growing public awareness and focusing attention.

Furthermore, because of the interactive nature of online media, firms may expect their response to be instantly reflected by online media, and thus be more motivated to preempt (further) image impairment. Consequently, Internet coverage of corporate donations may accelerate the corporate response more effectively compared to traditional media coverage.

Hypothesis 2a. The speed of firm response to Internet activism through donations will be positively related to the amount of Internet coverage on corporate donation.

Hypothesis 2b. The Internet coverage of corporate donations will have a stronger effect on the speed of firm donations compared to the coverage of corporate donations by traditional media.

Variation in Public Image Vulnerability and Corporate Response

If, as we proposed above, the Internet activism created an environment where firms were pressured by the threat to their public image, executives in firms with greater public image vulnerability may perceive a greater urgency to respond. In the Chinese context, characteristics that render corporate image more vulnerable include private ownership, potential culpability, and high social and political standing.

Private vs. state-controlled. China is characterized by a hybrid economy consisting of both state and private (nonstate) ownership (Peng & Luo, 2000). We posit that privately controlled firms in China are more vulnerable to threats to public image. As a new organizational form that emerged from the country's

market-oriented reforms, private firms have faced difficulty in attaining resources, political protection, and legitimacy (Li & Zhang, 2007). For instance, because the majority of banks in China are controlled by the government, it is much easier for state-controlled listed firms to obtain financing. Meanwhile, the greater market orientation of private firms also makes them more vulnerable to public opinion, and hence they pay more attention to customer needs and competitors (Deng & Dart, 1999). Studies have shown that private firms engage more in relationship-building and legitimacy-building (Marquis & Qian, 2014; Peng & Luo, 2000). Thus, compared with their counterparts in state-controlled firms, executives in private firms may have a greater sense of urgency when weighing the consequences for their corporate image of being compared unfavorably with other firms, since a damaged image may create even more hurdles in their future resource acquisition and economic exchange. We thus propose the following:

Hypothesis 3. The speed of response by private firms will be faster than that by state-controlled firms.

Firms in a culpable industry. Natural disasters can give rise to serious questioning of certain industries, such as the challenge to the nuclear power industry in Japan prompted by the 2011 tsunami. After the Sichuan earthquake, the real estate industry came under criticism for a number of reasons. First, a growing complaint from the public was that real estate developers were corrupt and had compromised on the quality of construction materials, which partly contributed to the loss of life after the earthquake (e.g., Gao, 2008). The collapse of some buildings—particularly schools—could have been avoided, and thousands of children's lives could have been spared had the quality of construction met the standard. Internet users shared photos of the debris, commenting that buildings collapsed because of the substandard materials used. Some challenged: "The earthquake happened. The houses collapsed. Where are the real estate developers?" (Liu & Lang, 2008). Although only certain developers were actually culpable of substandard construction, the entire industry anticipated closer scrutiny because substandard quality had become (or was perceived as) a general weakness in the industry. Jonsson, Greve, and Fujiwara-Greve (2009) reported that when one company's deviant act is discovered, audiences generalize and associate this deviance with innocent companies that have similar characteristics.

In addition, the real estate industry in China is known for allowing executives to accumulate abnormally large fortunes, partly because of weak market institutions. One ranking at the time indicated that seven of the 10 richest people in China were real estate developers (Forbes, 2008). Given the activists' framing that the wealthy should share with the deprived, real estate companies felt the urgency to give. An Internet commentary entitled "Earthquake relief grills the conscience of the rich: Real estate developers donated less than 2 million" (Liu & Lang, 2008) vividly illustrates the social expectations. Thus, the huge wealth of the industry, in addition to the perceived culpability, exacerbated its vulnerability. Many real estate firms donated to preempt damage to their corporate image. For instance, the vice chairman of the Jia Run Real Estate Company in Guangdong Province, Mr. Wang, said that when Jia Run donated, it wanted the public to know that it cared. He emphasized how over the years Jia Run had maintained a high quality of construction: "With the hindsight from today, our emphasis on the quality of our construction is in fact our respect for life" (Soufun, 2008). We therefore propose the following:

Hypothesis 4. The speed of response by firms in the real estate industry will be faster than that of firms in other industries.

Reputation. As a general assessment of a firm's character and approval rating, corporate reputation is conferred externally (Fombrun, 1996; Rao, 1994; Staw & Epstein, 2000). Even a good reputation can be lost if audiences withdraw their approval after a critical event (Currall & Epstein, 2003). It is generally agreed that it takes longer to build than to lose a reputation (Staw & Epstein, 2000). Executives of highly reputed firms may therefore be especially concerned about reputation loss. Ahmadjian and Robinson (2001), for example, found that high-reputation firms in Japan were less likely to downsize, an action perceived at that time as lucrative but illegitimate. Sutton and Galunic (1996) suggested that the "perils" associated with high-reputation firms are closer public monitoring and demands to account for their actions. Hence, such firms tend to be preoccupied with meeting public expectations.

High-reputation firms are seen as strategic targets by activists, so they are especially vulnerable to attack (Bartley & Child, 2011). For example, the extreme sanctions on Vanke may partly have been because its high renown made it a strategic target for Internet commentators. Not only are high-reputation

firms likely to be more closely watched, but public expectations of their participation compared with other firms may be higher given their social standing. Furthermore, they may perceive the cost of *not* responding to the activist demands to be higher. Spar and La Mure cited Novartis' response to the firm's awareness of the risks to its reputation. As one of its executives put it: "Reputation is one of the most valuable assets of a company." (Spar & La Mure, 2003: 94) We posit that the vulnerability of high-reputation firms prompts them to donate more quickly to avoid (further) criticism:

Hypothesis 5. High-reputation firms will respond more quickly than firms without a high reputation.

Political status of executives. Given the importance of government control over resources and the prevalence of government intervention in business in transitional markets (Hoskisson, Eden, Lau, & Wright, 2000), top executives seek political office to secure favorable treatment of their firms, as well as to garner personal power. However, the high political status they attain can lead to a greater sense of firm vulnerability to Internet activism. Because their political standing places them more in the government domain, they are expected to be as concerned about public welfare as the government, and the public legitimately expects them to contribute to disaster relief. For instance, reports on corporate donations often specifically mentioned that the top executives of the donating companies held a high-level position in the political system (e.g., Southern Daily, 2008), suggesting that their political status differentiated them from others. Given the value of political status for the firm (Hillman, Zardkoohi, & Bierman, 1999), executives may anticipate a greater loss if the firm's public image is tarnished—for example, a leader of a publicly disgraced company may not be reappointed to a top political post. Their personal interests are at stake as the damage to the firm's image can threaten their own career advancement. Since the potential loss for both the company and its executives makes such firms more vulnerable, we posit that they will prioritize the need to align with activist demands.

Hypothesis 6a. The response by firms whose top executives hold high-level political appointments will be faster than that of firms whose top executives do not hold such political appointments.

As online technology allows for the co-presence of individuals across time and space, we further posit

that top executives with national-level political appointments have a greater corporate image vulnerability than those with provincial-level political appointments. Because Internet users in dispersed provinces can monitor corporate behavior and exert pressure on firms at the same time, executives who hold office at national level may perceive themselves and their firms as more likely targets for criticism. Internet users may focus on firms with nationally recognized executives so as to grab more attention from the geographically diverse online community and grow the influence of the activism. While executives with provincial political appointments may be sheltered from public scrutiny in provinces outside their political office, those with national-office positions perceive a potential threat to the firm's public image across the country thanks to the broader scope of attention and exposure enabled by online technology.

Hypothesis 6b. The response by firms whose top executives hold national-level political appointments will be faster than that by firms whose top executives hold provincial-level political appointments.

Vulnerability Accentuated as a Result of Social Comparison

In addition to the predicted main effects of firm vulnerability characteristics, firms' image vulnerability can be accentuated when confronted with unfavorable social comparisons by online rankings. Since the rankings focus public attention on firms' donations, vulnerable firms may anticipate a higher likelihood of being compared with others and higher costs of unfavorable comparison. Social comparison may hence elicit a faster response from these firms as they seek to avoid or change unfavorable comparison. Prior research on third-party rankings has indicated that when the ranking criteria are specific dimensions, such as corporate environmental performance, firms under greater scrutiny from specific stakeholders, such as government regulators, are more likely to respond to improve their low rankings (Chatterji & Toffel, 2010). In contrast, even with a specific and narrow ranking criterion (i.e., amount of the donation), the online rankings accentuated the pressure on firms from a broad range of stakeholders, because the rankings were used as an activists' tactic to threaten corporate public image.

In the case of being listed as low donors, vulnerable firms may find it particularly unacceptable to be

displayed as giving less than others, while less vulnerable firms may be content to merely participate in giving. Especially when corporate image vulnerability stems from a high social standing, given the public's high expectations of these firms, a low ranking may be seen as inconsistent with their public image, and fast action will be taken to correct this impression. Similarly, vulnerable firms may find that their absence from the rankings sends a particularly strong message inviting disapproval from the public. Executives may anticipate a higher likelihood of being singled out for criticism and more dire consequences if spotlighted for nonparticipation. Hence, they would respond more swiftly by following suit (like those in the rankings). The social comparison pressure from online rankings thus amplifies the threat of image damage for vulnerable firms and hastens their response even more effectively.

Hypothesis 7. Vulnerability characteristics (e.g., private firms, real-estate firms, firms with high reputation and whose top executives hold high-level political appointments) interact with the tactic of online rankings so that vulnerable firms compared unfavorably in the online rankings will respond more speedily through donation.

METHODS

Data and Sample

Our sample consists of large, publicly listed companies in China. The majority of publicly listed firms in China at the time were state-controlled enterprises (63%), and on average state-controlled firms were larger than private (i.e., nonstate) firms. In order to have a balanced representation of state-controlled and private firms to test our hypothesis on private firms, we first ranked (by total assets) listed firms separately for state and private firms. The 300 largest state and the 300 largest private firms were included in our sample. We then added all 26 publicly listed financial institutions (mainly banks), the only industry listed in a separate database. Such a sample is appropriate for testing our theory because large firms are more visible and therefore more likely to be targeted by activist campaigns (Smith, 1996). There were 13 firms with missing information, and hence our final sample consisted of 613 firms.

We gathered information about these companies' donations from formal company announcements made through the stock market (reported on the website of the Shanghai or Shenzhen Stock Market or

by *Shanghai Security Newspaper* and *Chinese Security Newspaper*).² We began following the companies on the day of the earthquake (May 12, 2008) and created daily spells between this date and June 30, 2008. Most donations were made before June 30, 2008, after which the attention of the country was largely turned to the Olympic Games held in Beijing.³ Other firm-level data were from the Sinofin database compiled by the China Center for Economic Research. This is a widely used database on China's listed companies that provides information about companies' background and financial statistics (e.g., Kato & Long, 2006). We also collected some firm-level information directly from the firms' annual reports.

Dependent Variable

Since we posit that speed is critical to firm response to Internet activism, we used event history analysis to examine the speed of donation. The dependent variable is the hazard rate of donation. After the earthquake, 465 firms (of our sample) made a donation, and 148 firms (about 24% of our sample) did not donate and were considered right-censored. Among the donating firms, 109 firms donated twice or more. Therefore, we modeled multiple donations as repeated events. We measured the number of days from May 12, 2008, until the day the firm made a donation (if ever).

Independent Variables

Pressure from Internet activism. We measured the two main tactics that reflect the pressure from Internet activism. The first tactic was measured by two variables based on the five most widely circulated rankings of firm donations. A search of "Sichuan earthquake" and "company donation ranking" in Baidu generated about 1.4 million related sites. Since most sites cited one another, many

of the lists were the same. We hired a professional data mining service to identify the different lists, select the five most widely circulated lists based on the number of sites on which they appeared, and trace the first day they appeared. The five rankings were published first on tianya, 55BBS, rizhao, baidu, and Xinhua, respectively on May 14, 15, 16, 20 and 21.⁴ The number of companies included in them ranges from 194 to 364. Based on the initial publication dates and firms listed on the rankings, we created two dichotomous time-varying measures. *Ranked as low donor* was coded as 1 if a firm was located in the lower half of the list, and 0 otherwise (i.e., coded as 0 if a firm appeared in the upper half of the list or did not appear on the list). This variable captures the lower-than-median donors on the ranking. The firm stayed as in the previous ranking and was valuated again on the day when a new list was published.⁵ *Not recognized as donor* was coded as 1 after the earliest list was published and if a company did not donate and did not appear on the list; it stayed as 1 until it appeared on a later list—on that day it became 0 and stayed 0. The value of "1" for the two variables indicates the presence of the social comparison pressure from the rankings, and thus the variables were coded as 0 before May 14 (the date when the first ranking was published). The firms were not under such pressure before the rankings were published. The values for both variables were lagged for one day to allow for firm response.

The second tactic was measured by the total number of articles published on the major websites on corporate donation each day (lagged by one day). This measure was obtained from a previous study of multinational firms' donations in the same context (Zhang & Luo, 2013). The nine most widely read websites (based on Alexa, a widely accepted ranking of the most popular Chinese websites) were selected, and variations in Chinese for "corporate donation" and "Sichuan (or Wenchuan) earthquake" were used as key terms to identify articles.

Traditional media. To compare the effects of online versus traditional media, we measured the total number of articles on corporate donation published in the major nationwide newspapers each day

² We cross-checked company websites, reports, and the rankings of company donations on the Internet. Overall, there was consistency with respect to the timing and amount of reported donations. We also tracked reports to confirm that there were no instances of a sampled firm not making the promised donation.

³ We checked donations made by sampled firms between June 30 and one year after the earthquake, and found only 11 donations. The time span for our analysis thus allows us to capture 98% of the donations made by sampled firms.

⁴ These Internet sites are well-known community, search, and news sites in China.

⁵ For the variable *not recognized as donor*, since the lists were not comprehensive in identifying all donating companies, we assume that firms that donated but did not show up on the lists were not under the same pressure, and therefore coded those cases as 0.

during the same observation period (lagged by one day). We collected the information from WiseSearch, a media database that includes 1,300 newspapers in China. To be comparable with the online media coding, we chose the category “the most influential comprehensive media,” which includes 19 newspapers such as *People’s Daily*, *Guangming Daily*, *Economic Daily*, *South Daily*, and *Wenhui Daily*. We used the same key terms as above to identify articles.

Private versus state-controlled companies. The Sinofin database provides information about the characteristics of the dominant shareholder. State-controlled firms are those where the dominant shareholder is the state, while private firms are those where the dominant shareholder is private individuals. The variable *private* is coded as “1” for private firms, “0” for state firms.

Firms in a culpable industry. As described above, the real estate industry came under attack because of its potential culpability and extraordinary wealth. About 8% of the sample (47 firms) are in the real estate industry (coded as “1,” and “0” otherwise).

Company reputation. General reputation rankings are a recent phenomenon in China. These serve as certification contests, bestowing high reputation on winning or listed firms (Rao, 1994). We selected eight nationally recognized rankings upon consultation with experts in corporate reputation in China.⁶ We created a binary variable to indicate whether a firm had received any of these awards or been listed in the rankings before the earthquake. Those that had were considered to be firms with high reputation, accounting for 8% of our sample.

Political status of top executives. As in some other emerging economies, in China the most powerful

executive position in the firm is the chairman of the board, which is equivalent to the combined chairman and CEO position in the United States (Chen, Firth, Gao, & Rui, 2006). We measure the chair’s political status by (i) whether the firm’s chair was serving or had previously served as a delegate to the national People’s Congress (PC, China’s legislative body) or to the national Chinese People’s Political Consultative Conference (CPPCC), and (ii) whether he or she was or had been a delegate to the provincial PC or CPPCC. The PC and CPPCC are the only important political organizations in China that are open to business leaders. For those who had served at both levels (they cannot serve both at the same time), we only consider the national-level appointment. We collected this information case by case through company webpages and corporate publications, and we called the companies when public sources were not clear. In 9% of the sampled firms, the chair had been appointed to the national PC or CPPCC, and in 8% of the sample, the chair had been appointed to a provincial office.

To test our hypothesis on how online rankings accentuated corporate vulnerability, we created interaction terms between the two measures of online ranking (*ranked as low donor or not recognized as donor*) and measures of vulnerable firms.

Control Variables

We controlled for firm characteristics that may affect donation or potential targeting by activism, as suggested by prior research. Large firms were found to donate more, and we measured *firm size* as the log of the number of total employees (Amato & Amato, 2007). The number of *years since the firm’s initial public offering* (IPO) may reflect the firm’s market orientation. Waddock and Graves (1997) suggested that well-performing firms donate more because they have slack resources. Company performance was measured by the average *return on assets* (ROA) in the previous three years. Firms in highly monopolized industries have little incentive to engage in philanthropy (Johnson, 1966). We created a dummy variable for *monopolistic industries*, which include energy, utilities, and telecommunications. Some research has suggested that firms with stronger needs for marketing engage more in CSR (e.g., Fry, Keim, & Meiners, 1982). Following these studies, we controlled for consumer industries and marketing expenditure. We used four-digit industry codes (GICS) to classify firms as being in *consumer-related industries* (coded as 1), defined as industries whose

⁶ These rankings are: the most respected companies (as selected by the Case Research Center at Peking Univ. and the Economic Observer), the best employer award (organized by China’s Central Television), China’s best corporate citizenship award (organized by the 21 Century Newspaper), the most praised companies (as selected by Fortune), firms with the highest sense of responsibility (as selected by China Newsweek and China Red Cross), the Guangming social responsibility award (organized by Guangming Daily), companies with the best image (as selected by the Research Center on Development of the State Council), and the corporate social responsibility ranking issued by Hurun (Rupert Hoogewerf). Each of these awards encompasses a wide range of measures. For example, China’s best corporate citizenship award is based on good treatment of shareholders, employees, customers, business partners, environment, and society (Document for Selecting the Best Corporate Citizens, 2007).

direct customers are individual consumers rather than other firms. In order to avoid multicollinearity, we did not include real estate as a consumer-related industry. A total of 45% of the sample are within consumer industries. *Marketing expenditures* was measured as the annual marketing expenses as a percentage of total sales (Fry et al., 1982). We used the average annual marketing expenses in the previous three years divided by the average annual sales. Some of these characteristics above can make firms more likely to be targeted by activism, such as firms that are larger, more visible, consumer-oriented, and financially sound (e.g., Lenox & Eesley, 2009; Smith, 1996). These firms may respond sooner, although targets of activism can also choose to resist (e.g., Spar & La Mure, 2003).

We also controlled for firms' ownership and governance. We considered whether the firm has any *foreign investment*. Firms with foreign ownership may suffer from the liability of foreignness and face more challenge from collective action. However, foreign investment, if there is any, is low in domestic publicly listed firms in China and may not be discernible to Internet users. Prior research has suggested that ownership concentration allows owners to monitor effectively and thus to discourage management from donation, and that powerful executives may weaken the monitoring and enable donation (Atkinson & Galaskiewicz, 1988). We controlled for *ownership concentration* by the percentage of shares owned by the largest shareholder. We used *top leaders' tenure*, measured by the number of years the chair was in such a position, to proxy executive power (Westphal & Zajac, 1994). In addition, given that executives with different functional backgrounds have different strategic priorities (e.g., Hambrick & Mason, 1984; Weber, Rao, & Thomas, 2009), top executives with a marketing background may prioritize management of corporate image during the Internet activism. We coded functional background using the position and department affiliation of the executives' longest work experience. *Marketing background* was "1" if either the chair or general manager had a sales or marketing background and "0" otherwise. We controlled for the location of a firm's headquarters by *coastal areas* (coded as 1), which have better market infrastructures than the interior areas, and *Sichuan*, the province hit by the quake. To reflect the *significance of the operations in Sichuan* for the firm, we also controlled the registered capital of each firm's Sichuan branch as a percentage of total registered capital of all its branch companies.

Analysis

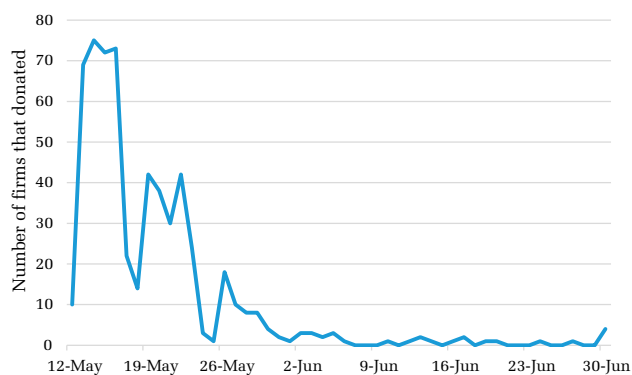
We use continuous-time event history analysis to examine how quickly firms responded to the earthquake with donations (Box-Steffensmeier & Jones, 2004). The data structure for our event history analysis consists of daily spells with both time-invariant and time-variant variables. Figure 1 shows the number of firms making a donation each day following the earthquake. We employ the Gompertz model, which can assume a monotonically decreasing base rate.⁷ We specify clustering on firms, which uses a standard error that is robust (Rogers, 1993), to take into account the occurrence of repeated events for a firm.

To test our argument that during the Internet activism, corporate vulnerability characteristics explain which firms responded faster to the activist demands, we need to net out the influence of these characteristics on firms' propensity for donation prior to this specific disaster. An advantage of our China context is that there was a lack of social expectation for corporate philanthropy in general before the earthquake. Still, a rigorous test of our argument would control for the possibility that firms with these characteristics may have differed in their donation practices before the disaster. We conducted a propensity score weighted analysis, which in effect controls for firms' prior propensity to donate when examining the effect of activism (Guo & Fraser, 2010). The first step in this procedure is to estimate the selection into having a "treatment" (donation before the earthquake) through a probit regression. The dependent variable of the selectivity model is whether a firm donated between 2005 and May 11, 2008. This variable was coded based on information collected from the database on China Economic News, Duxiu database, and ChinaCSRMap.⁸ We

⁷ The monotonically decreasing base rate fits the general pattern of post-earthquake donation rates, and therefore the Gompertz model provides a good model fit. We also estimated the constant rate model, the Weibull model, and the log-normal model, and our key results remained.

⁸ For the database on China Economic News and for Duxiu database, we used the keywords of company name and "donation" or "charity" or "social responsibility" to search. For ChinaCSRMap, which includes information on 487 firms, we collected information on whether firms in our sample donated between 2005 and May 11, 2008. We then put information from the three sources together and deleted repetitive items, and thus obtained the times and the total amount of donation by firms in our sample in this period.

FIGURE 1
Number of Large Publicly Listed Chinese Firms that Donated Following the Earthquake on May 12, 2008



obtained the propensity scores using the *pscore* routine in Stata.⁹ In the second step, we used the propensity scores to adjust our event history regression and OLS analysis, respectively, through propensity score weighting (Hirano, Imbens, & Ridder, 2003).¹⁰ The estimates after the propensity score weighting was applied did not differ substantively from those before. This suggests a strong impact of Internet activism and corporate

⁹ In our sample, there were 103 firms with the treatment (donation) against 510 in the control group (no donation). In the probit model, we used explanatory variables found as important predictors for corporate donation in prior research (e.g., Brammer & Millington, 2008; Wang & Qian, 2011) (i.e., being located in coastal areas, firm size, performance, marketing expenditure as percentage of total revenues, monopolized industries, consumer industry, ownership concentration), as well as our measures of vulnerability (private ownership, real estate, reputation, and political appointment in national and provincial government). We used data from different years for some variables (compared with the main regression) to adjust to the dependent variable (which describes donation between 2005 and May 2008) (e.g., we used the average of employment, marketing expenditure ratio, and ROA between 2003 and 2005). The model had a good fit (χ^2 144.13 $df = 12$, $p < .001$).

¹⁰ Treated and control firms were reweighted to be representative of a population from which they were drawn. Let p be the estimated propensity score, the weights are $1/p$ for a firm that had a higher propensity to donate (i.e., we observed its donation prior to the earthquake) and $1/(1-p)$ for one that had a lower propensity to donate (i.e., no donation observed prior to the earthquake).

vulnerability after controlling for firms' pre-existing propensity to donate. We present results with the propensity score weighting in Table 2.

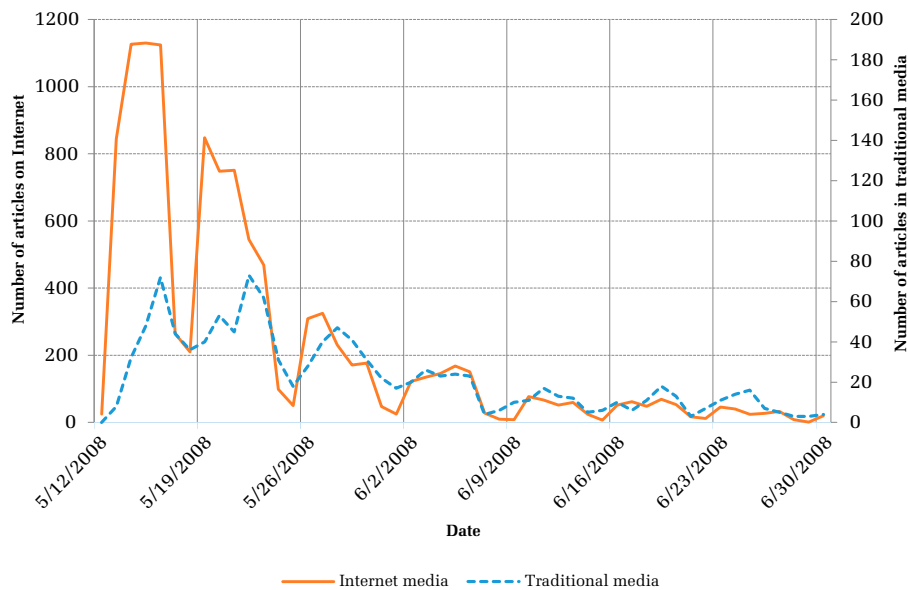
RESULTS

Figure 2 shows the comparison between the Internet and traditional media with regard to the number of articles on corporate donation published in our study period. The amount of Internet media on this issue was much more voluminous than that in the traditional media. Moreover, the Internet media peaked more rapidly, at 1,130 articles on the fourth day following the earthquake, and stayed at a high level longer, especially in the first two weeks. It then started to decline gradually and more sharply in June. Whereas traditional media troughed significantly over the weekend (marked by gridlines), Internet media remained relatively high. Consequently, the Internet media helped to quickly raise public awareness, focus attention, and feed the momentum to demand corporate donation; in contrast, the time trend of slow peaking and declining on weekends in traditional media was almost opposite to the rapid surge in corporate donation events shown in Figure 1.

Table 1 reports the descriptive statistics for the event history analysis. Table 2 presents event history models predicting donation rates. To guard against potential multicollinearity, we checked the variance inflation factor (VIF) of all our independent and control variables. The largest VIF was below 3, which is significantly lower than the generally accepted maximum of 10 (Neter, Kutner, Nachtsheim, & Wasserman, 1996).

In Table 2, Model 1 is the baseline including only control variables. Model 2 includes the variables for Internet activism and for corporate vulnerability, to test Hypotheses 1 through 6. Using the likelihood ratio tests, we see that the overall model fit is significantly improved over Model 1. We then test Hypothesis 7 by including the interaction between the two measures of online rankings and vulnerability characteristics one at a time. We report only the significant interactions in Model 3, and the inclusion of these interactions significantly improved the overall model fit of Model 3 over Model 2. For repeated event history analysis, heterogeneity in having prior events may affect the occurrence of later events. We

FIGURE 2
Number of Articles on Corporate Donation Published on the Internet versus in Traditional Media, Post-Earthquake, China, 2008



hence also examine the initial donation events and subsequent donation events separately in Models 4a and 4b.¹¹ The two measures of online rankings are each meaningful in only one of the two models. Again, we report only the significant interactions. In Model 4a, the risk set is all the firms (before their first donation), and hence the variable *Not*

recognized as donor was relevant.¹² In Model 4b, the risk set is the firms that have made one donation, and thus the variable *Ranked as low donor* was relevant.¹³ The results in Models 4a and 4b regarding the interactions are consistent with those in Model 3.

Hypothesis 1 predicts that firms that compare unfavorably in online rankings will subsequently make donations faster compared to other firms. In Model 2 of Table 2, the coefficient of the variable ranked as low donor is positive ($p < .05$)—being ranked low increases a firm's likelihood of donation by 57% in a given time interval ($e^{0.45} = 1.57$). Not being recognized as a donor in the rankings has a strong positive effect on the speed of donation ($p < .01$), leading to a 210% higher likelihood of donation

¹¹ This also helped us to control for the possibility that firms that had not yet donated were more likely to donate independent of the existence of the rankings. Examining initial donations and subsequent donations separately effectively controlled for heterogeneity in prior donation events. Note that our two variables for online rankings are still conceptually and empirically different from the variable indicating whether a firm has already donated at each time point. *Not recognized as a donor* is different from *Has donated* primarily because of the time lag between the quake and the publication of rankings (the correlation between the two variables was $-.85$). *Ranked as a low donor* is different from *Has donated* because it distinguishes low donors from high donors (the correlation between the two variables was $.15$). While in general firms that have donated already may not feel additional pressure to donate again, we predicted that low donors would feel stronger pressure to donate again (especially if they had public image vulnerability).

¹² As an alternative model specification to test the effect of online rankings (i.e., *Not recognized as donor*) on the initial donation, we estimated a piecewise constant rate model predicting the initial donation events, with period-specific effects. We used May 14th, the day the first ranking appeared, to divide the two periods (instead of using the variable *Not recognized as donor*). We found consistent results as reported here.

¹³ The time clock for this analysis was set as the time duration since the first donation event.

TABLE 1
Descriptives of Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1 Coastal area	0.63	0.48	1								
2 Headquartered in Sichuan	0.03	0.18	-0.25*	1							
3 Significance of operation in Sichuan	0.03	0.15	-0.23*	0.8*	1						
4 Firm size (logged)	8	1.55	-0.06*	0.04*	0.02*	1					
5 Years since IPO	9	4.31	-0.06*	0.1*	0.08*	-0.22*	1				
6 ROA	5.12	5.55	-0.03*	0.01	-0.02*	0.11*	-0.27*	1			
7 Monopolized industry	0.08	0.28	-0.06*	-0.06*	-0.05*	0.09*	0.08*	0.08*	1		
8 Consumer industries (excl. real estate)	0.45	0.5	0.08*	-0.01	0.01	0	0.04*	-0.17*	0.1*	1	
9 Marketing expense	5.55	7.3	-0.02*	0.01	0.06*	-0.01*	0.02*	-0.05*	-0.1*	0.33*	1
10 Foreign-invested	0.23	0.42	0.23*	-0.08*	-0.07*	0.23*	-0.09*	0.01	0.01*	0.02*	0.03*
11 Ownership concentration	0.38	0.16	-0.01	0.07*	0.05*	0.17*	-0.14*	0.21*	0.17*	-0.13*	-0.14*
12 Chair tenure	5.56	3.38	0.02*	0.03*	0.01	0.02*	0.23*	0.04*	-0.07*	0.02*	0.04*
13 Marketing background of executives	0.07	0.25	0.02*	-0.01*	0	-0.02*	0.08*	0	-0.03*	0.06*	0.02*
14 Not recognized as donor on rankings (lagged)	0.28	0.45	-0.02*	-0.04*	-0.04*	-0.18*	0.09*	-0.13*	0.08*	-0.08*	-0.16*
15 Listed as low donor on rankings (lagged)	0.06	0.24	0	0.04*	-0.01	0.06*	0.05*	0.02*	-0.04*	0.05*	-0.01
16 Number of Internet articles on corporate donation (lagged)	221.3	316.95	0	0	0	0	0	0	0	0	0
17 Number of articles on corporate donation in traditional media (lagged)	22.3	18.42	0	0	0	0	0	0	0	0	0
18 Private- (non-state-) controlled	0.45	0.5	0.02*	0.05*	0.01*	-0.33*	-0.08*	-0.11*	-0.22*	0.15*	0.09*
19 Real estate firms	0.08	0.27	0.09*	-0.05*	-0.05*	-0.35*	0.13*	-0.07*	-0.09*	-0.26*	-0.05*
20 High reputation	0.08	0.27	0.13*	0.01	-0.01	0.29*	-0.03*	0.05*	0	0.11*	0.11*
21 National PC/CPPCC delegate	0.09	0.29	-0.03*	0	-0.04*	0.16*	-0.15*	0.03*	-0.06*	0.05*	0.08*
22 Provincial PC/CPPCC delegate	0.08	0.27	0.06*	0.08*	0.05*	-0.07*	-0.04*	0.01	-0.07*	0	0.01*
23 Total donation amount (logged) ^a	4.18	2.67	-0.05	0.08*	0.09*	0.33*	-0.13*	0.23*	-0.06	0.09*	0.17*

TABLE 1
(Continued)

Variables	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Coastal area													
2 Headquartered in Sichuan													
3 Significance of operation in Sichuan													
4 Firm size (logged)													
5 Years since IPO													
6 ROA													
7 Monopolized industry													
8 Consumer industries (excl. real estate)													
9 Marketing expense													
10 Foreign-invested	1												
11 Ownership concentration	0.01												
12 Chair tenure	0	-0.21*											
13 Marketing background of executives	-0.04*	-0.02*	0										
14 Not recognized as donor on rankings (lagged)	0.01	-0.03*	-0.06*	-0.05*									
15 Listed as low donor on rankings (lagged)	-0.02*	-0.06*	0.04*	0.04*	-0.16*								
16 Number of Internet articles on corporate donation (lagged)	0	0	0	0	0.19*	-0.05*							
17 Number of articles on corporate donation in traditional media (lagged)	0	0	0	0	0.18*	-0.01*	0.7*						
18 Private- (non-state-) controlled Real estate firms	-0.14*	-0.24*	0.06*	0	0.02*	0.02*	0	0					
19 High reputation	-0.03*	-0.01*	-0.07*	0	0.01*	-0.02*	0	0	0.05*				
20 National PC/CPCC delegate	0.12*	0.09*	0	0.04*	-0.18*	0.06*	0	0	-0.11*	0.03*			
21 Provincial PC/CPCC delegate	0.06*	-0.02*	0.17*	-0.02*	-0.12*	0.04*	0	0	0	-0.05*	0.15*		
22 Total donation amount (logged) ^a	-0.06*	-0.08*	0.11*	0.02*	-0.04*	0.03*	0	0	0.15*	0.03*	0.03*	-0.09*	
23	0.03	0.12*	0.08*	0.06	-	-	-	-	-0.11*	-0.02	0.31*	0.2*	0.03

Notes: 30,650 observations for 613 firms with 594 events of donation.

^a Descriptives of variable 23 are based on 613 observations (firms), where the donation amount of firms that did not donate in this time period was treated as 0.

* Significant at $p < .05$ or lower.

TABLE 2
Event History Models Predicting Corporate Donation (N = 613 firms)

Variables	Model 1	Model 2	Model 3	Model 4a	Model 4b
Coastal area	0.11 (0.07)	0.07 (0.09)	0.07 (0.09)	0.08 (0.11)	0.04 (0.24)
Headquartered in Sichuan	-0.09 (0.16)	-0.18 (0.23)	-0.21 (0.23)	-0.24 (0.38)	-1.18* (0.57)
Significance of operation in Sichuan	0.38+ (0.22)	0.63* (0.31)	0.68* (0.32)	0.63 (0.47)	1.91** (0.68)
Firm size (logged)	0.14** (0.02)	0.18** (0.03)	0.18** (0.03)	0.18** (0.04)	0.39** (0.10)
Years since IPO	-0.003 (0.01)	-0.002 (0.01)	0.001 (0.01)	-0.003 (0.01)	0.02 (0.02)
Return on assets	0.02** (0.00)	0.02** (0.01)	0.03** (0.01)	0.03** (0.01)	0.02+ (0.01)
Monopolized industry	-0.24+ (0.14)	-0.29+ (0.17)	-0.29+ (0.17)	-0.37+ (0.20)	-0.35 (0.40)
Consumer industries (excl. real estate)	0.11+ (0.07)	0.18* (0.09)	0.19* (0.09)	0.24* (0.11)	0.16 (0.24)
Marketing expense	0.01** (0.00)	0.02** (0.00)	0.02** (0.00)	0.02** (0.00)	0.00 (0.01)
Foreign-invested	-0.09 (0.07)	-0.11 (0.09)	-0.11 (0.09)	-0.14 (0.12)	-0.08 (0.21)
Ownership concentration	0.13 (0.19)	0.17 (0.24)	0.21 (0.24)	0.26 (0.31)	0.09 (0.55)
Chair tenure	0.01 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.01 (0.03)
Marketing background of executives	0.16 (0.10)	0.19 (0.13)	0.21 (0.14)	0.30+ (0.18)	0.35 (0.28)
Independent Variables					
Listed as low donor on rankings (lagged)		0.45* (0.19)	0.24 (0.26)		-0.25 (0.41)
Not recognized as donor on rankings (lagged)		1.13** (0.10)	0.93** (0.13)	0.40** (0.15)	
Number of Internet articles on corporate donation (lagged)		0.001** (0.0001)	0.001** (0.0001)		
Number of articles on corporate donation in traditional media (lagged)		-0.01** (0.003)	-0.01** (0.003)		
Private- (non-state-) controlled		0.05 (0.09)	-0.14 (0.12)	-0.20 (0.15)	0.16 (0.23)
Real estate firms		0.46** (0.17)	0.45* (0.18)	0.47* (0.22)	0.77 (0.49)
High reputation		0.63** (0.12)	0.54** (0.12)	0.87** (0.14)	0.54* (0.26)
National PC/CPCC delegate		0.24* (0.11)	0.21+ (0.12)	0.39** (0.14)	-0.02 (0.28)
Provincial PC/CPCC delegate		0.02 (0.12)	0.04 (0.13)	0.18 (0.17)	-0.57 (0.40)
Listed as low donor on rankings (lagged)*			0.65+ (0.33)		1.69** (0.48)
National delegate			0.35* (0.16)	0.40* (0.19)	
Not recognized as donor on rankings (lagged)* private			0.45* (0.22)	0.49+ (0.26)	
Not recognized as donor on rankings (lagged)* reputation					
Constant	-3.68** (0.22)	-4.92** (0.37)	-4.86** (0.37)	-4.50** (0.46)	-7.68** (0.98)
γ	-0.12** (0.00)	-0.11** (0.01)	-0.11** (0.01)	-0.09** (0.01)	-0.10** (0.01)
Wald χ^2	92.72	387.26	501.52	304.91	199.16
df	13	22	25	21	20
Observations	30,650	30,650	30,650	10,530	20,120
Number of firms	613	613	613	613	464
Number of events	594	594	594	465	129

Notes: Compertz models. Robust standard errors in parentheses. The models have propensity score weighting. Models 1 to 3 analyze all donation events (repeated event history analysis), while Model 4a analyzes initial donation events and Model 4b analyzes subsequent donation events. One firm made its first donation on June 30, the last day of our observation period, and therefore the firms that were at risk for analysis of subsequent donation events was 464.

+ $p < .1$

* $p < .05$

** $p < .01$

Two-tailed tests of significance.

($e^{1.13} = 3.10$). Hypothesis 1 thus received strong support.

Consistent with Hypothesis 2a, which posits a positive effect of online articles on the speed of donation, the number of Internet articles has a strong positive effect on the speed of donation ($p < .01$, Model 2). When the number of articles increased from the minimum (0) to the mean (221) and to one standard deviation above the mean (538), the likelihood of corporate donation became, respectively, 25% ($e^{(0.001 \times 221)} = 1.25$) and 71% higher in a given time interval. These results suggest that firms donate faster under pressure from Internet activism.

Hypothesis 2b argues that Internet coverage of corporate donations accelerates donation more effectively than does such coverage in traditional media. The coefficient of traditional media coverage is negative ($p < .01$, Model 2). We also tried including traditional media and Internet media coverage separately with the other variables in Model 2, and the opposite signs of these two variables remained. This may reflect the slow build-up of the traditional media attention to corporate donation, which was opposite to the trend of the rapid surge in corporate participation in giving. Traditional media did not seem to prompt corporate donations perhaps because previous government censorship had led the public and firms to pay little attention to traditional media to gauge the public pulse, and the rapidly growing Internet coverage had gained full public attention. To test Hypothesis 2b formally, we compare the size of the coefficients of Internet and traditional media by imposing an equality constraint, finding the effect of Internet articles to be significantly larger than traditional media coverage ($p < .001$). Hypothesis 2b is thus strongly supported.

Hypothesis 3 posits that the speed of response is faster by private firms than by state-controlled firms. However, the effect of private ownership is not significant (Model 2). Thus, Hypothesis 3 is not supported. Hypothesis 4 proposes that real estate firms respond more quickly with donations. Firms in the real estate industry have a 58% higher likelihood of donating in a given time interval compared to firms in other industries ($p < .01$, Model 2). We further tested whether the effect of real estate firms is distinct from that of consumer industries (firms in consumer industries have a 20% higher likelihood of donation in a given time interval than those in non-consumer industries do [$p < .05$, Model 2]). A comparison of the two coefficients through an equality constraint suggested that real estate firms donated significantly faster than did firms in consumer

industries ($p < .05$). Hypothesis 4 thus receives support. Consistent with Hypothesis 5, which posits a positive correlation between firm reputation and speed of donation, the coefficient for reputation is positive ($p < .01$). High-reputation firms have an 88% higher likelihood of donation in a given time interval compared to firms without such a reputation. Hypothesis 6a proposes a positive relationship between the political appointment of top executives and speed of donation. Firms where the chair held national-level political positions have a 27% higher likelihood of donation in a given time interval than do those without such positions ($p < .05$). However, the effect of provincial-level political appointment is not significant. Hypothesis 6a is therefore partially supported. To test Hypothesis 6b on the difference of speed between firms where the chairs held national-level political appointments and those with provincial-level ones, we imposed an equality constraint to compare the two coefficients and found that the former was significantly larger than the latter ($p < .1$). Hypothesis 6b thus receives some support.

In Hypothesis 7 we further posit an interaction effect between the tactic of online rankings and vulnerability characteristics. The interaction between national political appointment and ranked as low donor is positive ($p < .01$, Model 4b). This is consistent with our argument that the social comparison generated by a low ranking was particularly unacceptable for firms with high political status, thus accentuating the vulnerability of these firms and urging them to donate again quickly. While private firms on average are found not to donate more quickly than state-controlled firms did (Model 2), they did donate sooner when they were not recognized on the donation rankings published by Internet users ($p < .05$, Model 4a). The interaction between not recognized as donor and high reputation is positive ($p < .1$, Model 4a). However, we do not find a significant interaction between real estate firms and the two measures of online rankings. This may be due to the fact that the real estate industry was already singled out by Internet users, and therefore the rankings did not have an additional effect on their vulnerability. As a whole, Hypothesis 7 is largely supported.

Regarding control variables, large firms donated more quickly ($p < 0.01$), possibly because they were more resourceful or because their higher visibility put them under more pressure from the activism. Financially well-performing firms donated sooner ($p < 0.01$), supporting the slack resource argument (Waddock & Graves, 1997). Consistent with prior

studies (e.g., Fry et al., 1982; Johnson, 1966), firms in monopolized industries donated more slowly ($p < 0.1$), and firms with higher marketing expenditures or in consumer industries gave sooner ($p < .01$). Firms with more significant operations in Sichuan donated faster ($p < .05$).

Further Analysis

Prior research has suggested that organizations often mimic peers in the same industry or with board interlocks (e.g., Davis & Greve, 1997). We hence controlled such potential influence through two variables: the cumulative number of firms in the same two-digit industry as the focal firm that had donated each day, and the cumulative number of interlocked firms that had donated each day (both lagged for one day). A firm was considered to be interlocked with the focal firm if at least one of its board members served on the board of the focal firm between 2007 and 2008 (data were collected from the RESSET, see Fisman & Wang, 2009). These two measures did not have a positive and significant effect on the focal firm's speed of donation, and the strong impact of the variables for Internet activism remained. This indicates that under intense online scrutiny, firms were directly responding to the Internet attention given to corporate donations and associated comparisons based on online rankings, rather than driven by imitation within the industry or through executive networks.

We conducted more stringent tests on firm response to the Internet activism, assuming those firms that donated before the online pressure built up had done so out of intrinsic motivation rather than in anticipation of the activism. These tests showed results that were consistent with those reported in the main analysis. First, we estimated a piecewise constant rate model with period-specific effects (Box-Steffensmeier & Jones, 2004). May 14, the first day on which one of the five most widely circulated rankings of corporate donation appeared, was used to divide the two periods. The significant effects of the vulnerability characteristics in the second period supported the impact of the Internet activism. Second, we removed the events of donation that occurred before May 14 (including this day) (154 donations). Our results remained. In particular, private firms donated significantly sooner than state-controlled firms, supporting Hypothesis 3 ($p < .05$).

Our emphasis on the mechanism of corporate image threat through social comparison suggests that firms with public image vulnerability may donate

larger amounts in total. We examined donation amounts, measured as the natural logarithm of the cash amount of total donation (Galaskiewicz, 1997). The average total donation was RMB 5.41 million (USD 780,000), and there is a large variation across firms (ranging from RMB 20,000 to 211 million; i.e., USD 2,886 to 30.45 million). We conducted two sets of analyses and focused on consistent results: an OLS model based on the entire sample (no donation coded as 0), and a Heckman selection model to correct for potential sample selection bias (as non-donating firms were not randomly distributed) (Heckman, 1979). As shown in Table 3, the two different models show consistent results regarding the positive effects of real estate firms, high reputation, and national-level political appointment ($p < .01$). Except for private firms, firms that we have argued to be more vulnerable to image loss are associated with larger amounts of donation. These results also indicate the substantive impact of Internet activism.

DISCUSSION

Civil society's incapacity to hold the corporate sector accountable in authoritarian regimes is a grand challenge in today's global environment, and we explored whether and how Internet activism can allow dispersed civil society to pressure large firms to respond. By studying Chinese firms' donations to disaster relief in the wake of the 2008 Sichuan earthquake, we have found support for our framework that Internet activism elicits corporate response by threatening corporate public image, and that social comparison is a key mechanism underlying this process. First, our results show that the speed of firm response is positively related to the tactics of Internet activism, such as online rankings and articles on corporate donations, which focused attention and triggered social comparisons. Second, firms with higher image vulnerability, such as real estate firms and others with high social and political standing, donated more quickly and gave more because they perceived a higher likelihood of public image damage. Third, the interaction between corporate vulnerability characteristics and social comparison stemming from online rankings suggests that these firms' vulnerability was enhanced when compared unfavorably, and hence they further hastened their donations.

Prior work has suggested that executives of high reputation and status may be more committed to being socially responsible (Swanson, 1995; Weaver, Trevino, & Cochran, 1999). However, if such managerial values

TABLE 3
OLS and Heckman Sample Selection Models Predicting Total Donation Amount

	Model 1		Model 2	
Coastal area	0.10	(0.23)	0.02	(0.13)
Sichuan	0.12	(0.74)	0.00	(0.49)
Significance of operation in Sichuan	1.41	(1.00)	1.29*	(0.59)
Firm size (logged)	0.45**	(0.09)	0.32**	(0.05)
Years since IPO	-0.02	(0.03)	-0.02	(0.01)
Return on assets	0.09**	(0.02)	0.04**	(0.01)
Monopolized industry	-0.67	(0.45)	-0.19	(0.22)
Consumer industries (excl. real estate)	0.62**	(0.23)	0.28*	(0.13)
Marketing expense	0.05**	(0.01)	0.01	(0.01)
Foreign-invested	-0.38	(0.24)	-0.05	(0.14)
Ownership concentration	1.23*	(0.62)	1.18**	(0.36)
Chair tenure	0.05	(0.03)	0.04*	(0.02)
Marketing background of executives	0.25	(0.37)	0.23	(0.21)
Independent Variables				
Private- (non-state-) controlled	-0.14	(0.23)	-0.23+	(0.13)
Real estate firms	1.36**	(0.48)	0.91**	(0.24)
High reputation	1.87**	(0.26)	0.89**	(0.19)
National PC/CPPCC delegate	0.94**	(0.32)	0.50**	(0.18)
Provincial PC/CPPCC delegate	0.22	(0.36)	-0.04	(0.20)
Constant	-1.34	(0.90)	1.73**	(0.48)
<i>Mills ratio correction</i>				
Likelihood of donation			0.15	(0.22)
Observations	613		613	
Adjusted R-squared	.26			
df	18		18	
χ -square			243.04	

Notes: Standard errors in parentheses. For Model 1, firms that did not donate were coded as 0 for donation amount (N = 613 firms), and has a propensity score weighting. Model 2 is a Heckman sample selection model (number of censored observations = 148). The first-stage equation is a probit model predicting whether firms donated based on covariates that we found to be significant firm-level predictors of making a donation. The instrumental variable is the total number of Internet articles on corporate donation published the day before the firm's first donation.

⁺ $p \leq .1$

* $p \leq .05$

** $p \leq .01$

Two-tailed tests of significance.

were the main driving force behind the decision to donate, the effect of reputation and political status on donation should not be contingent on online rankings. Our findings show that for firms where top executives held national-level political appointments, a low ranking prompted these firms to donate again; and that high-reputation firms donated more quickly if they had not been included as a donor in the rankings. These interaction effects support our argument that firm vulnerability, which is magnified by the social comparison process triggered by online activists, constitutes an important corporate opportunity structure that facilitates firm response to Internet activism.

By establishing the impact on corporations of an online activist campaign, our study helps to address the challenge of business–society relationships in

tightly controlled environments. In the absence of channels such as organized campaigns, boycotts, protests, and press exposure (available in Western democracies), our study offers a framework to explain how and why Internet activism can be an alternative means to pressure corporations to change. First, the technical attributes of online technology can be utilized by a dispersed and deprived civil society to focus public attention and generate social comparisons, creating a formidable image threat to corporations. Thanks to online communication platforms and the diffusion of Internet connections, which have made widespread information dissemination easy, cheap, and fast, opportunities are created for Internet activists to exert their voice. Ironically, in authoritarian contexts, government control over traditional media not only discredits

traditional media, but pushes people to pay more attention to the Internet, which further propels the growth of Internet activism. Prior research has emphasized how online technologies enable collective action to emerge and scale up rapidly (Earl & Kimport, 2011). We extend this by considering how the technical attributes of online communication grab the attention of corporate executives and elicit a corporate response. By focusing public attention on a single metric and evoking established norms of social comparison, Internet activists developed the potential to instantly inflict damage on companies' public image. The fear of public image damage due to unfavorable comparisons made and spread by virtual communities was a powerful impetus for corporate change.

Second, powerful and privileged businesses in authoritarian regimes may be particularly vulnerable, and hence more responsive, to Internet activism. It is well known that in such contexts, powerful businesses often collude with government and government-controlled media, benefiting from unfair competition. However, in the wake of Internet activism, the privileged businesses are caught off guard. The faster and larger donations made by firms with image vulnerability not only supports the notion that Internet activism spurred firms to respond to the image threat, but also suggests that those in positions of power had more vulnerability. Firms with politically affiliated executives and high reputation—typically associated with resources and power—drew instant comparison and higher expectations from Internet users, and hence image vulnerability. In the case of real estate firms, besides their real or potential culpability, their wealth and power made it more legitimate for Internet activists to demand their contributions. The fast and wide reach of Internet dissemination and the interactions from online communities often generate an intense emotional appeal to users, who tend to spread information and accusations unquestioningly (Gurak, 1999). Because the Internet is much harder to regulate and control, it is increasingly difficult for powerful corporations to escape scrutiny in the digital world.

Finally, taking fast and preemptive action to manage vulnerability may become a hallmark of response to Internet activism, despite its lack of central coordination and persistent identity (Kollock, 1999). The collective call for Chinese firms to contribute to disaster relief did not mount a focused attack against specific individual companies. Except for a few instances of high-profile firms (such as Vanke) and the

real estate industry, which were the target of focused negative attention, online activists exerted a diffuse pressure on firms through information dissemination, advocacy, and social comparison. This is distinct from traditional movement campaigns that target specific firms and aim to physically disrupt their operations. The two-way exchange feature of online media may also lead firms to be more willing to respond in the hope of actively shaping the rapidly evolving digital communication. While studies of offline movements have shown preemption to be one type of corporate response (Marquis et al., 2016; Reid & Toffel, 2009), we found preemption to be key to response to Internet activism. This is particularly true in societies with weak rule of law, where rumors and false information (often spread by the Internet) can bring quick harm to corporate image.

While we have focused on how Internet activism can address the grand challenge of business–society relations in authoritarian regimes, there are potential constraints on its power. For instance, governments may increasingly regulate and monitor Internet communication (The Economist, 2015), so in some cases the mobilizing capacity of the Internet may be reduced. Moreover, the fact that Internet users rarely scrutinize information obtained in cyberspace suggests that false information may be incorporated into the rapidly circulating message. The tendency that “speed may supersede accuracy” can give rise to insularity (Gurak, 1999: 259), just as repeated false alarms can breed cynicism and discourage participation in future campaigns.

Our study also provides a number of important updates to the literature at the intersection of social movements and organizations in general. First, while much of this literature is based on movement tactics invented before the Internet era (King & Pearce, 2010), we show how and why a new type of mobilizing structure—Internet activism—can be effective, potentially changing the social environment in which firms compete. A key difference between Internet activism and traditional campaigns is that the former can occur and achieve impact without central coordination and the support of a social movement organization (Hiatt, Grandy, Lee, 2015; Hiatt, Sine & Tolbert, 2009). In particular, online ranking is a powerful tactic to trigger social comparisons that can undermine corporate image. Second, online channels have revolutionized the impact of the media. Although we only compared online media with traditional media in an authoritarian state, the advantages of online media in its wide and fast reach, interactive nature and virtual community-building

are also likely to prevail in democratic societies (cf. Rindova, Pollock, & Hayward, 2006). In our case, the Internet achieved in days what traditional media in the contexts of free press might have taken months or years to achieve with regard to focusing public attention, thereby spreading and legitimating the activists' framing. Not only can Internet media threaten firms' public image more efficiently, it can catch firms off guard and thus make them more likely to succumb to public pressure. Third, we highlight corporate image vulnerability as an important corporate opportunity structure to explain heterogeneous responses to movement campaigns (King, 2008; Soule, 2012). We also broaden the vulnerability characteristics examined in previous studies by linking such characteristics with the features of Internet activism, the social comparison process, and the social structure.

Some of the limitations of our study suggest directions for future research. First, we did not capture the interactive feature of online media—for instance, through quantifying the number of comments or the times an article was forwarded. Hence, it is likely that we underestimated the impact of Internet activism on corporate response in our analysis. Second, by studying only one form of Internet activism, we were not able to examine a wide range of online tactics. In the post-earthquake era, microblogging such as Twitter, or in China Weibo and WeChat, has been widely adopted. This creates strong online social networks among individuals and facilitates information sharing and social comparison. Continuous innovation in online communication platforms bodes well for efforts to address the grand challenge of business–society relationships in authoritarian regimes, and future research can examine how other online tactics affect corporate responses.

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