## **ORIGINAL PAPER**



# Are Socially Responsible Firms Associated with Socially Responsible Citizens? A Study of Social Distancing During the Covid-19 Pandemic

Danny Miller<sup>1</sup> · Zhenyang Tang<sup>2</sup> · Xiaowei Xu<sup>3</sup> · Isabelle Le Breton-Miller<sup>1</sup>

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#### Abstract

The literature on the interplay between geographic communities and organizations has largely ignored the role of individual residents. In adopting a meso-perspective, we examine a potentially vital relationship between corporate conduct and prosocial behavior demanding sacrifice from individuals. Drawing on Weber (Economy and society: an outline of interpretive sociology. University of California Press, Berkeley, 1978 (Translation of Wirtschaft und Gesellschaft, Grundriss der verstehenden Soziologie, 1922)), we theorize that organizations in a community legitimize personal social conduct in three ways—by serving as role models, imparting norms and values, and routinizing forms of interaction. We study the relationship between corporate social responsibility (CSR) behavior by local firms and the social distancing (SD) of citizens in US counties during the Covid-19 pandemic, a core ethical outcome. We argue and find that the residents of communities in which firms exhibit higher levels of CSR engaged in more SD during the Covid-19 pandemic. This was true when firms were (a) long-established, (b) isomorphic in their CSR, and (c) major employers and vendors. Moreover, CSR relating to the treatment of employees as well as positive and negative extremes in CSR bore especially strong relationships with SD. Implications are drawn for the study of business ethics, as modeled by CSR, as a force for ethical personal behavior and public health in communities.

**Keywords** CSR · Communities · Public health · Social distancing

Whereas a rich sociological literature has examined the various ways in which organizations within geographic communities can influence one another (e.g., Marquis et al., 2011, 2013), there is far less research on how organizations, collectively and via their conduct, may influence the behavior of individual citizens (Cialdini, 2007; Mills, 1951; Putnam, 2000; Tonnies, 1957). Despite their potential relevance for ethical social conduct, such relationships have been understudied in both sociological and business literatures.

Danny Miller danny.miller@hec.ca

Zhenyang Tang ZTang@clarku.edu

Isabelle Le Breton-Miller isabelle.lebreton@hec.ca

- HEC Montreal, Montreal, Canada
- <sup>2</sup> Clark University, Worcester, USA
- University of Rhode Island, Kingston, USA

As significant and embedded corporate actors in a community, firms hire, train and indoctrinate local employees, interact with customers and other stakeholders, and impact the environment. As part of residents' daily experiences, firms influence their lives, and likely, shape their attitudes and conduct (Mills, 1951; Putnam & Feldstein, 2009; Romani et al., 2013). In adopting a "meso-perspective" that bridges macro-organizational and micro approaches (Rousseau & House, 1994), we argue that one prominent aspect of firm behavior affecting employees and other community residents is corporate social responsibility (CSR) (Lichtenstein et al., 2004; Thornton & Rupp, 2016; Tian & Robertson, 2019).

Inspired by Weber's (1922; trans. 1978) classic sources of legitimacy and authority, we theorize that firms through their CSR behavior can number among the key parties stimulating ethically demanding social conduct in a community. Firms may serve this function in several complementary and mutually reinforcing ways: by serving as inspiring role models, by being conveyors of norms and values, and by routinizing norms of common engagement. Through their CSR, firms orchestrate multifaceted sources of social influence



from multiple parties. For example, they may favorably or adversely impact the natural environment, produce goods and services responsibly or otherwise, create nurturing or unhealthy work environments, and affect human rights and public safety (Shiu & Yang, 2017; Tian & Robertson, 2019). As a result, they provide vivid and potentially impactful examples of pro- and anti-social behavior in their communities (Cialdini, 2007; Davis & Zald, 2005; Littlewood, 2014; Schultz et al., 2007). Those can influence the social norms and values of both employees and other residents exhibited in everyday behavior (Schultz et al., 2007), particularly where firms are long-established, important sources of employment and commerce, and converge collectively in their CSR behavior.

To explore this thesis, we study individual social distancing (SD) behavior in US counties with corporate offices of listed firms during the Covid-19 pandemic. SD has been shown to be a critical indicator of socially responsible behavior intended to reduce the spread of a dangerous virus (e.g., Allcott et al., 2020). Our expectation was that counties whose firms collectively exhibited high levels of CSR vis-a-vis the environment, employee well-being, community contribution, and product offerings would exhibit more responsible social distancing among residents during the crisis. Even after controlling for many community characteristics and employing mediating and instrumental variable regressions to address endogeneity, this expectation was confirmed. Findings were especially significant in counties where companies were long-time residents, collectively accounted for a large fraction of employment, and where there was uniformity among them in their CSR practices; findings were also most significant for CSR practices related to the treatment of employees, and when practices reached positive or negative extremes. These findings suggest that firm CSR is associated with demanding ethical social behavior in the larger community, perhaps due to its multifaceted nature and association with many parties there.

Social distancing during an epidemic is a meaningful form of ethical conduct as it must be done by most individuals, many of whom are less vulnerable, to protect a minority who are more so; it also requires significant personal discipline and sacrifice (Allcott et al., 2020; Kelso et al., 2009; Oosterhoff, 2020; Sabin, 2012). In fact, there is an emerging literature in epidemiology on the importance of organizational social responsibility in ensuring public health. For example, some studies have found that the transition from collectivist to "laissez-faire" individualist attitudes among institutions in society is associated with socially harmful resistance to vaccination (Bérubé, 2020; Boas et al., 2016; Prainsack & Buyx, 2011). Unfortunately, such socially contextualized studies are rare. Thus Daniels (2001) and others have criticized an "individualistic myopia" of bioethical thinking, which fails to consider social and institutional influences upon population health. These discussions in bioethics reinforce the need for scholars to consider the effect of community organizations on personal public health behavior (see also Allcott et al., 2020; Oosterhoff, 2020).

Our analysis contributes to the literature on CSR and organizations in several ways. First, building beyond the literature on organizations and communities, which has had a macro-emphasis (Marquis et al., 2011), it draws on Weber's (1978) sources of legitimacy and authority to explore the ways in which CSR may be associated with ethically demanding social conduct of *individuals* in a community, perhaps because of its multifaceted influences. Second, it does so in the context of a critical health crisis by examining how the collective CSR of firms in a community may condition the conduct of residents during a formidable pandemic that demands solidarity and personal sacrifice. It thereby extends the situational application of CSR to ethical, socially responsible behavior in the general population (Tian & Robertson, 2019). Third, in highlighting a novel potential force for public health, it contributes to scholarship in medical ethics and epidemiology, which have tended to focus on personal incentives while downplaying the importance of social context (Boas et al., 2016; Colgrove, 2016; Dawson & Jennings, 2013).

In the following sections we introduce and present our hypotheses, proceed to our methods and findings, and conclude with discussion.

# Communities, CSR, and Social Distancing

A community is geographically restricted area in which individuals interact and thus share some common interests and perspectives (Marquis et al., 2011). We believe that the proximity of firms, their employees, and residents in such a community facilitates mutual influence. First, firms co-located in a community reinforce one another, driving isomorphism in norms and conduct (e.g., Romanelli & Khessina, 2005; Saxenian, 1994). This happens as companies learn from each other, hire from similar labor pools, exchange staff, transact commercially, and have members who socialize. Such influences are reflected in their CSR (e.g., Marquis et al., 2007, 2013; Raynard et al., 2013). Second, due to physical proximity and the regular interactions it affords, residents can be influenced in their social conduct by the CSR behavior of firms in the community (Tian & Robertson, 2019), particularly where those practices are shared among established and significant firms (Cialdini, 2007; Cialdini & Trost, 1998). We believe that this will be true for pro-social behavior under crisis (Boas et al., 2016; Colgrove, 2016; Dawson & Jennings, 2013).



Table 1 Sources of influence: from CSR to individual behavior

	CSR sources of influence					
	Role models	Social norms and values	Routinized engagement			
Sources of legitimacy—(inspired by Weber, 1922)	Ideals	Social norms, traditions	Routines, standards, efficacy			
Impetus for personal conduct	Inspiration and aspiration	Felt social pressure	Habit from interaction			
Personal reaction	"this is how we can be better"	"this is how we all should act"	"this is just how we do things"			
Isomorphic forces—(inspired by DiMaggio & Powell, 1983)	Mimetic	Normative	Coercive (subtly)			

# How CSR Behavior Relates to Individual Social Conduct: Three Complementary Sources

The CSR construct is multifaceted. It encompasses how firms treat their employees, the environment, and the community via such policies as workforce benefits and diversity, pollution avoidance, green products, and charitable activities (Kim et al., 2012; Kinder et al., 2014). Drawing on Weber (1978), we propose three related and important ways in which organizations' CSR can shape the conduct of resident individuals: by acting as focal role models that legitimize or inspire mimetic conduct; by displaying norms and values that convey what is socially acceptable or desirable; and by regular direct social engagement with residents which routinizes norms and forms of conduct. These respective influences represent ideals, normative traditions, and routines and standards as different sources of legitimacy and conformity (see Table 1). Although we argue that CSR can influence public behavior, we do not deny that multiple institutional forces play a role in shaping both individual and corporate behavior.

# **Role Models**

Some firms, via their exemplary CSR, serve as role models that inspire community members, and cause them to aspire toward similar modes of conduct (Tian & Robertson, 2019). Firms through extraordinary behavior can influence via striking examples (Lafuente et al., 2007; Lockwood et al., 2002); for instance, through unusually generous charity efforts, path-breaking environmental initiatives, and displays of exceptional benevolence to the community. In so doing, they may motivate others to embrace higher ideals, to better themselves, and to enhance community solidarity and wellbeing (Romani et al., 2013). Responsible social distancing is such behavior, one that requires personal sacrifice for others in times of crisis. In Weber's (1978) classic treatment of sources of authority and legitimacy, charismatic entities such as religious or political figures may stimulate ideological emulation and act as role models. So too, perhaps, can inspirational firms that evoke mimesis of key aspects of their behavior (Di Maggio & Powell, 1983). For example, the venerable Corning Inc. rebuilt its hometown of Corning, New York after a cataclysmic flood, in the process, avoiding all layoffs during the many months of plant closure, and incurring vast corporate expenditures to rebuild the community. This evoked extraordinary community solidarity from local residents (Graham & Shuldiner, 2001). Unfortunately, there are also very negative CSR roles models. For example, major firms in a community may thrive despite extremes of irresponsible and exploitative conduct, setting a negative tone of opportunism, and encouraging destructive mimesis by opportunistic residents (Littlewood, 2014).

### **Social Norms and Values**

A second Weberian source of influence from CSR to resident conduct is by legitimizing or reinforcing traditional social norms and values, which are more common and pervasive than those evidenced by role model ideals. For example, as central actors, firms display consistent modes of CSR conduct that collectively embed norms and values of honesty, generosity, and responsible behavior toward stakeholders—customers, employees, suppliers, and the public (Bratt, 1999; Kinzig et al., 2013). Complementing role models whose outstanding behavior draws attention and emulation, norms and values convey traditions of what is socially acceptable, legitimate, and sanctioned versus unacceptable (Cialdini, 2007; Cialdini & Trost, 1998; Chiu & Sharfman, 2011; Thornton & Rupp, 2016). They help to establish what is right and just. Thus, people influenced by norms feel "this is how I should act"; "this is what is expected of me". For example, the beneficent human resource practices at Hallmark Cards, Inc. induced 40% of its employees to perform extensive volunteer work in the community, rendering civic solidarity a tradition (Miller & Le Breton-Miller, 2005). In locales pervaded by such norms, concern for others, and thus responsible social distancing are likely to be more common. There, legitimacy derives from local traditions, and isomorphic forces are largely normative (Cialdini, 2007; Di Maggio & Powell, 1983). Again, sadly, there are negative examples: corporate permissiveness or employee exploitation can



promote selfish "every man for himself" norms and behavior among locals.

# **Routines of Engagement and Interaction**

A final influence of firm CSR on individual behavior is via Weber's routinized forms of rational engagement and interaction. Here, ideals and norms are not consciously considered but simply routinized and enacted in everyday behavior. People in a community interact on a regular basis with local firms: they work for them, act as suppliers, and engage commercially as customers. Such interactions follow particular routines and adhere to certain standards. Thus, firm influence takes the form of "this is how we do things; this is how it is done" (Feldman, 2000; Welsch & Kühling, 2009). Here, habit, routines, convention, industry standards, and formalities drive behavior more than social norms, values, or inspiring examples. Weberian sources of authority and legitimacy in this context are programmed efficacy and bureaucracy, whereas forces for isomorphism are subtly coercive because induced behavior becomes reflexive, not subject to personal reflection or considered volition. For example, profit sharing, green practices, product warrantees, politeness protocols, recycling programs, and employee benefits, may become so widespread, that people's "community citizenship" behavior becomes routinized and taken for granted.

Whereas role models, normative traditions, and routines of engagement are different forms of social influence, all of them can induce conformity to the ethical norms they embody. Moreover, in communities, these forms of influence may complement one another as, for example, ideals become enshrined in normative traditions and are reinforced via routines of engagement.

# **Hypotheses**

In developing our hypotheses, we first describe how CSR can shape individual conduct. To explore closer connections, we then explore the conditions under which CSR, via the above complementary legitimizing sources, can have their greatest effect on individual social behavior—namely, (a) where firms are older and thus established and more likely to serve as role models and enactors of norms, (b) where there is homogeneity, that is similarity among firms, in their CSR practices such that they collectively convey a consistent set of models, norms and values, and patterns of interaction, and (c) when firms collectively account for significant employment and business volume in the community so that more residents are routinely exposed to their norms and practices. Each of these characteristics make CSR norms more prominent in a community. Finally, we explore the specific kinds of CSR that are most likely to be of greatest consequence for community conduct. We believe that it is the consistency of rationales among our five hypotheses, more than any specific one, that argues for the impact of CSR upon individual social behavior.

### CSR and Individuals' SD Conduct

Some regions become known for their social cohesion, trust, and widespread norms of reciprocity (Marquis & Davis, 2009; Marquis et al., 2011; Thornton et al., 2015), and others, quite the reverse (see Littlewood, 2014). As noted, one neglected source of such influence is the impact firm CSR on the social conduct of individual residents (Tian & Robertson, 2019). We proposed three complementary sources of influence by which firms via their CSR behavior can shape the social conduct of community residents by serving as role models, enacting and conveying norms and values, and routinizing these via regular interaction. These sources can operate together to affect different stakeholders differently. For example, CSR policies for employees may impact their local behavior, and through them, their associates (Tian & Robertson, 2019). By contrast, practices regarding the natural environment, public health, diversity hiring, and charity may affect a broader array of residents, albeit less intensively (Romani et al., 2013). The following associations are illustrative.

First, by exhibiting consistently responsible or irresponsible behavior in their treatment of employees, the public, and the environment, firms are socially prominent actors. They collectively convey social norms and values, enact routines of engagement, and represent role models that influence residents directly and via their employees (Mills, 1951; Putnam, 2000). For example, by encouraging volunteer work, pursuing green practices, being good business partners, and generously treating employees, companies can affect resident values in a community (Davis & Zald, 2005; Shan & Tang, 2020; Tian & Robertson, 2019). In so doing, their policies and actions encourage personal social responsibility.

By contrast, poor corporate citizens that pollute, incur health violations, and engage in shoddy business practices, reinforce a climate of greed and irresponsibility (Littlewood, 2014; Romanelli & Khessina, 2005). Collectively, such firms diffuse norms and values of opportunism, and serve as negative role models (Putnam, 2000; Saxenian, 1994). In these environments, social responsibility is unlikely to thrive (Mills, 1951; Putnam, 2000).

One way in which firm CSR shapes residents' social behavior is via their treatment of employees. People spend many of their waking hours in companies. They are trained and indoctrinated there and induced to fit the culture of the organization (Alvesson, 2012, Alvesson et al. 2017; Alvesson & Kärreman, 2007). They are subject to norms and values on how to treat one another and draw lessons in solidarity from the health benefits and safety policies of their



employer (Frenkel et al., 2012). Employees, in turn, may share these values with their families, friends and neighbors, thereby diffusing them in the community (Galaskiewicz & Burt, 1991). Such norms and values are core drivers of individual social responsibility, such as that demanded by social distancing during an epidemic (Baum et al., 2009; Colgrove, 2016).

Interestingly, whereas the literature on organizations has placed less emphasis on the impact of organizations on individual behavior, the epidemiological literature has taken a different, complementary tack (Boas et al., 2016; Colgrove, 2016; Dawson & Jennings, 2013). In examining the bioethical conduct of individuals, such as their refusal to vaccinate, bio-ethicists have concentrated on personal incentives and largely neglected the social context within which those receiving the incentives are embedded (Allcott et al., 2020; Boas et al., 2016; Holm, 1995; Prainsack & Buyx, 2011). In theorizing an organizational impact on individuals' social distancing (SD) in the current pandemic, we adopt a posture that bridges and complements these opposing sociological and public health emphases.

**Hypothesis 1** CSR behavior of firms within a community will influence the social distancing (SD) practices of individual residents in that community.

# The Impact of Firm Age on the CSR: SD Relationship

The degree to which an organization's practices will influence community members is apt to be in part a function of how temporally embedded it is within that community. For example, a well-established or multigenerational firm is more likely to be recognized for its behavior than a newcomer to which residents have had less exposure (James, 1999; Miller & Le Breton-Miller, 2005). Employees and other stakeholders and residents will have had ample chance over the years to become familiar with more aspects of its values, reputation, and ethical practices, and to have embraced those values, for better or worse (Dacin et al., 1999).

Those legacy practices, including aspects of CSR, may constitute community-embedded exemplars of certain types of conduct, and thus are more apt to serve as conveyors of norms. There are many examples of this among venerable firms whose values come to permeate not only their employees but other members of the community (Pruitt, 1998). Recall the example above of Corning which shaped

the pro-social solidarity of their community for generations (Graham & Shuldiner, 2001). This was true as well of other centenarian firms such as Timken and Hallmark which during periods of severe economic depression and strife inspired community solidarity via exemplary service (Miller & Le Breton-Miller, 2005; Pruitt, 1998). Social distancing during a pandemic is one manifestation of such solidarity.

**Hypothesis 2** The relationship between firm CSR and social distancing (SD) will be stronger for older versus younger firms of a community.

# The Impact of CSR Homogeneity on the CSR: SD Relationship

Norms and values are apt to diffuse best when they are uniformly manifested in the community, that is, where groups of firms are ethically homogeneous. Where similar CSR practices are manifested by most neighboring firms, common norms and values are more likely to pervade a community. Residents will experience widespread and consistently responsible or irresponsible behavior, and thus will be more deeply affected. On the other hand, where firms vary greatly from each other in their CSR practices, individuals are offered an inconsistent and confusing array of exemplars, whose influence is thereby attenuated. It is also possible that where CSR practices are homogeneous, they will be mutually reinforcing, as organizations influence one another, either in an ethical "race to the top" or "race to the bottom" (Marquis et al., 2007, 2013; Romanelli & Khessina, 2005). Thus, the relationship between CSR and SD will be stronger in communities with homogeneous CSR.

**Hypothesis 3** The relationship between firm CSR and social distancing (SD) will be stronger in communities with homogeneous CSR across firms.

# The Impact of Firm Economic Importance on the CSR: SD Relationship

The impact of CSR on individual behavior is more likely to prevail where firms represent a major presence in the community. Certainly, norms and values transfuse best in a community when many residents are exposed to them. Moreover, routines of engagement and interaction with parties—our third source for diffusing CSR practices, is enhanced by companies collectively employing more people and transacting with more residents (Brammer & Millington, 2006).

Large firms hire more residents and transact and interact with more locals as suppliers of goods and services, participants in community activities, and perhaps influencers of local politics (Pomering & Dolnicar, 2009). Their visibility and impact increase employees and community residents'



<sup>&</sup>lt;sup>1</sup> Boas et al.'s (2016) search in PubMed for "vaccination" and "solidarity"—a community characteristic, yielded only 22 publications; a search for "vaccination" and "incentives"—an individual characteristic, yielded 635 publications.

awareness of their CSR behavior, as mere witnesses, or as beneficiaries or victims. That can shape resident's behavior, with good examples suggesting the value and social prevalence of responsible conduct, and ethical lapses the reverse. By contrast, where firms are small and account for little commercial activity in the community, it is unlikely that their social practices will influence personal behavior, particularly the disciplined behavior required during a health crisis.

**Hypothesis 4** The relationship between firm CSR and SD will be stronger where firms account for a large proportion of community employment and business volume.

# The Impact of Employee Related CSR on Individuals' SD Conduct

We suggested that CSR behavior can influence personal behavior in the community via inspirational role models, conveyors of social norms and values, and parties that routinize specific forms of social engagement. These sources of influence are more likely to have an impact when CSR concerns treatment employees because such policies tend to be more *intimate*, *enduring*, *and personally consequential* than those relating to other CSR initiatives (Perrault & Quinn, 2018).

CSR is multifaceted. Some aspects relate to practices such as R&D, product quality, product safety, and adherence to anti-trust guidelines. Others have to do with broader environmental policies and practices, including clean energy, recycling, innovative products, and avoidance of dangerous behavior concerning hazardous waste, and agricultural chemicals. Although all these policies reflect social responsibility, they tend on average to be less personally impactful to those concerned than policies relating to the everyday treatment of employees and their families.

CSR policies for employees are directly and pervasively experienced by them, their co-workers, and their families, influencing their daily lives via close, continual engagement and personally relevant policies (Perrault & Quinn, 2018; Shan & Tang, 2020). Employee-related practices concern compensation, retirement benefits, unions, gain sharing, health and safety policies and records, and downsizing. Relatedly, "diversity CSR" includes conduct regarding the fair treatment of women, minorities, LGBT members, the handicapped, and provision of flex-time and elder care, again generating consequential personal repercussions, and providing potentially poignant ethical examples to employees and their families. Such policies also bear an especially intimate connection to daily life at work and organization-based identification (Edwards & Peccei, 2010). They are thus apt to influence employee ethical values and attitudes, enacted in the community via the employees themselves, their co-workers, as well as their family members and friends (Frenkel et al., 2012).

In short, everyday impactful manifestations of ethical and unethical policies for the treatment of employees can influence personal ethics in the community, and thus social distancing behavior during an epidemic (Allcott et al., 2020; Shan & Tang, 2020).

**Hypothesis 5** Firm CSR behavior related to employees and employee diversity will influence the social distancing practices of individuals in the community.

# Method

# Sample and CSR Data

Our sample consists of all firms covered in MSCI's ESG KLD Stats database (formerly KLD Stats, Kinder et al., 2014). The database lists strengths and concerns relating to corporate social responsibility behavior for the largest 3000 US companies by market capitalization; these fall into seven categories, including employee relations, diversity, environment, community, human rights, product quality, and corporate governance. Although some have criticized the database because it sums different types of strengths and concerns, it has been used in many influential studies and is deemed to demonstrate validity and consistency over time in recent analyses and reviews (see Hart & Sharfman, 2015; Perrault & Quinn, 2018). For our study we exclude the category of corporate governance because it includes items such as accounting transparency and CEO compensation which do not affect a large contingent of individuals in a community, are rarely attended to by the general public, and thus are often excluded in CSR studies (Cronqvist & Yu, 2017; Kim et al., 2012). For each of the remaining six categories, following general practice (e.g., Awaysheh et al., 2020; Cai et al., 2012; Hong & Andersen, 2011; Koh et al., 2014; Shiu & Yang, 2017) we construct a CSR score: each strength adds + 1 to the score and each concern adds - 1. That is, the CSR score is equal to the number of strengths minus the number of concerns for each category. We then add the CSR scores for all six categories as our measure of a firm's overall CSR. A greater CSR value corresponds to more strengths and fewer concerns, and hence to a more socially responsible corporate behavior. For each company, we use the most recent CSR ratings available in the database. We also compute separate results for each of the CSR components to explore Hypothesis 5.



Nonetheless our results are robust to including corporate governance in our analysis.

KLD encompasses approximately 3100 companies. We include companies with valid CUSIP numbers that could be merged with the Compustat/Capital IQ database, and drop those lacking valid financial or CSR data. Our final sample consists of 2442 companies located in 311 US counties.

# **Social Distancing**

We chose social distancing as our dependent variable because it best reflected a person's mindset of social responsibility at the beginning of a pandemic when there was a lack of proper guidance from the authorities as to how to behave (Adolph et al., 2021). In fact, during the early days, there were conflicting and contradictory pronouncements in the US regarding various precautionary measures such as mask wearing and personal space. With little guidance from authorities, individuals resorted to restricting their mobility as the safest way to avoid contracting and spreading disease (Badr et al., 2020; Zhou et al., 2020). In late April, as there were more consistent recommendations from authorities regarding the wearing of masks and personal distancing, mobility became a less reliable measure of human agency regarding responsible Covid behavior as citizens could ambulate more freely with proper protection. On April 17, the White House issued guidelines for opening up America again. On April 30, the CDC issued updated health and safety guidelines for business reopening. Alaska, Georgia and Oklahoma were the first states to partially reopen on April 24.

Our social distancing data come from *Google Covid-19 Community Mobility Reports*. Google tracked its users' movements over time during the Covid-19 outbreak, and compiled reports on mobility reduction by county and across categories of places such as retail and recreation, groceries and pharmacies, parks, transit stations, workplaces, and residential. The changes in community mobility are then compared to a baseline value for that day of the week in the same county, estimated using the median value for the corresponding day of the week during the 5-week period before the pandemic outbreak, from Jan 3 to Feb 6, 2020. Since our analysis is at the firm level, we assign county-level values of changes in community mobility to firms located in that county.

There are more than a billion people globally who use Google Maps every month; further, the mobility data are not limited to Google Maps users on mobile devices, but also comes from users of more than five million active apps or websites using Google Maps Platform core products every-day. Hence, we believe the mobility data provided by Google should accurately reflect average mobility trends across counties. We used the Mobility Reports data from February 15th, the first day the data are available, to the week ending on April 26th, by which time most states had begun to issue

specific masking and distancing policies that made reducing mobility less necessary and thus a less accurate indicator of social responsibility.

# **Community as State County**

As noted, for our study it was important that firms and residents be in geographic proximity. Empirical studies on community characteristics often define a community as a county—for example, the US Congress Joint Economic Committee, as well as Borgonovi and Andrieu (2020), use county-level data to construct measures of a community's social capital; similarly, Cui et al. (2019) define moral beliefs in a community at the county level. In this study, we consider each county as a community. Fortunately, social distancing data from Google are at the county level (states would have been too broad socially and geographically). Compustat provided the zip codes of the headquarters for all firms. We define the corresponding social distancing index using the average mobility reduction for the county where a firm is located.

## **Control Variables**

We employed Compustat to obtain firm-level control variables. Specifically, we include in our analyses factors which may affect CSR, such as firm size (log number of employees), revenue growth rate, selling, general and administrative (SG&A) expenses scaled by book assets, and firm industry fixed effects. We do this as differences in these firm characteristics may affect firm CSR ratings. For example, firm size is an important determinant of firm CSR behavior (Cordeiro & Tewari, 2015; Udayasankar, 2008); and bigger firms also tend to have more impact within the county. 3 SG&A is positively associated with CSR behavior (Erhemjamts et al., 2013) and can account for the size of headquarters, hence a firm's influence on community social distancing.<sup>4</sup> Revenue growth is included as a profitability measure associated with CSR, as CSR is more affordable for profitable firms (Bhardwaj et al., 2018; Chen et al., 2018); and CSR can increase revenue growth by attracting consumers (Lev et al., 2010). Finally, industry controls are included as, for example, sin industries (e.g., tobacco, alcohol) may choose to engage more in CSR behavior due to its value-enhancing effect (Cai et al., 2012; Cordeiro & Tewari, 2015).

<sup>&</sup>lt;sup>3</sup> Although size may include revenues and staff beyond county boundaries, it remains a useful control as larger firms generally also have a more important county presence and a more prominent image and reputation (e.g., Costco in King County WA, or Walmart in Bentonville).

<sup>&</sup>lt;sup>4</sup> A major component of SG&A expenses are costs at headquarters.

In addition, we include county-level control variables which may affect the practice of social distancing (SD). SD reductions should be greater when Covid-19 cases and death rates are higher. We obtain the number of cases and number of deaths for each county from The New York Times Coronavirus (Covid-19) Case Count and calculate the death rate as the number of deaths scaled by the number of cases.<sup>5</sup> We also control for other county-level characteristics such as log population, log income, population density, urban/rural code (an index that classifies counties into six levels with lower values for urban, higher for rural areas), education (measured by percentage of residents with a high school diploma or lower), percentage of older residents (65 years and up), and political views (dummy variable indicating whether more county residents voted for the Democratic Party than the Republican Party in 2016). These data are derived from the Census Bureau, American Community Survey, and the MIT Election Data and Science Lab. All other control variables are obtained for year 2018 because this is the most recent year for which data are available. Finally, we include state fixed effects in our analysis to account for the fact that different states may have distinct guidelines of social distancing, political orientations, and different timelines for the pandemic outbreak. Thus, we are comparing changes in social distancing pre- vs. post COVID outbreak in firm counties (vs other counties) in the same state. We report variable definitions and data sources in Appendix 1.

## **Discretionary Versus Mandated SD**

Social distancing is uncomfortable: it denies people normal human contact, comradeship, intimacy, recreation, and even livelihood. It represents a sacrifice, not only for self-protection but for the community at large. Different states implemented mandatory SD at different times, and so we could examine periods of SD before and after the state mandated shutdown. In the before period, SD is discretionary, after which it is mandated, but nonetheless varies greatly in adherence. To establish the robustness of our findings, we examine this discretionary period in which, it may be argued, that SD is especially proactive and agentic, and therefore represents a more socially responsible manifestation of community solidarity.

<sup>&</sup>lt;sup>5</sup> We include the case numbers and death rate at the end of our sample period as control. We also examined the average number of cases and death rate over the period and it did not alter our results.

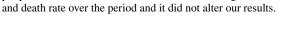


 Table 2
 Social distancing by state avg/state lock down date

State	SD_all	SD_before	SD_after	State-level stay-at-home order <sup>a</sup>	Avg. # firms/ county
AK	- 9.372	0.000	- 22.359	3/28	2.0
AL	- 9.044	- 1.170	- 26.205	4/4	2.0
AR	- 3.626	- 3.626	N/A	N/A	2.0
ΑZ	- 15.004	- 4.338	- 32.935	3/31	15.0
CA	- 19.486	1.576	- 37.741	3/19	15.8
CO	- 15.526	- 1.477	- 33.291	3/26	9.4
CT	- 13.114	2.843	- 29.652	3/23	9.8
DC	- 6.797	3.893	- 24.328	3/30	2.5
DE	- 13.481	1.786	- 30.262	3/24	6.5
FL	- 18.448	- 6.551	- 42.944	4/3	4.8
GA	- 14.128	- 5.262	- 32.070		10.8
HI	- 28.669	- 5.944	- 55.656	3/25	4.0
IA	- 9.340	- 9.340	N/A	N/A	2.8
ID	3.813	- 9.340 14.222	- 8.078	3/25	3.0
IL	- 11.052	6.098	- 8.078 - 27.433	3/23	13.7
IN	- 11.032 - 9.733	1.813	- 27.433 - 22.598	3/25	2.3
IN KS	- 9.733 1.916	9.614	- 22.398 - 10.492	3/30	4.3
KY	- 5.804		- 10.492 - 17.983	3/26	4.3
		3.773			
LA	- 12.001	4.450	- 29.539	3/23	7.5
MA	- 15.391	0.801	- 33.635	3/24	16.0
MD	- 14.706	- 2.263	- 34.886	3/30	9.5
ME	- 14.906	- 4.715	- 33.225	4/2	2.0
MI	- 11.529	4.345	- 28.719	3/24	4.2
MN	- 10.335	- 1.561	- 22.209	3/27	8.4
MO	- 3.472	2.215	- 16.815	4/6	5.5
MS	- 13.992	- 0.711	- 29.750	4/3	2.0
MT	- 13.264	-3.200	<b>-</b> 26.738	3/28	1.0
NC	<b>-</b> 9.599	- 0.057	<b>-</b> 24.497	3/30	3.9
ND	<b>-</b> 13.003	<b>-</b> 13.003	N/A	N/A	1.0
NE	<b>-</b> 4.156	<b>-</b> 4.156	N/A	N/A	4.0
NH	<b>-</b> 9.436	2.854	- 26.769	3/27	1.7
NJ	- 17.054	5.122	- 39.279	3/21	5.3
NM	- 10.603	4.153	- 27.170	3/24	1.0
NV	- 17.632	- 7.754	- 35.252	4/1	9.5
NY	- 15.469	3.339	- 33.435	3/22	11.2
OH	-6.505	5.662	<b>-</b> 18.641	3/23	5.7
OK	- 7.536	0.153	- 22.080	4/2	11.0
OR	- 10.560	5.103	- 27.056	3/23	4.3
PA	- 12.751	- 3.411	- 29.479	4/1	6.4
RI	- 12.819	1.081	- 31.836	3/28	2.7
SC	-8.530	-2.757	- 23.727	4/7	2.0
SD	- 2.469	- 2.469	N/A	N/A	1.5
TN	- 8.487	0.020	- 24.822	4/2	5.5
TX	- 13.008	- 3.392	- 31.140	4/2	13.0
UT	- 2.660	- 2.660	N/A	N/A	4.7
VA	- 18.281	- 6.013	- 37.773	3/30	9.2
WA	- 10.135	6.098	- 27.358	3/23	6.5
WI	- 9.744	0.716	- 22.061	3/25	4.4



Table 2 (continued)

State	SD_all	SD_before	SD_after	State-level stay-at-home order <sup>a</sup>	Avg. # firms/ county
WV	- 14.207	1.569	- 30.501	3/23	1.5

This table reports social distancing measures, stay-at-home order dates, and number of firms by state. SD\_all, SD\_before and SD\_after are the reduction in mobility measured over the entire sample period, the period before stay-at-home orders, and the period after stay-at-home orders, respectively

<sup>a</sup>South Dakota and Utah had some county-level stay-at-home orders but did not issue state-level orders. Stay-at-home orders issued in Kentucky, Massachusetts and Oklahoma were advisory

# **Findings**

In Table 2, we report a summary of the average social distancing measure by state, together with state lock down dates. Almost all counties in the United States exhibited substantial social distancing, starting in March 2020; however, the level of social distancing varies greatly. For example, states like California, Hawaii, New Jersey, and Nevada saw substantial reductions in mobility, while Idaho, Kansas, Utah, and South Dakota showed minor changes in overall mobility. It is notable that states that did not issue stay-athome orders or were late in doing so showed less mobility reduction. In addition, there appears to be a correlation between number of firms and social distancing, as states with more social distancing tend to have greater average number of firms per county. Of course, social distancing is also affected by other factors, including the number of cases and death rate in each state or county.

We report descriptive statistics (Panel A) and correlations (Panel B) of our key variables in Table 3. On average, counties saw an 18.326% reduction in residents' mobility from February 15 to April 26; however, the mobility reduction is only 2.332% before stay-at-home orders were issued. As expected, the overall social distancing measure, SD\_all, is negatively correlated with CSR and most of its components as pro-social CSR is associated with *less* mobility (more distancing). Oddly, the social distancing measure estimated *prior* to stay-at-home orders exhibits a positive correlation with CSR, possibly because some states issued stay-at-home orders very early when there were few cases. Of course, the association between social distancing and CSR can only be assessed after considering key control variables

To assess Hypothesis 1, Table 4 presents our baseline results on the association between CSR and SD. Specifically, we regress county-level overall social distancing on CSR, together with controls. In column 1, we analyze the entire sample period, while in columns 2 and 3 we analyze the subsample periods before and after issuance of stay-at-home orders, respectively. All columns include state fixed effects and SIC 2-digit industry-fixed effects. Standard errors are clustered by county.

The coefficient estimates of CSR are negative and statistically significant in all three columns. These results support Hypothesis 1 that higher CSR ratings are associated with more extensive social distancing. The coefficient estimate varies slightly before and after stay-at-home orders but is statistically significant at the 1% level in columns 2 and 3.

Several control variables also have significant impacts on social distancing. Counties with more cases and Democratic affiliations tend to have more social distancing; counties with lower population density, poorer education, and older/bigger firms show less social distancing. Somewhat surprisingly, counties with more older people have less social distancing. This may be because of the higher percentage of older residents who are less informed, or those in rural, less populous counties (see Panel B of Table 3—note that Urban/Rural is greater for more rural counties) where social distancing is less necessary (see https://www.theladders.com/careeradvice/generation-social-distancing-coronavirus).

# Firm Age

We next assess Hypothesis 2 by investigating firm age, a factor which allows stakeholders and residents to become more familiar over time with a firm's ethical practices. We conduct a subsample analysis split according to median firm age. Table 5, column 1 concerns firms of above-median age, and column 2 median or below-median age. We find that the coefficient estimate of CSR in column 1 is negative and statistically significant at the 1% level. In contrast, the coefficient for younger firms is insignificant. Consistent with Hypothesis 2, these results show that the negative effect of firm CSR on SD mainly comes from older firms which are more likely to be embedded in the community as role models, sources of norms, or partners in routinized interactions with residents. We do not observe the same effect for younger firms—an important limitation on the range of our

such as number of cases, population, education, and political affiliation.

<sup>&</sup>lt;sup>6</sup> Google does not report mobility reduction figures when statistically significant levels of data are not available. As a result, the numbers of valid observations are slightly smaller for periods before and after stay-at-home orders.

<sup>&</sup>lt;sup>7</sup> We employed subsample analyses for Hypotheses 2 to 4 to isolate conditions where there is and is NOT an association between CSR and SD. We have established the significance of these analyses using interaction terms (see Robustness section below).

 Table 3
 Summary statistics and correlations

Panel A. Descriptive statistics					
Variable	Obs	Mean	Std. Dev	Min	Max
SD_all	2442	- 18.326	8.482	- 39.483	10.39
SD_before	2432	- 2.332	5.383	- 28.010	17.16
SD_after	2385	- 38.500	12.314	- 69.766	3.20
CSR	2433	0.649	2.606	- 3.000	10.00
Community	2442	0.102	0.386	- 1.000	2.00
Diversity	2442	- 0.442	0.990	- 2.000	2.00
Employee	2442	0.666	1.368	- 1.000	6.00
Environment	2442	0.274	0.737	- 1.000	3.00
Human rights	2433	0.028	0.279	- 1.000	2.000
Product	2442	0.008	0.419	- 1.000	1.000
Log(cases)	2442	7.854	1.760	0.000	11.97
Log(population)	2442	13.857	0.981	10.260	16.12
Death rate	2442	0.045	0.023	0.000	0.15
Log(income)	2442	10.926	0.261	10.396	11.719
Pop. density	2424	5.397	13.042	0.020	57.34
Urban	2424	1.207	0.508	1.000	5.000
Education	2442	11.182	4.298	3.600	21.300
Democratic	2442	0.811	0.392	0.000	1.000
Elder percentage	2439	14.678	2.661	9.885	23.880
Firm size	2363	0.909	2.212	- 4.828	5.44
SG&A	2442	0.193	0.258	0.000	1.53
Revenue growth	2384	0.119	0.296	- 0.613	1.80
Log(firm age)	2402	3.047	0.814	0.000	4.55
Panel B. Correlation matrix					
[1]	[2] [3] [4] [5] [6]	[7] [8] [9] [10]	[11] [12] [13] [14] [15	5] [16] [17] [18] [19] [2	0] [21] [2:
[1]		[,] [0] [2] [10]	[] [12] [13] [14] [1.	,, [10] [17] [2	√j <u>(</u> ≙1) <u>(</u> ≙.

[1]	SD_an																				
[2]	SD_before	0.62																			
[3]	SD_after	0.98 0.61																			
[4]	CSR	-0.06  0.01 - 0.06																			
[5]	Community	0.00 0.01 0.00	0.55																		
[6]	Diversity	-0.05  0.00 - 0.05	0.65	0.37																	
[7]	Employee	- 0.06- 0.02 - 0.05	0.82	0.30	0.30																
[8]	Environment	- 0.03   0.03 - 0.03	0.66	0.28	0.27	0.42															
[9]	Human Rights	0.03 0.00 0.03	0.18	0.24	0.01	0.09	- 0.01														
[10]	Product	-0.05  0.02 - 0.05	0.11 -	- 0.04 -	- 0.10	0.01	- 0.04	- 0.02													
[11]	Log(Cases)	- 0.62- 0.22 - 0.65	0.05	0.02	0.04	0.03	0.02	0.01	0.03												
[12]	Log(Population)	- 0.40- 0.24 - 0.38	0.01	0.00 -	- 0.01	0.02	- 0.02	0.05	0.02	0.65											
[13]	Death Rate	-0.11  0.13 - 0.12	0.04	0.04	0.05	0.01	0.05	- 0.04	0.01	0.26	- 0.04										
[14]	Log(Income)	- 0.11 0.17 - 0.09	- 0.01 -	- 0.01 -	- 0.04	- 0.01	0.02	0.01	0.05	0.07	- 0.07	0.15									
[15]	Pop. Density	- 0.66- 0.35 - 0.67	0.06	0.02	0.08	0.03	0.03	0.00	0.00	0.62	0.14	0.26	- 0.02								
[16]	Urban	0.30 0.22 0.31	- 0.05	0.00 -	- 0.03	- 0.05	- 0.01	- 0.01	- 0.01	- 0.43	- 0.50	- 0.04	0.03	- 0.14							
[17]	Education	- 0.21- 0.18 - 0.18	- 0.03	0.02 -	- 0.02	- 0.03	- 0.03	0.07	- 0.01	0.33	0.58	- 0.28	- 0.15	0.15	- 0.06						
[18]	Democratic	- 0.46- 0.23 - 0.45	0.07	0.02	0.08	0.05	0.02	- 0.04	0.04	0.47	0.41	0.13	0.05	0.17	- 0.36	0.19					
[19]	Elder Percentage	0.01  0.21 - 0.02	0.01	0.00	0.02	0.01	0.03	- 0.05	0.00	- 0.02	- 0.30	0.33	0.15	0.12	0.24	- 0.35	- 0.14				
[20]	Firm Size	0.10 0.03 0.09	0.38	0.28	0.30	0.30	0.27	- 0.03	- 0.07	- 0.03	- 0.03	0.03	- 0.09	- 0.01	- 0.02	- 0.06	- 0.02	0.00			
[21]	SG&A	- 0.06- 0.01 - 0.05	- 0.08 -	- 0.05 -	- 0.01	- 0.11	- 0.03	- 0.07	0.03	- 0.01	0.01	0.01	- 0.01	- 0.01	- 0.08	- 0.09	0.04	- 0.05	0.04		
[22]	Revenue Growth	- 0.06- 0.06 - 0.05	- 0.05 -	- 0.02 -	- 0.06	- 0.02	- 0.04	0.02	- 0.01	0.00	0.04	- 0.03	0.03	0.02	- 0.01	0.04	0.05	- 0.02	- 0.08	- 0.05	
[23]	Log(Firm Age)	0.14 0.11 0.14	0.19	0.20	0.14	0.15	0.10	0.01	- 0.03	- 0.05	- 0.07	0.05	- 0.01	- 0.04	0.07	- 0.05	- 0.05	0.06	0.23	- 0.08- 0.1	7

Panel A reports descriptive statistics of variables. Panel B reports correlations among variables. All continuous variables are winsored at the 1% and the 99% levels



Table 4 CSR and social distancing

Dep. Var	(1)	(2)	(3)
	SD_all	SD_before	SD_after
CSR	- 0.069***	- 0.051***	- 0.094***
	(-3.02)	(-2.86)	(-2.93)
Log(Cases)	- 0.733	0.175	- 2.119***
	(-1.39)	(0.47)	(-2.65)
Log(Population)	-0.659	- 1.239**	0.154
	(-0.80)	(-2.50)	(0.12)
Death Rate	0.488	9.077	- 16.554
	(0.04)	(1.07)	(-0.86)
Log(Income)	0.869	1.171	0.663
	(0.76)	(1.62)	(0.39)
Pop. Density	- 0.415***	- 0.236***	- 0.570***
	(-13.15)	(-10.88)	(-13.27)
Urban	- 1.316**	- 1.064**	- 1.541*
	(-2.27)	(-2.46)	(-1.74)
Education	0.480***	0.296***	0.742***
	(5.11)	(5.03)	(4.90)
Democratic	- 3.923***	- 2.773***	- 5.994***
	(-5.24)	(-5.02)	(-5.32)
Elder Percentage	0.422***	0.276***	0.677***
	(2.98)	(2.89)	(2.98)
Firm Size	0.087**	0.073**	0.095
	(1.98)	(2.20)	(1.49)
SG&A	0.031	0.383	-0.481
	(0.08)	(1.17)	(-0.86)
Revenue Growth	0.122	0.184	-0.009
	(0.65)	(1.28)	(-0.04)
Log(Firm Age)	0.161*	0.120*	0.214
	(1.77)	(1.75)	(1.60)
Constant	- 7.287	1.704	-23.941
	(-0.50)	(0.20)	(-1.05)
State & Industry FE	Yes	Yes	Yes
Observations	2241	2232	2186
R-squared	0.851	0.812	0.856

This table reports the regressions of social distancing on CSR. In columns 1–3, the dependent variables are the reduction in mobility measured over the entire sample period, the period before stay-athome orders, and the period after stay-at-home orders, respectively. All continuous variables are winsored at the 1% and the 99% levels. T-statistics are reported in parentheses and are clustered at the county level

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively

findings. In column 3, we interact CSR with log firm age and find that the coefficient estimate of the interaction term is negatively significant at the 5% level, indicating that the effect of CSR on mobility reduction is more pronounced for older firms.

Table 5 CSR and firm age

	(1)	(2)	(3)
	> Median age	<=Median age	Interaction
CSR	- 0.115***	- 0.009	0.106
	(-3.09)	(-0.22)	(1.29)
CSR x Log(Firm Age)			- 0.052**
			(-2.21)
Log(Cases)	- 0.592	- 0.747	- 0.725
	(-0.94)	(-1.50)	(-1.37)
Log(Population)	- 0.824	-0.492	-0.664
	(-0.85)	(-0.64)	(-0.81)
Death Rate	3.232	- 3.093	0.651
	(0.21)	(-0.26)	(0.05)
Log(Income)	1.444	0.410	0.859
	(1.11)	(0.38)	(0.75)
Pop. Density	- 0.424***	- 0.411***	- 0.415***
	(-12.00)	(-11.80)	(-13.19)
Urban	- 0.967	- 1.451***	- 1.302**
	(-1.30)	(-2.62)	(-2.25)
Education	0.515***	0.442***	0.481***
	(4.84)	(4.82)	(5.14)
Democratic	- 4.134***	- 4.010***	- 3.908***
	(-5.02)	(-5.51)	(-5.24)
Elder Percentage	0.439***	0.413***	0.422***
	(2.74)	(3.00)	(2.99)
Firm Size	0.147**	0.062	0.092**
	(2.38)	(0.94)	(2.08)
SG&A	0.787	- 0.301	0.058
SG&/I	(1.01)	(-0.65)	(0.14)
Revenue Growth	0.126	0.316	0.136
Revenue Growth	(0.39)	(1.25)	(0.72)
Log(Eirm Aga)	0.496*	0.386**	0.219**
Log(Firm Age)			
C	(1.84)	(2.30)	(2.21)
Constant	- 17.254	- 0.082	- 7.424
G	(-1.03)	(-0.01)	(-0.51)
State & Industry FE	Yes	Yes	Yes
Observations	1018	1223	2241
R-squared	0.884	0.834	0.851

This table reports the regressions of social distancing on CSR, conditional on firm age. Columns 1 and 2 present subsample analysis and column 3 presents results including an interaction term between CSR and log firm age. Firm age is measured as the number of years from IPO to 2020. The dependent variable is the reduction in mobility measured over the entire sample period. All continuous variables are winsored at the 1% and the 99% levels. *T*-statistics are reported in parentheses and are clustered at the county level

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively



Table 6 CSR and CSR homogeneity

	(1)	(2)	(3)
	Low homogeneity	High homoge- neity	Interaction
CSR	- 0.037	- 0.038**	- 0.352**
	(-1.64)	(-2.17)	(-2.48)
CSR Variance			-0.929
			(-1.50)
CSR x CSR Variance			0.109**
			(2.17)
Log(Cases)	- 2.489***	0.750	- 4.572***
	(-8.69)	(0.74)	(-4.35)
Log(Population)	1.998***	- 6.168***	4.320***
	(5.35)	(-3.23)	(3.00)
Death Rate	- 0.240	- 151.304***	- 52.301*
	(-0.03)	(-4.72)	(-1.78)
Log(Income)	- 1.155***	- 6.849***	-0.621
	(-3.42)	(-3.33)	(-0.32)
Pop. Density	- 0.338***	- 1.249***	- 2.848***
	(-27.83)	(-5.19)	(-3.09)
Urban	- 0.382	- 4.948**	- 2.585**
	(-0.96)	(-2.60)	(-2.30)
Education	0.160***	1.022***	0.598***
	(3.10)	(5.18)	(3.96)
Democratic	- 1.785***	- 5.605***	-2.290
	(-4.03)	(-3.35)	(-1.40)
Elder Percentage	0.116**	1.354***	0.787***
	(2.03)	(4.83)	(3.53)
Firm Size	0.045	0.074	-0.010
	(1.16)	(1.66)	(-0.18)
SG&A	- 0.721**	0.599	-0.501
	(-2.27)	(1.40)	(-1.26)
Revenue Growth	- 0.171	0.150	-0.305
	(-0.83)	(1.23)	(-1.46)
Log(Firm Age)	0.125	0.102	0.146
	(1.42)	(1.04)	(1.52)
Constant	- 11.510**	118.318***	- 31.329
	(-2.57)	(3.16)	(-1.38)
State & Industry FE	Yes	Yes	Yes
Observations	932	948	1880
R-squared	0.965	0.898	0.837

This table reports the regressions of social distancing on CSR, conditional on CSR homogeneity. In column 1 (2), we analyze counties with above-median (below-median) CSR variance, and include an interaction between CSR and CSR variance in column 3. The dependent variable is the reduction in mobility measured over the entire sample period. CSR is the overall corporate social responsibility measure. CSR Variance is the variance of CSR ratings of all firms located in a county. All continuous variables are winsored at the 1% and the 99% levels. *T*-statistics are reported in parentheses and are clustered at the county level

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively



# **CSR Homogeneity**

In Table 6, we test Hypothesis 3 on the impact of CSR homogeneity in a county on SD there. We measure CSR homogeneity with the variance of CSR of firms located in a county; 88 In order to calculate variance, we required a county to have at least five firms in our sample, we then estimate the CSR-SD relationship for counties with above-median and median or below-median CSR standard deviation separately. We show that the negative association between CSR and SD is only statistically significant in counties with below-median CSR variance, i.e., where CSR is homogeneous in a county. In addition, the interaction term of CSR and CSR variance is positively significant at the 5% level. Findings in Table 6 are consistent with Hypothesis 3 that the effect is that CSR is pronounced in communities with homogeneous CSR. This confirms that firm isomorphism in CSR has a significant effect on SD; where it is absent, there is no such effect.

# **Commercial Importance**

Table 7 presents regression results pertaining to Hypothesis 4 on the relationship between CSR and SD in counties where firms were major versus minor employers and vendors. We employ two measures of firm importance—number of employees as a percentage of total firm employees in a county, and firm revenue as a percentage of total firm revenues in a county. We required counties to have at least five firms in order to calculate firm influence. Consistent with Hypothesis 4 that CSR matters more for firms with greater local influence, we show that the negative CSR-SD association is only statistically significant for firms with more than the median fraction of employees (column 1) or that generate more than the median fraction of revenues (column 4) in the county. In contrast, in columns 2 and 5, the coefficient estimate of CSR is statistically insignificant for firms with median or below-median employment or revenue percentages. In columns 3 and 6, we include interaction terms in regressions and find the coefficient estimates of both interaction terms negative and significant.

# **Employee Related and Other Components of CSR**

Hypothesis 5 proposed that the components of CSR relating to employee treatment and diversity would relate significantly to SD due to their close and consequential impact on employees and their families and associates. Table 8 confirms that. The analyses regress social distancing on each of the six CSR components—community, diversity, employee, environment, human rights and products. The coefficient estimates are reported in columns 1–6. Columns 2 and 3 show that indeed the employee and diversity components of CSR are significant in the expected direction, whereas the

**Table 7** CSR and firm importance

	(1)	(2)	(3)	(4)	(5)	(6)
	Employment			Revenue %		
	> Median	≤ Median	Interaction	> Median	≤ Median	Interaction
CSR	- 0.090***	- 0.023	0.020	- 0.119***	- 0.024	-0.004
	(-3.17)	(-0.87)	(0.62)	(-3.58)	(-1.29)	(-0.14)
Employment %			0.743**			
			(2.34)			
CSR x Employment %			- 0.060**			
			(-2.60)			
Revenue %						0.604**
						(2.19)
CSR x Revenue %						- 0.052**
						(-2.33)
Log(Cases)	-0.758	<b>-</b> 1.476	- 1.010	-0.779	- 1.564	-1.024
	(-1.12)	(-1.54)	(-1.35)	(-1.20)	(-1.46)	(-1.33)
Log(Population)	- 0.959	1.080	0.040	-0.892	1.254	-0.024
	(-0.89)	(0.78)	(0.03)	(-0.84)	(0.84)	(-0.02)
Death Rate	- 6.316	-2.130	<b>-</b> 4.418	<b>-</b> 9.116	<b>-</b> 9.442	-2.815
	(-0.33)	(-0.11)	(-0.23)	(-0.46)	(-0.47)	(-0.15)
Log(Income)	0.507	0.005	-0.032	1.172	-0.845	0.016
	(0.36)	(0.00)	(-0.03)	(0.81)	(-0.69)	(0.01)
Pop. Density	- 0.424***	- 0.377***	- 0.387***	- 0.430***	- 0.369***	- 0.390***
	(-10.29)	(-10.00)	(-10.67)	(-9.65)	(-9.16)	(-10.55)
Urban	-0.756	-0.148	-0.773	-0.812	-0.089	-0.661
	(-0.82)	(-0.16)	(-0.77)	(-0.85)	(-0.10)	(-0.66)
Education	0.513***	0.419***	0.490***	0.517***	0.384***	0.503***
	(4.10)	(3.70)	(4.03)	(4.12)	(3.46)	(4.13)
Democratic	- 4.352***	- 4.488***	- 4.278***	- 4.848***	- 3.878***	- 4.297** <sup>*</sup>
	(-3.98)	(-4.40)	(-4.23)	(-4.01)	(-4.14)	(-4.29)
Elder Percentage	0.496**	0.550**	0.526***	0.504***	0.490**	0.533***
	(2.53)	(2.48)	(2.71)	(2.70)	(2.33)	(2.73)
Firm Size	0.028	-0.004	- 0.203	0.017	-0.002	- 0.126
	(0.17)	(-0.08)	(-1.58)	(0.10)	(-0.04)	(-1.23)
SG&A	-0.630	0.523	0.119	-0.874	0.346	0.074
	(-0.83)	(1.51)	(0.35)	(-1.21)	(1.01)	(0.21)
Revenue Growth	-0.284	-0.008	-0.026	0.339	-0.029	-0.008
	(-0.58)	(-0.05)	(-0.18)	(0.65)	(-0.20)	(-0.05)
Log(Firm Age)	0.049	0.188**	0.101	0.202	0.210**	0.119
	(0.36)	(2.04)	(1.28)	(1.25)	(2.42)	(1.49)
Constant	7.581	<b>-</b> 22.688	<b>-</b> 8.719	<b>-</b> 7.473	- 31.153*	<b>-</b> 8.467
	(0.43)	(-1.37)	(-0.55)	(-0.40)	(-1.90)	(-0.54)
State & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	830	1059	1889	744	1144	1888
R-squared	0.873	0.929	0.902	0.869	0.932	0.902

This table reports the regressions of social distancing on CSR, conditional on firm importance in its county. Firm importance is measured using the number of employees as a percentage of total firm employees in the county (columns 1-3) and firm revenue as a percentage of total firm revenues in the county (columns 4-6). The dependent variable is the reduction in mobility measured over the entire sample period. All continuous variables are winsored at the 1% and the 99% levels. T-statistics are reported in parentheses and are clustered at the county level

<sup>\*\*\*, \*\*,</sup> and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively



**Table 8** CSR components and social distancing

	(1)	(2)	(3)	(4)	(5)	(6)
Community	- 0.076					
Community	(-0.59)					
Diversity	( 0.0)	- 0.199*				
		(-1.79)				
Employee		,	- 0.168***			
			(-3.91)			
Environment				- 0.089		
				(-1.20)		
Human Rights					- 0.049	
					(-0.29)	
Product						-0.015
						(-0.10)
Log(Cases)	-0.758	0.133	-0.757	-0.759	-0.738	-0.760
	(-1.43)	(0.29)	(-1.43)	(-1.43)	(-1.39)	(-1.43)
Log(Population)	-0.626	- 2.193***	-0.628	-0.627	-0.646	-0.623
	(-0.76)	(-2.95)	(-0.77)	(-0.76)	(-0.78)	(-0.75)
Death Rate	0.870	30.511*	0.360	0.842	0.769	0.845
	(0.07)	(1.96)	(0.03)	(0.07)	(0.06)	(0.07)
Log(Income)	0.877	- 3.270**	0.850	0.868	0.885	0.874
	(0.76)	(-2.12)	(0.75)	(0.76)	(0.77)	(0.76)
Pop. Density	- 0.416***	- 0.413***	- 0.416***	- 0.416***	- 0.415***	- 0.416***
T. 1	(-13.03)	(-13.04)	(- 13.07)	(-13.02)	(- 13.07)	(-13.02)
Urban	- 1.323**	- 0.138	- 1.321**	- 1.320**	- 1.316**	- 1.322**
El d	(-2.28)	(-0.17)	(-2.28)	(-2.28)	(-2.27)	(-2.28)
Education	0.484***	0.098	0.478***	0.484***	0.483***	0.484***
Damaantia	(5.14) - 3.948***	(0.81) - 5.323***	(5.10) - 3.908***	(5.14) - 3.945***	(5.12) - 3.955***	(5.14) - 3.950***
Democratic						
Elder Percentage	(- 5.27) 0.422***	(- 5.23) - 0.109	(- 5.23) 0.421***	(- 5.27) 0.422***	(- 5.27) 0.423***	(- 5.27) 0.422***
Elder Tercentage	(2.98)	(-0.60)	(2.98)	(2.98)	(2.98)	(2.98)
Firm Size	0.052	0.199***	0.092**	0.058	0.045	0.047
THIII SIZE	(1.24)	(2.86)	(2.19)	(1.38)	(1.12)	(1.16)
SG&A	0.085	- 0.078	- 0.002	0.071	0.070	0.085
	(0.21)	(-0.11)	(-0.01)	(0.17)	(0.17)	(0.21)
Revenue Growth	0.147	- 0.492	0.142	0.147	0.135	0.148
	(0.79)	(-1.26)	(0.76)	(0.79)	(0.72)	(0.80)
Log(Firm Age)	0.148	0.531***	0.161*	0.146	0.142	0.143
-	(1.61)	(3.05)	(1.79)	(1.59)	(1.56)	(1.57)
Constant	- 7.545	47.347**	- 7.249	- 7.411	- 7.460	- 7.526
	(-0.51)	(2.49)	(-0.50)	(-0.50)	(-0.51)	(-0.51)
State & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2247	2270	2247	2247	2241	2247
R-squared	0.851	0.635	0.851	0.851	0.851	0.851

This table reports the regressions of social distancing on the six components of CSR: Community, Diversity, Employee, Environment, Human Rights and Product. The dependent variable is the reduction in mobility measured over the entire sample period. All continuous variables are winsored at the 1% and the 99% levels. T-statistics are reported in parentheses and are clustered at the county level



<sup>\*\*\*, \*\*,</sup> and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively

other components which are more remote from public attention and less consequential to many residents bear weaker associations.

As these are only components of a holistic index, and because our theorization throughout most of the paper concerns all our aspects of CSR, these findings must be interpreted with caution. For example, community may not be significant because of very limited variation in the measure of community CSR (90% report no strengths, 97% no concerns). The MSCI ESG KLD data only cover a limited number of items on community strengths and concerns (our data show a range from -1 to 2, and most firms list none). In addition, community-related CSR in the database mainly concerns donations which are often to national funds or foundations rather than local communities, and local initiatives such as volunteer programs are rare (only about 1.2% of our sample firms report volunteer programs); hence, the community-related CSR ratings may not accurately measure firms' CSR efforts in their communities.

# The Impact of Firms with Exceptional CSR: Role Models Good and Bad

We attempted to examine the impact of firms which score exceptionally high, and exceptionally poorly on CSR as, arguably, these would be the most positive and negative role models, respectively, in impacting social distancing. We define the "bottom 10% CSR firms" as those in the lowest decile with CSR ratings of -2 or lower (firms with at least two more concerns than initiatives), and the "top 10% CSR firms" as those in the highest decile with CSR ratings of 5 or higher. We define "top 20% CSR firms" and "top 30% CSR firms" in similar ways. We regress social distancing on these dummy variables, taking firms with ratings around 0 as the benchmark. As Table 9 shows, we observe statistically significant coefficients for the top 10% and bottom 10% firms, suggesting that our results are mainly driven by "role models" with extreme CSR ratings. In addition, we show that firms with lowest CSR ratings are associated with less social distancing in communities they are located.

In untabulated tests, we also show that high-CSR firms on average do not locate in communities with more social capital. Together with the insignificant coefficients of top 30% to top 20% firms in Table 9, our findings suggest, very tentatively, that the role model mechanism of CSR may be a more salient influence on social distancing than social norms.

# Robustness, Identification, and Endogeneity Issues

In untabulated results (all available from the authors), we show that the association between CSR and SD is robust in several measures. First, *all* our results hold when we substitute mobility reduction over the entire sample period

with mobility reduction before or after stay-at-home orders, although we only report the breakdown in Table 4. Second, employee-related and diversity-related CSR ratings alone give us virtually these same results for all analyses. Third, our results hold when we include the corporate governance component of CSR ratings. Finally, we disaggregated the CSR index into concerns and strengths, and as expected, found negative relationships with SD for strengths (p < 0.05) and positive ones for concerns (p < 0.10); the latter result likely was less significant due to the limited variance of the concerns indicator (only a small portion of firms report concerns). In short, CSR correlates with social distancing under multiple measures of both social distancing and CSR.

For identification purposes, we follow recommendations by Semadeni et al. (2014) and employ instrumental variables to address the potential endogeneity of CSR. Specifically, we instrument CSR by two variables which should be related to firm CSR but not distancing: Female CEO is a dummy which equals one if the CEO is female and zero otherwise; Log(CEO Age) is the log value of CEO age. Female CEOs and young CEOs have been shown to more actively engage in socially responsible practices and investments (Borghesi et al., 2014; McGuinness et al., 2017). Moreover, CEO appointment decisions are firm level and are based on CEO qualifications, not board composition or community demographics (Cook & Glass, 2015; Gupta & Raman, 2014), nor social distancing practices in a future pandemic. Thus, CEO gender and age represent valid instruments for CSR. We obtain these variables from Execucomp.

In Table 10, we report our instrumental variable regression results. Due to data limitations, the instrument variables reduce our sample size to 1438. Column 1 reports the first stage analysis and shows that our two instrumental variables clearly satisfy the relevance condition. We show that CSR is significantly related to instrument variables; firms run by female CEOs and young CEOs tend to have higher CSR ratings. In column 2, we find that instrumented CSR continues to correlate negatively with a community's social distancing practices, and the relationship is statistically significant at the 10% level.

Following recommendations by Semadeni et al. (2014), we perform two post-estimation tests to validate our instrumental variables. In the weak instrument test on the joint significance of CEO gender and age, we obtain a p-value of 0.0156, rejecting the null hypothesis that our instrumental variables are weak instruments. In the overidentification tests on the endogeneity of instrumental variables (Sargan and Basmann tests), we obtain p-values of 0.8958 and 0.9004; such a large p-value clearly fails to reject the null hypothesis that our instruments are not endogenous. Both post-estimation tests suggest that our instrumental variables are correctly specified and aid correct identification.



Table 9 Social distancing and top/bottom CSR firms

Variables	(1)	(2)	(3)
	SD_all	SD_before	SD_after
CSR Bottom 10%	0.483**	0.359**	0.526*
	(2.49)	(2.44)	(1.92)
CSR Top 30%	0.244	0.083	0.298
	(0.92)	(0.46)	(0.73)
CSR Top 20%	-0.282	- 0.168	-0.523
	(-1.12)	(-0.90)	(-1.44)
CSR Top 10%	- 0.351**	- 0.247*	- 0.537**
	(-1.96)	(-1.77)	(-2.17)
Log(Cases)	-0.743	0.167	- 2.131***
	(-1.41)	(0.45)	(-2.68)
Log(Population)	- 0.649	- 1.231**	0.165
	(-0.79)	(-2.49)	(0.13)
Death Rate	0.653	9.140	- 16.366
	(0.05)	(1.08)	(-0.85)
Log(Income)	0.871	1.173	0.669
	(0.76)	(1.63)	(0.40)
Pop. Density	- 0.414***	- 0.235***	- 0.569***
	(-13.20)	(-10.93)	(-13.31)
Urban	- 1.322**	- 1.068**	- 1.550*
	(-2.28)	(-2.47)	(-1.75)
Education	0.480***	0.296***	0.742***
	(5.13)	(5.04)	(4.91)
Democratic	- 3.930***	- 2.777***	- 6.000***
	(-5.26)	(-5.04)	(-5.32)
Elder Percentage	0.419***	0.274***	0.676***
	(2.96)	(2.86)	(2.97)
Firm Size	0.085*	0.071**	0.094
	(1.94)	(2.10)	(1.50)
SG&A	0.028	0.374	-0.488
	(0.07)	(1.15)	(-0.88)
Revenue Growth	0.097	0.168	-0.040
	(0.51)	(1.17)	(-0.15)
Log(Firm Age)	0.158*	0.116*	0.209
	(1.71)	(1.67)	(1.56)
Constant	- 7.595	1.463	- 24.290
	(-0.52)	(0.17)	(-1.07)
State & Industry Fixed Effects	Yes	Yes	Yes
Observations	2241	2232	2186
R-squared	0.851	0.812	0.856

This table reports the regressions of social distancing on top or bottom CSR indicators. The dependent variable is the reduction in mobility measured over the entire sample period. All continuous variables are winsored at the 1% and the 99% levels. *T*-statistics are reported in parentheses and are clustered at the county level

\*\*\*, \*\*, and \* indicate statistical significance at the  $1\%,\,5\%$  and 10% levels, respectively

Table 10 CSR and social distancing: instrumental variables

	First stage	Second stage
Dep. Var	CSR	SD_all
CSR		- 0.898*
		(-1.77)
Female CEO	0.623**	
	(2.17)	
Log(CEO Age)	- 1.003*	
	(-1.9)	
Log(Cases)	0.080	- 0.849*
	(0.46)	(-1.79)
Log(Population)	- 0.326	- 0.835
	(-1.26)	(-1.13)
Death Rate	0.312	- 4.937
	(0.07)	(-0.39)
Log(Income)	-0.362	0.192
	(-1.00)	(0.18)
Pop. Density	-0.003	- 0.410***
	(-0.23)	(-14.28)
Urban	- 0.132	- 1.338**
	(-0.66)	(-2.22)
Education	- 0.029	0.466***
	(-1.08)	(5.03)
Democratic	0.698***	- 3.303***
	(3.11)	(-4.04)
Elder Percentage	0.032	0.592***
	(0.66)	(4.16)
Firm Size	0.858***	0.801*
	(16.45)	(1.82)
SG&A	- 0.609	-0.240
	(-1.58)	(-0.29)
Revenue Growth	- 0.943***	- 1.162*
	(-2.61)	(-1.69)
Log(Firm Age)	0.479***	0.451*
	(4.07)	(1.66)
Constant	6.673	- 24.568*
	(1.37)	(-1.92)
State & Industry FE	Yes	Yes
Observations	1438	1438
R-squared	0.353	0.828
P value of Weak Instrument test		0.0156
P value of Sargan chi2 test		0.8958
P value of Basmann chi2 test		0.9004

This table reports the instrumental variable regression of social distancing on CSR. The dependent variable in the second stage is the reduction in mobility measured over the entire sample period. CSR is instrumented by CEO gender and log CEO age. All continuous variables are winsored at the 1% and the 99% levels. *T*-statistics are reported in parentheses and are clustered at the county level

\*\*\*\*, \*\*\*, and \* indicate statistical significance at the  $1\%,\,5\%$  and 10% levels, respectively



# **Further Explorations of Endogeneity**

An important endogeneity concern is that social distancing and CSR may both stem from social responsibility levels in a county. Although it is difficult to completely exclude this influence, all our tests suggest that it did not drive our findings. First, we obtained data on a social capital index and its four sub-indices—family unity, community health, institution health, and collective efficacy from the US Congress Joint Economic Committee (see Appendix 1). We find that our results hold when the social capital index or any of its four sub-indices are included as control variables (see Appendix 2). We also find that except for institution health none of these indices, including the overall index, bears a significant relationship to the distancing measure, and that the CSR measure exhibits very weak and statistically insignificant correlations with all social capital measures.

In addition, we performed a mediation test to investigate the possibility that CSR affects social distancing through social capital, i.e., that social capital serves as a mediator between social distancing and CSR. Following Baron and Kenny (1986) we test the significance of this mediating effect using the Sobel z-score (Sobel, 1982): that coefficient is -0.003 and the corresponding z-score is -1.261, which is statistically insignificant even at the 10% level. Thus, the social capital index is not a valid mediator for CSR and social distancing.

Another possible source of endogeneity are government actions to prevent the spread of Covid-19. For example, some counties may impose more extreme restrictions which affect social distancing. Although it is unclear how such county-level actions might relate to CSR, we did assess this potential confound. First, most of the differences in government actions were at the state not county level. In addition, had government actions driven our results, our findings would be significant only *after* imposed stay-athome orders—the most powerful driver of distancing. To the contrary, our results are equally strong before stay-athome orders.

Finally, we address potential endogeneity from work-from-home (WFH) policies. A positive correlation is plausible between firm CSR initiatives and flexible work policies such as the WFH policies during a pandemic. Hence, mobility reduction may simply reflect work-related mobility reduction as a result of WFH policies. To address this concern, we excluded work-related mobility reduction from our social distancing measure and replicated our results. In untabulated results, we find that the social distancing measure

excluding work-related mobility reduction remained significantly explained by firm CSR, indicating that our results are not driven by WFH policies. All of our untabulated results are available upon request.

# **Discussion**

# Community, Organization, and Individual Behavior

Beginning with Tonnies (1887 translated 1957), sociologists have explored the profound social effects of the interplay of communities and organizations, and their effect on individual behavior. In recent years, the organizational literature has deepened our knowledge of the reciprocity among communities and their organizations and institutions (Davis & Zald, 2005; Marquis et al., 2007, 2011, and others). The current study advances the literature by examining the impact both have on individual behavior. Such influence is critical as institutions like businesses can have an important effect on the social norms and values of the community as enacted by the conduct of its residents (Mills, 1951; Putnam, 2000). Those norms can be manifested quite strikingly as personal social discipline and sacrifice, or the lack thereof, during hard times (Putnam & Feldstein, 2009). A key question therefore is can consistently positive or negative examples of social conduct by significant firms in a community influence residents' solidarity in periods of crisis? For better and for worse, our research suggests an affirmative answer.

We have proposed three sources of influence by which firms, through their CSR behavior, can shape individual conduct: by serving as role models, by conveying and reinforcing social norms, and by routinizing forms of engagement with community members (see Table 1). Firms' norms and values, as evidenced in part by their material and social practices, can shape critical behavior of members of the community. Companies hire, socialize and train people who spend much of their time at work, and are influenced by their working conditions and benefits for their well-being. They also interact regularly with customers and vendors, impact the natural environment, and engage with community institutions such as schools, charities, and local government. As such they may serve as uplifting role models or conveyors of norms and values, and routinizing agents of responsible social conduct, by fostering enlightened and beneficent employment conditions, clean technology initiatives, and civic generosity in times of strife (e.g., Graham & Shuldiner, 2001; Tilcsik & Marquis, 2013). Unfortunately, they may also pollute, be selfish, exploit employees, eschew regulations, and lobby unconscionably for private benefits (Dobbin & Zorn, 2005). Certainly, firm conduct may be consequential to and thus influential upon the social norms of residents of a community.



<sup>&</sup>lt;sup>9</sup> For detailed definition and data source please see https://www.jec.senate.gov/public/index.cfm/republicans/2018/4/the-geography-of-social-capital-in-america#endnote-022-backlink.

This impact on individual behavior is important as residents are central social actors and come to behave in common ways that ultimately feed back on each other, on firms, and on other community institutions (Giddens, 1984; Putnam, 2000). Indeed, such individual agency is a critical vehicle for institutional and organizational change and warrants further attention in the literature on organizations and communities (Battilana, 2006). This is particularly true for ethical behavior that can serve as a basis for community health and solidarity—or their erosion (Dawson & Jennings, 2013).

Although responsible personal conduct is inevitably shaped by multiple factors including family life, community institutions, friends, and neighbors, we have proposed that it is also influenced by corporate behavior in the community, specifically, the way in which firms deal responsibly or irresponsibly with their employees, the environment, and the community. Firm's CSR, be it positive or negative, seems to be associated with a critical form of public health behavior—social distancing during the current pandemic.

We have demonstrated this influence to prevail where firms are temporally embedded in a community, as that likely establishes a clear reputation for role model status, and also a longer history in which residents interact with these organizations. Relationships to firms' CSR are also especially evident when there is homogeneity among firms' collective CSR profiles—that is, when firms in a community exhibit a similar behavior. This uniformity enhances its perceived legitimacy (Romanelli & Khessina, 2005; Saxenian, 1994), and hence its impact on individual norms (Thornton et al., 2015). For example, where compassionate working conditions, and care for others, are manifested by many longembedded firms, social solidarity is apt to become more salient. Finally, where firms have a bigger footprint in the community by hiring more employees and doing a larger share of business, that exposes more residents to firms' norms, values, and routinized forms of interaction. All these factors work to instantiate firms' CSR behavior in the social conduct of residents, particularly when CSR is directed toward employees and is highly positive or negative. Moreover, each factor, namely firms' embeddedness, collective CSR homogeneity, and footprint substantiates our three sources of CSR impact on residents—as role models, conveyors of norms and values, and parties of routine engagement (Table 1).

Whereas previous studies of CSR have examined its impact on outcomes such as firm reputation, financial performance, and the environment, its impact on individual behavior has been less emphasized. Our research shows that

this represents a promising area for further study, particularly as it relates to beneficent, responsible social behavior outside the immediate work environment, and toward others in the community. We caution, however, that for expository purposes, much of our emphasis has been on the positive aspects of responsible CSR leading to pro-social conduct in a community. Of course, the reverse tendency is equally true where an individualistic "every man for himself" mentality is manifested by core corporate actors. For example, where employees are treated indifferently, and the natural environment and stakeholder well-being are neglected or exploited, firms serve as negative social examples, and that can translate into less responsible personal behavior in the community.

# **CSR and Ethical and Public Health Implications**

Our study has important implications for the study of CSR and business ethics. Most of the literature on CSR focuses on the contextual, managerial and ownership characteristics that shape it, on its various strategic manifestations, and on its competitive and performance outcomes. Some important research has recently also established its implications for the conduct of individual employees (Lichtenstein et al., 2004; Romani et al., 2013). Our research progresses further in demonstrating that CSR, particularly that related to the treatment of employees, may have consequences for the ethical behavior of individuals in a community, especially when firms are long-established residents, significant entities in community commerce and employment, and are homogeneous in their collective CSR: factors all suggestive of pertinence and visibility (Cialdini & Trost, 1998). That we have described such influence during a terrible crisis suggests its potential application to other vital forms of community conduct.

Our research is also of potential significance to public health research. Epidemiological studies pertaining to public health in areas such as vaccine resistance and diet-related abuses have focused on individual incentives. They have under-emphasized the role of social institutions and community solidarity (Allcott et al., 2020; Boas et al., 2016; Dawson & Jennings, 2013), and ignored business conduct except as direct causes of illness and pollution. We show how CSR can encourage personally demanding pro-health behavior under crisis conditions. In fact, community solidary and the institutions and corporations that stimulate or



impede such solidarity in the population are topics worthy of further study.

# **Research Directions**

How community companies shape resident behavior is a promising area for further study. Although we have examined the extreme situation of conduct during a pandemic, others may wish to explore drivers of less episodic forms of individual behavior and social solidarity: for example, do more responsible firms in a community encourage enlightened resident behavior pertaining to diversity, education, public health, climate change and community engagement? Does firm CSR relate to community solidarity as manifested by individual charitable giving, volunteerism, and home care for the elderly? Conversely, does an absence of social responsibility by influential, historically embedded companies erode community solidarity, issuing in more delinquency, poverty, crime, family strife, homelessness, or racial conflict.

Of course, although CSR is an important aspect of corporate conduct that can influence personal social behavior in communities, there are others. For example, more finegrained analysis of the impact of environmental, diversity, and public health initiatives by firms in the community may also be worth examining.

# Limitations

Mutual influences operate at individual (social distancing), corporate (CSR) and community levels. Hence SD is likely influenced not only by firm CSR but also by the broader social and epidemiological environment of the community and its various social institutions. Although we have addressed endogeneity concerns and have tried to rule out key community effects related to political affiliation, education, income, and age, and also the severity of the pandemic in the community and resident vulnerability, there may be other influences we could not capture, and in a cross

sectional study it is impossible to entirely rule out reverse causality. Moreover, some firms have operations in communities beyond their head offices, and some residents work at firms located outside their communities; this limitation was impossible to avoid given data availability. Also, our findings do not apply in all situations. Our subsample analyses make clear the conditions under which our findings do, and do NOT apply—i.e., where there are less historically embedded firms, those with less employment and a smaller business footprint, and in communities with heterogeneous CSR practices. Although these limitations are consistent with our theorizing, they serve as an important caution against overgeneralization. Finally, there are many ways to measure CSR. We have chosen a common, inclusive, and popular one, but its elements may apply more to some industries and firms than to others. Moreover, our CSR measure gives the same weight to initiatives and concerns as there is no clear guidance in the literature as to which are most important. A more refined measure may lead to improved results. In addition, our empirical analysis is limited to the US. This too is important to bear in mind.

## **Conclusion**

In recent months, very different public role models and values have been referenced by politicians to convince citizens to social distance, wear masks, and wash hands to avoid spreading the coronavirus. Some have appealed to economic motives to limit pandemic effects and get everyone back to work. Others have made appeals to people based on their social obligation to save the lives of the vulnerable. They have, sometimes in poignant fashion, celebrated the health-care and civic workers who have risked their lives to save others and referred to the importance of community solidarity. And they have managed to contain the virus. Corporations too, through their social responsibility, can play a part in fostering community solidarity. This influence will be of growing importance in an increasingly vulnerable world.



# **Appendix 1: List of Variable Definitions**

This table reports definitions and data sources of all variables used in this study.

Variable	Definition	Data source
SD_all	Change in community mobility compared to a baseline value for that day of the week in the same county, estimated over the entire sample period	Google Covid-19 Community Mobility Reports
SD_before	Change in community mobility compared to a baseline value for that day of the week in the same county, estimated before stay-at-home orders	Google Covid-19 Community Mobility Reports
SD_after	Change in community mobility compared to a baseline value for that day of the week in the same county, estimated after stay-at-home orders	Google Covid-19 Community Mobility Reports
CSR	Total number of strengths minus total number of concerns for six categories: employee relations, diversity, environment, community, human rights, and product quality	MSCI ESG KLD STATS
Community	Total number of strengths minus total number of concerns in the category of community	MSCI ESG KLD STATS
Diversity	Total number of strengths minus total number of concerns in the category of diversity	MSCI ESG KLD STATS
Employee	Total number of strengths minus total number of concerns in the category of employee relations	MSCI ESG KLD STATS
Environment	Total number of strengths minus total number of concerns in the category of environment	MSCI ESG KLD STATS
Human Rights	Total number of strengths minus total number of concerns in the category of human rights	MSCI ESG KLD STATS
Product	Total number of strengths minus total number of concerns in the category of product quality	MSCI ESG KLD STATS
Log(Cases)	Logarithm of county-level cases of Covid-19	Data from The New York Times, based on reports from state and local health agencies
Log(Population)	Logarithm of county-level population	Census Bureau
Death Rate	Covid-19 death rate in the county at the end of April 2020	Data from The New York Times, based on reports from state and local health agencies
Log(Income)	Logarithm of county-level household income	Census Bureau
Pop. Density	County-level population density	Census Bureau
Urban	National Center for Health Statistics Urban–Rural Classification Scheme that classifies counties into six levels with lower values for urban and higher for rural areas	Census Bureau
Education	Percentage of residents with a high school diploma or lower	Census Bureau
Democratic	A dummy variable indicating whether more county residents voted for the Democratic Party than the Republican Party in 2016	MIT Election Data and Science Lab
Elder Percentage	Percentage of residents 65 years and up	Census Bureau
Firm Size	Logarithm number of employees	Compustat
SG&A	Selling, general and administrative expenses scaled by book assets	Compustat
Revenue Growth	Growth rate in revenue	Compustat
Log(Firm Age)	Logarithm of firm age	Compustat
CSR Variance	Variance of CSR ratings of all firms located in a county	MSCI ESG KLD STATS
Employment %	Number of firm employees as a percentage of total firm employees in the county	Compustat
Revenue %	Percentage of firm revenue as a percentage of total firm revenues in the county	Compustat
CSR Top 10%/Top 20%/Top 30%/Bot- tom 10%	Dummy variables indicating whether the firm's CSR rating is among the top $10\%/top\ 20\%/top\ 30\%/bottom\ 10\%$ of all sample firms	MSCI ESG KLD STATS
Female CEO	Dummy variable indicating whether the firm has a female CEO	Execucomp
Log(CEO Age)	Logarithm of CEO age	Execucomp
Social Capital	A county-level index developed by the US Congress Joint Economic Committee which measures social capital or "the aspects of our relationships that produce benefits for us"	US Congress Joint Eco- nomic Committee



Variable	Definition	Data source
Family Unity	A subindex of social capital which measures the share of births to unmarried women, share of women ages 35–44 who are currently married and not separated, and share of own children living in a single-parent family	US Congress Joint Economic Committee
Community Health	A subindex of social capital which measures registered non-religious non-profits per 1000, religious congregations per 1000, and an informal civil society subindex measuring volunteer work and other community work	US Congress Joint Economic Committee
Institution Health	A subindex of social capital which measures average of votes per citizen age 18+, mail-back response rates for 2010 census, and a confidence in institutions subindex which measures share reporting at least some confidence in institutions	US Congress Joint Economic Committee
Collective Efficacy	A subindex of social capital which is based on violent crimes per 100,000	US Congress Joint Economic Committee

# **Appendix 2: CSR and Social Capital**

This table reports the regressions of social distancing on CSR and social capital index and its components: family unity, community health, institution health and collective efficacy. The dependent variable is the reduction in mobility measured over the entire sample period. All continuous variables are winsored at the 1% and the 99% levels. T-statistics are reported in parentheses and are clustered at the county level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) SD_all	(2) SD_all	(3)	(4)	(5) SD_all
			SD_all	SD_all	
CSR	- 0.066***	- 0.069***	- 0.063***	- 0.062***	- 0.063***
	(-2.91)	(-3.01)	(-2.75)	(-2.74)	(-2.81)
Social Capital	0.528				
	(1.01)				
Family Unity		0.127			
		(0.22)			
Community Health			- 1.439		
			(-0.85)		
nstitution Health				2.390**	
				(2.05)	
Collective Efficacy					0.392
					(1.32)
Log(Cases)	- 0.767	- 0.749	- 0.817	- 0.836	- 0.759
	(-1.46)	(-1.38)	(-1.51)	(-1.63)	(-1.45)
Log(Population)	- 0.597	- 0.643	- 0.591	- 0.533	- 0.578
	(-0.74)	(-0.77)	(-0.73)	(-0.68)	(-0.72)
Death Rate	- 0.573	0.471	2.160	- 0.327	- 1.703
	(-0.05)	(0.04)	(0.18)	(-0.03)	(-0.14)
Log(Income)	1.056	0.907	0.773	1.285	1.022
	(0.89)	(0.78)	(0.68)	(1.12)	(0.87)
Pop. Density	- 0.407***	- 0.413***	- 0.379***	- 0.392***	- 0.400***



	(1)	(2)	(3)	(4)	(5)
	SD_all	SD_all	SD_all	SD_all	SD_all
	(-13.01)	(- 12.60)	(-6.77)	(- 12.10)	(- 12.64)
Urban	- 1.342**	- 1.323**	- 1.222**	- 1.081*	- 1.356**
	(-2.32)	(-2.28)	(-2.06)	(-1.89)	(-2.30)
Education	0.550***	0.500***	0.462***	0.646***	0.530***
	(4.48)	(3.70)	(4.93)	(4.86)	(5.23)
Democratic	- 3.756***	- 3.875***	- 3.634***	- 3.995***	- 3.685***
	(-4.82)	(-4.84)	(-4.21)	(-5.23)	(-4.72)
Elder Percentage	0.411***	0.424***	0.442***	0.374***	0.407***
	(2.94)	(2.98)	(3.12)	(2.72)	(2.92)
Firm Size	0.088**	0.088**	0.086*	0.084**	0.087**
	(2.01)	(2.00)	(1.95)	(1.97)	(1.98)
SG&A	0.037	0.033	0.024	0.100	0.026
	(0.09)	(0.08)	(0.06)	(0.24)	(0.06)
Revenue Growth	0.123	0.123	0.125	0.066	0.130
	(0.66)	(0.65)	(0.68)	(0.35)	(0.70)
Log(Firm Age)	0.175*	0.166*	0.163*	0.181**	0.168*
	(1.90)	(1.89)	(1.79)	(1.98)	(1.80)
Constant	- 10.107	- 8.049	- 6.343	- 15.132	- 9.005
	(-0.66)	(-0.52)	(-0.44)	(-1.02)	(-0.60)
State & Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2241	2241	2241	2241	2238
R-squared	0.852	0.851	0.853	0.854	0.853

# **Declarations**

Conflicts of interest The authors have no conflict of interest to disclose.

**Ethical Approval** This article does not contain any studies with human participants or animals performed by any of the authors.

**Informed Consent** Not applicable. This article does not contain any identifiable personal data.

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