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ORIGINAL ARTICLE

Irresponsible contagions: Propagating harmful behavior through imitation

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Abstract

'Monkey see, monkey do' is an old saying referring to imitating another's actions without necessarily understanding the underlying motivations or being concerned about consequences, such as propagating harmful behaviors. This study examines the likelihood of firms imitating and proliferating others' unethical, irresponsible practices thereby exacerbating harmful effects among even more firms; in doing so, irresponsible contagions can rapidly spread more broadly, negatively affecting even more consumers. Building upon rivalry- and information-based imitation theories, we examine if harmful behaviors of others, in combination with misbehavior of referent firms, influences the likelihood of a firm to engage in irresponsible consumer-related practices. After examining 25,824 firm-year observations over 12 years, our findings suggest that imitation of harmful product-related behavior occurs; with size an important factor related to proliferation of harmful behaviors. Testing the model against a holdout sample finds 94% accuracy. Implications for scholars, managers, and policy makers are explored.

KEYWORDS

corporate social irresponsibility, customer, empirical analysis, information-based imitation, rivalry-based imitation, small business

1 | INTRODUCTION

After PPG, owner of the Glidden paint brand, introduced a zero volatile organic compounds (VOC) product in the mid-1990s, all other major paint companies, facing an imminent threat of federal regulations, followed PPG's lead by offering a version of a zero-VOC, eco-friendly product (Esposito, 2005). Corporate compliance with VOC regulations, however, was a protracted challenge due to higher research and development expenses (Valk, 2015). Subsequently, the U.S. Federal Trade Commission (FTC) charged two large paint companies PPG Architectural Finishes, Inc. and Sherwin-Williams for making deceptive claims that their interior paint products contain "zero" volatile organic compounds, VOCs (FTC, 2012).

Why do corporations engage in harmful, unethical behavior toward essential stakeholders and, importantly, proliferate bad behaviors of others' irresponsible practices? We theorize that the mimicry of others' behaviors reduces uncertainty even if imitation propagates irresponsible consumer behaviors. These irresponsible behaviors include actions that violate normative or regulatory standards, such as selling harmful products, deceptive advertising, or other misinformation provision, targeting vulnerable consumers, or inciting other customer-related controversies. Reducing uncertainty through rivalry- and information-based imitation (Lieberman & Asaba, 2006), can, we argue, unfortunately, encourage harmful behaviors of large, in-group members to be 'normed' and propagated across an industry sector. Building upon Lieberman and Asaba's (2006) theories of imitation, we

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argue that imitation can propagate unethical, harmful behaviors across an industry despite the considerable downside risks of harming consumers, diminished firm reputation, and damaging lawsuits (e.g., the FTC's deceptive claims lawsuit against PPG). As a result, smaller firms, facing a mix of uncertainty and competitive pressures, are incentivized to follow others' harmful behaviors, especially when competing within the same industry and task environments (Cyert & March, 1963; Gupta et al., 2021).

Our study initially draws upon rivalry-based theories of imitation, defined as conforming to other firms' actions (Fligstein, 1985), to examine if prior, irresponsible practices of peers are related to a focal firm's irresponsible behavior toward consumers. Then, using information-based theories of imitation we examine the role of other, referent firms in encouraging harmful behaviors (Lieberman & Asaba, 2006), potentially infecting entire industries through proliferation, as imitation may be the "sincerest form of flattery" (Colton, 1824). While imitation is common and can apply to a broad category of social or economic practices, legitimate or harmful (Lieberman & Asaba, 2006), we argue that imitation and proliferation of firms' *unethical* practices toward an essential external stakeholder, consumers are more likely to be affected by peer pressure and influential others. As such, large referent firms may render smaller firms particularly susceptible to spreading harmful behaviors leading to large negative outcomes for society.

Imitation that encourages the widespread *proliferation* of misdeeds, as in the case of numerous competitors offering 'zero' VOC paint products, allows firms to pass on negative externalities to numerous consumers as acceptable behavior, an industry 'norm'. This, in turn, can obscure responsibility while undermining individual and societal welfare (Aqueveque et al., 2018). Using rivalry- and information-based theories of imitation, we theorize that the diffusion of irresponsible behaviors is exacerbated by competitive pressures (acutely felt by peers and smaller firms) and is multiplied through the effect of large firms' harmful behaviors. As a result, widespread imitation of harmful behaviors can create a contagion effect infecting even more consumers. We examine the conditions under which peers' behavior and uncertainty combine such that imitation of other firms' harmful behaviors exacerbates the diffusion and proliferation of firm(s)'s misdeeds thereby increasing the widespread negative effects of harmful behaviors.

The purpose of this paper is to advance the reorientation of the CSR and CSiR (corporate social responsibility/ irresponsibility) research agenda toward its origins of benefits (or fewer harms) toward society (Bowen, 1953; Kim, 2021) by focusing on harmful actions that extend beyond a focal firm, when imitated by others, exacerbate harm to society. In addition, we seek to contribute to the CSiR literature by identifying how competitive contexts among peers in combination with uncertain outcomes can encourage imitation of unethical, irresponsible behaviors toward consumers, an essential stakeholder group. We propose that more stringent policy and managerial measures are warranted to halt large firms' harmful behaviors to mitigate or suppress contagion effects early on.

In addition, by controlling for several, well-known firm- and industry-level CSiR influences such as advertising intensity, financial risk tolerance, industry growth, capital intensity, and irresponsible behaviors within the firm and its peers, we theorize and find support for firm size as an important accelerant in propagating harmful consumer-related behaviors. Our results suggest firm size plays a direct and outsized moderating role that is particularly damaging when peers and smaller firms adopt the harmful consumer practices of referent businesses.

The paper is structured as follows. The next section contrasts the positive halo effects of prosocial marketing behavior with a focus on irresponsible consumer-related behaviors and the mechanisms that underlie prosocial versus irresponsible consumer behaviors. Then, based on rivalry- and information-based theories of imitation, we develop hypotheses to explain why certain mechanisms (peers' irresponsible behavior and firm size, directly and in combination) might encourage the diffusion and propagation of harmful consumer-related practices. In section three, we describe our method and data set of 25,824 firm-year observations across 12 years and methods. Section four explains the analysis and results including an out-of-time, hold-out sample among robustness checks and appropriateness of model fit. Section five discusses the conclusions and implications for policy makers, managers, and researchers. In the final section, we discuss the limitations as well as future research opportunities to better understand and theorize about how imitation and firm size might play an outsized role in promoting harmful corporate behaviors. In particular, we discuss how mitigating a 'monkey see, monkey do' logic that might encourage smaller firms to imitate other firms' irresponsible behavior, especially larger firms, without accounting for the harmful consequences has unintended ethical implications for society.

2 | THEORY AND HYPOTHESES DEVELOPMENT

Connectedness between a firm and consumers, an important stakeholder (Edinger-Schons et al., 2020; Vuković et al., 2020), is essential for value creation (Crane, 2020; Escadas et al., 2019). Connectedness, which includes consumers' perceptions of firms' motivations for CSR, affects consumers' purchasing behaviors (Escadas et al., 2019; Vuković et al., 2020) and vice versa. Firms adjust practices to meet consumer demands while customers respond to firms' perceived responsible and irresponsible behaviors by adjusting intentions or purchasing decisions (Edinger-Schons et al., 2020; Escadas et al., 2019; Kang et al., 2016).

2.1 | Marketing literature and (ir)responsible behavior

Extant marketing literature suggests, in general, a firm's positive prosocial product-related behavior may have a positive spillover, or halo, effect benefiting the firm (e.g., Bhattacharya & Sen, 2004;

Chernev & Blair, 2015; Luo & Bhattacharya, 2006, 2009; Sen & Bhattacharya, 2001). Prior research suggests that listening to customers' needs and positive prosocial behavior toward correcting or compensating consumers for negative product/service externalities can enhance financial performance (Edinger-Schons et al., 2020; Kang et al., 2016; Nickerson et al., 2022). For example, Bhattacharya and Sen (Bhattacharya & Sen, 2004; Sen & Bhattacharya, 2001), relying on a stakeholder theoretic approach, found that prosocial initiatives led to positive consumer responses that included increased purchase intentions and ultimately, higher market value. Nickerson et al. (2022) found that genuine CSR activities aimed at reducing negative externalities enhanced sales whereas philanthropic CSR activities did not. One clear benefit of responsible, prosocial, consumer-related practices, aggregated across multiple studies, is attracting and retaining consumers can aid in top-line growth (Henisz et al., 2019; Orlitzky et al., 2017). Overall, these studies suggest that firms have practical, economic incentives to voluntarily engage in positive, prosocial, consumer-focused behaviors.

Socially irresponsible marketing behaviors, on the other hand, can negate a firm's prosocial behaviors leading to decreased firm performance and diminished credibility by undermining future socially responsible activities (Handelman & Arnold, 1999; Kang et al., 2016). Irresponsible behaviors may have more pronounced negative effects on the reputation of the brand or firm than the firm's responsible behaviors (Escadas et al., 2019) as negative information is psychologically more influential than positive information due to loss aversion, that is, 'losses loom larger than gains' (Baumeister et al., 2001; Kahneman & Tversky, 1979). In short, irresponsible marketing behaviors, such as deceptive tactics or targeting vulnerable consumers, can have negative consequences for the firm, consumer welfare, and consumers' subsequent behavior (Kang et al., 2016; Mascarenhas, 1995; Sher, 2011; Smith & Cooper-Martin, 1997). Taken together, prior research suggests that despite the presence of responsible behavior a firm can be penalized for socially irresponsible consumer-related actions.

Given the potential penalties of irresponsible consumer-related behaviors, our research question explores the conditions under which irresponsible consumer-related behaviors are diffused and propagated across firms, through a contagion effect, amounting to untold harmful consequences for numerous consumers.

In the next section, we use rivalry-based imitation theory to conceptualize imitation as a low-cost, competitive response that encourages the diffusion of harmful behaviors. Then, using rivalry- and information-based imitation theory we argue that referent firms can have an outsized effect on smaller firms that moderates the proliferation of irresponsible behaviors toward consumers.

2.2 | Mechanisms underlying (ir) responsible behaviors

Prior research on imitation has examined individual-level peer influences to explain, for example, CEO political decisions (Gupta

et al., 2021). At the firm level, research on imitation often applies institutional theory to examine structuration or isomorphic pressures on firm performance (Hillebrand et al., 2011; Orlitzky et al., 2017; Wu et al., 2003). Table 1 highlights prior research on the diffusion of *prosocial* behaviors in marketing with a focus on internal, firm-specific implications such as firm performance. Nikolaeva and Bicho (2011), for example, found that propagating widespread benefits through positive behavior such as the adoption of a global CSR reporting initiative improved firm performance if two conditions were met: (a) rivals' adoption as well as (b) the overall prevalence of CSR reporting practices suggesting that others' behavior matters as well as the context encouraging such behavior.

Imitating firm-level behavior that results in *negative* consequences also depends upon how a focal firm adopts these practices (Bhatnagar et al., 2016; Hillebrand et al., 2011; Wu et al., 2003). If adopting e-marketing practices, for example, are not in sync with the focal firm's competencies or identity, wholesale imitation due to bandwagon effects¹ can negatively affect firm performance. That is, the mere imitation of others' marketing behaviors is not a panacea, and does not guarantee a positive response from consumers or firm-level payoff.

As such, using imitation theory in the context of consumer-related behaviors, we start by theorizing that peers' behaviors and competitive context encourage the diffusion of practices. Yet, with our focus on the propagation of harmful behaviors, we expect that the underlying mechanisms may be different than they would be for imitating prosocial positive behaviors due to the importance of loss aversion (Kahneman & Tversky, 1979).²

Our focus is on the consumer implications of imitating unethical practices (i.e., harmful effects on consumers/society rather than on the firm such as financial performance). As the proliferation of irresponsible consumer behavior can have strong and negative repercussions for the firm's brand and reputation, harm consumers, and damage their loyalty (Bhattacharya & Sen, 2004), disrupting consumer loyalty can, in turn, have untold indirect multiplier effects with ongoing negative firm outcomes over time (Griffin, 2016). As consumers have additional avenues of recourse such as switching brands, posting negative feedback online, or bringing lawsuits, it is in the firm's best interest to resist the contagion of practices that potentially harm consumers, the brand, and/or reputation of the firm.

Taken together, we begin with a conservative view that propagation of harmful behavior is, *ceteris paribus*, less likely than the propagation of prosocial behaviors; finding significant, widespread diffusion of harmful behaviors is unlikely. The next section uses theories of imitation to explain why irresponsible consumer behavior might exist and persist.

2.2.1 | Imitation theory and peers' prior irresponsible behavior

Rivalry-based imitation theory

Lieberman and Asaba (2006) suggest that rivalry-based theories of imitation focus on peers as a relevant referent group to create

TABLE 1 Imitation and marketing behaviors – Through an institutional theory lens

Article	Research question	Key findings
Bhatnagar et al. (2016)	What are the characteristics of retailers who imitate practices of other firms?	New firms and smaller retailers imitate due to efficiency; large retailers imitate due to legitimacy
Khan et al. (2015)	What leads to CSR in the absence of regulation?	Under weak regulation, MNCs have the propensity to develop normatively acceptable CSR marketing in response to informal institutional pressures
Hillebrand et al. (2011)	What are the effects of mimetic motives on customer insights and relationship performance?	Mimetic motives have a negative influence on the effectiveness of adopted marketing practice, except when a strategic fit between practice and firm is present
Martin et al. (2011)	Do firms with authentic ethical identities vs. strategic identities respond differently to institutional CSR pressures?	Firms whose identity is tied to authentic vs. calculated ethical behavior do so strategically in line with normative ethical expectations and institutional isomorphism; Exceeding ethical norms can produce a comparative advantage
Nikolaeva and Bicho (2011)	Does imitation of other firms affect adoption of global CSR reporting standards?	Adoption is affected by competitors' adoption and overall diffusion of practice among global businesses; No evidence that top brand companies are less likely to imitate
Connelly et al. (2011)	How does institutional theory apply to marketing strategy?	Institutional theory is one of nine theories from strategy literature that can explain firm adoption of sustainable marketing practices
Wu et al. (2003)	What are the antecedents of intensity of e-business adoption?	Normative pressures adopted due to bandwagon effects rather than strategic or economic reasons did not improve organizational performance
Handelman and Arnold (1999)	How do performative (e.g., economic-oriented actions) versus institutional actions with a social dimension affect consumer response?	Socially oriented institutional actions establish reputational legitimacy and have a direct effect on firm performance; negative socially-oriented actions negate the effects of highly efficient firms

competitive parity or decrease rivalry. Rival firms' behavior may convey information about widespread, acceptable, legitimate, or superior practices (Lieberman & Asaba, 2006). Further, uncertainty due to turbulent competitive environments, rife with randomness (Emery & Trist, 1965), can thus result in imitating others' behaviors without necessarily understanding the underlying motivation or consequential effects (Grewal & Dharwadkar, 2002; Lieberman & Asaba, 2006)—a 'monkey see, monkey do' situation. In short, the actions of other referent firms such as in-group organizations may be viewed as conveying information about accepted business practices, even if those practices are to the detriment of the firm, or stakeholders. In doing so, referent groups may encourage the proliferation of unethical or illegal product-related practices. This result is consistent with findings from Kedia et al. (2015), who found that unethical earnings reporting is likely to be imitated by other, similar firms such as rivals.

Further, considering that many firms within a sector can be tarred by the same brush when irresponsible behavior is profligate (c.f., the entire fossil fuel industry being scrutinized after oil spills in Cragg & Greenbaum, 2002; Griffin, 2021; King et al., 2002) or when the industry is already controversial (Aqueveque et al., 2018), bad behavior may have become normalized as part of acceptable competitive behaviors in certain industries. Thus, a spill-over effect may occur once irresponsible practices are started, even for those

organizations having smaller, less visible, 'merely incremental' concerns. Displaying incremental yet potentially numerous, unethical behaviors (as opposed to profligate disasters such as the 2010 BP oil spill in the Gulf of Mexico that remained a headline for more than 100 days) may create a sense of acceptable competitive behaviors thereby creating disincentives for a firm desiring to differentiate itself via responsible behavior (Fooks et al., 2013). Normalizing an industry's unethical behavior can induce, in turn, a race to the bottom (a contagion effect) for all firms within a sector (Bryant et al., 2020; Griffin et al., 2015). The widespread proliferation of unethical marketing behaviors in a sector is particularly problematic because norm violations can rapidly spread through a group when one's actions are conditioned on the compliance of another (Diekmann et al., 2015).

Despite loss aversion and reputational pressures limiting the likelihood of consumer-related irresponsible behaviors, based on rivalry-based imitation theory, we theorize that uncertainty stemming from competitive pressures will increase the likelihood of imitation of peers' harmful behaviors in a focal firm. Overall, we expect that in aggregate, the irresponsible marketing practices of rival firms within the same industry sector will influence a firm's own unethical marketing behaviors to increase imitation.

As a baseline, we hypothesize that if rivals have previously engaged in irresponsible marketing behavior, the focal firm will be more likely to adopt irresponsible practices.

Hypothesis 1 *There is a positive relationship between rivals' previous irresponsible behavior and the likelihood of a focal firm's irresponsible behavior.*

2.2.2 | Firm size effects and mimicking large, in-group referents

Because larger firms are more visible, their practices are more likely to attract attention from the media, regulators, consumers, community groups, and other external stakeholders (Surroca et al., 2010; Waddock & Graves, 1997). With more scrutiny, more irresponsible behaviors might be brought to light, as a form of, or an attempt to exert, social control (Campbell, 2007).

Larger firms may also be directly engaged in more product-related controversies, with concomitant legal and reputational risks (Orlitzky et al., 2017), even though larger firms may have more, varied financial and non-financial resources able to be brought to bear or to offset the costs for regulatory compliance, publicity, and stakeholder management activities (Surroca et al., 2010). Yet, given the costs of implementing prosocial beneficial solutions or offering reparations for prior harmful behavior (e.g., recalls), larger firms may use a communications strategy rather than implementing responsible behaviors. This may create a gap between saying and doing (Wickert et al., 2016).

Furthermore, larger firms, presumably having more resources in the form of profitability (measured through accounting or market returns) and/or tolerance for risk due to diversification, may not directly address the complex, interrelated issues and processes needed to staunch wrongdoings (Delmas et al., 2011). Larger firms may instead be content with buffering against volatility and environmental complexity (Bansal, 2005; Fu et al., 2021; Montgomery & Singh 1984; Peteraf, 1993; Sharfman & Fernando, 2008) enabling the firm to withstand the scrutiny of harmful behaviors over the longer term. This occurs despite evidence that merely increasing the number and variety of financial investments in prosocial activities is ineffective in offsetting the negative effects of irresponsible behavior (Kang et al., 2016).

In short, we expect to find a direct relationship between firm size and irresponsible behavior, after controlling for risk tolerance and profitability. *Ceteris paribus*, larger firms are more likely to engage in and be cited for, irresponsible marketing behavior despite the numerous reputational and performance disincentives for harmful, unethical behavior directed toward consumers.

Hypothesis 2 *There is a positive relationship between firm size and the likelihood of a focal firm's irresponsible behavior.*

Information-based imitation theory

Information-based theories of imitation, in contrast to rivalry-based imitation theories, suggest that firms may be more likely to mimic the behavior of a referent group inferred to have superior information about actions or outcomes (Lieberman & Asaba, 2006). Imitating the

actions of others might confer legitimacy, especially if imitating reference groups that act as proxies for trustworthiness (DiMaggio & Powell, 1983; Lieberman & Asaba, 2006) and connectedness. This in turn implies the likelihood of a positive outcome of imitation (Crane, 2020) even if actual losses occur. These referent groups may signal greater prestige, standing, and/or information advantages than others (Lieberman & Asaba, 2006). This is akin to choosing a restaurant because of the long line of customers waiting outside, assuming the queue is a signal of quality.

According to information-based theories of imitation (Lieberman & Asaba, 2006), the effect of firm size on the focal firm's irresponsible behavior, however, will likely depend on the actions of other firms. Smaller firms, for example, are more likely to imitate larger firms under the assumption that larger firms have superior information (Lieberman & Asaba, 2006). When studying chemical firms' investment in capacity Gilbert and Lieberman (1987) found smaller firms followed the lead of larger firms within the industry. One reason for this size-based behavior is that "firms adopt the practices of 'legitimate' organizations and that legitimacy is inferred from traits like large size and success" a process known as trait-based imitation (Haunschild & Miner, 1997, p. 475). Gupta et al. (2021, p. 530) further suggest that referent firms, in particular, 'larger, more prestigious, and higher-performing firms' shape the salience and perceived merits of certain behaviors, thereby 'affecting the likelihood that those decisions will be emulated'. Thus, firm size is a specific trait known to lead to imitation with smaller firms more likely to imitate.

In finance, for example, unethical financial behaviors can be diffused especially if the initial unethical actor is an in-group member (Gino et al., 2009) that is facing uncertainty (Greve et al., 2010). Greve et al. (2010) discuss how unethical actions such as option back-dating can spread throughout industries citing imitation of a referent group/organization as a primary mechanism. Unethical finance actions are said to proliferate because decision-makers look toward similar/proximate others for social proof (i.e., legitimating or norming behaviors) on what to do in the face of uncertainty (Greve et al., 2010).

Because proliferation is more likely to occur when firms are facing uncertainty (Crane, 2020; DiMaggio & Powell, 1983) and when coupled with information- and rivalry-based imitation theory (Lieberman & Asaba, 2006), peer pressure and larger firms engaging in harmful behaviors may exacerbate the likelihood of imitation. Smaller firms may be more prone to mimicking and proliferating other in-group members' unethical marketing behaviors, despite the disincentives of harmful behavior on firm performance, the liability of lawsuits, and consumers' negative reactions. Smaller firms, for example, with fewer resources facing competitive pressures may be more likely to cut expenses, delaying all but the most essential expenditures, and thus imitate rivals' irresponsible behaviors as an information-based low-cost strategy (Lieberman & Asaba, 2006). Rather than exploring a wider range of alternative behaviors or delaying action to better understand the positive and negative consequences of others' activities, once a practice is widespread a smaller

firm may choose to mimic rivals to enhance legitimacy (Brammer & Millington, 2005; Brown & Forster, 2013; DiMaggio & Powell, 1983; Lieberman & Asaba, 2006).

Firms may also succumb to imitation due to external social pressure (Hildebrand et al., 2011) – which may favor imitation of larger firms' behavior – especially when social pressures are impinging upon an entire industry sector (Aqueveque et al., 2018; Mahon & McGowan, 1996). Whereas internal CSR behaviors might be influenced by internal firm-specific factors such as corporate values, governance, or mission alignment (Zaman et al., 2022), information-based imitation theory suggests that others' behaviors are particularly influential in the focal firm's behavior toward external-facing consumers.

Larger firms may initiate and render behavior legitimate while limiting their accountability for the proliferation of harmful misdeeds once unintended consequences are identified. As such, smaller firms that imitate larger firms using information-based imitation without a broad understanding of unintended consequences may unwittingly propagate harmful behaviors through society. Once adopted, a harmful practice may become widespread and normalized across a sector with harmful consequences for society. If rivals' and especially larger firms' errors of commission (harmful product practices) encourage numerous other firms to follow suit, then widespread risks might be shared by the industry (Misani, 2010)—a potential contagion that proliferates unethical, harmful behaviors.

At the same time, prior studies have found that market leaders and firms with greater visibility are less likely to imitate others (Aerts et al., 2006; Rosenkopf & Abrahamson, 1999). Larger firms with more resources, experience, and capabilities upon which to draw for strategic direction (Waddock & Graves, 1997), are more likely to be market leaders, not followers and may be less likely to follow irresponsible actions of others.

As a result, we expect larger firms will be more likely to engage in harmful behavior (Hypothesis 2) yet be limited in imitating harmful behaviors. We expect smaller firms, due to uncertainty exacerbated by rivalry- and information-based imitation, to be more likely to propagate unethical behaviors through the imitation of irresponsible marketing behaviors. Following this logic, we propose that firm size moderates the propagation of irresponsible marketing behavior such that smaller firms are more likely to propagate unethical behavior with outsized effects, that is, firm size and imitation effects are contingent on each other. In other words, the effects of peers' irresponsible behavior on the likelihood of a firm's irresponsible behavior will be larger for smaller firms. More specifically:

Hypothesis 3 *There is an interactional effect of rivals' previous irresponsible behavior with firm size on the likelihood of a focal firm's irresponsible behavior.*

Overall, under uncertainty, firms may seek certainty by conforming their behaviors to the practices of relevant others and those considered standard setters as a form of legitimacy-seeking behaviors. When uncertainty is combined with competitive pressures, imitation is a viable low-cost strategy when resources are restricted to signal the adoption of acceptable, desirable practices. Of course, longer-term consequences of imitation may be unknown or unknowable especially when market leaders' and rivals' behaviors are presumed to be associated with legitimate, profitable behaviors. As even more firms adopt and thus propagate irresponsible practices, smaller firms facing uncertainty and rivalry pressures may not want to risk being identified as the odd one out, even though the consequences of the behavior are unknown or known to be unethical. The resulting imitation of others' prior unethical behavior can, in turn, rapidly and broadly expand, especially among smaller firms, thereby propagating negative consequences for consumers, firms, and the industry. Figure 1 shows our hypothesized relationships.

3 | METHODS

3.1 | Data

We combine data from “perhaps (the) oldest and best-known CSR rating schemes in the US” (Lim & Pope, 2020, p. 456) to examine the irresponsible marketing behavior of firms and rivals, as described below, from the Kinder, Lydenberg, and Domini (KLD) Socrates/MSCI ESG database. This widely used CSR database (Chen, 2021; Hillman & Keim, 2001; Oikonomou et al., 2014; Surroca et al., 2010; Waddock & Graves, 1997), includes detailed, annual measures of positive and negative firm behaviors, categorized by stakeholder group (e.g., consumers, employees, etc.). In 2003, the KLD was expanded with the addition of MSCI USA IMI index firms to the data set (MSCI, 2016) “to measure the performance of the large, mid and small-cap segments of the US market” (MSCI, 2017).

These KLD data were matched with annual firm-level financial information from the Compustat North American database (<http://www.compustat.com/>), including balance sheet details and profitability measures. We use data collected from 2004 to 2015, with 2003 data used to provide lagged variables and 2016

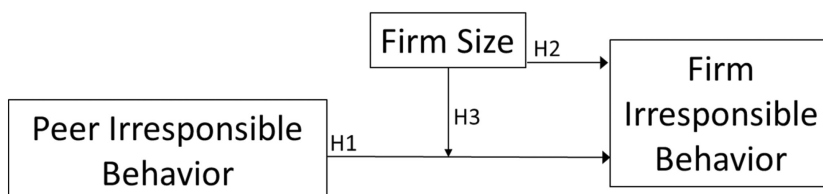


FIGURE 1 Proposed model of likelihood of Firm's irresponsible marketing behavior

data used as a hold-out test of the model's accuracy and predictive ability. Our data, bounded on the low end by KLD's 2003 change in population to include more firms across the large, mid- and small-cap segments, is bounded on the high end by our 2016 holdout sample resulting in our final sample including 25,824 firm-year observations.

3.2 | Dependent variable

Consistent with CSR research, we measured each firm's irresponsible behavior in terms of product controversies reported in the KLD data set, previously known as product concerns (Flammer, 2015; Flammer & Kacperczyk, 2015; Sharfman, 1996). The specific irresponsible behaviors (see Appendix A) include but are not limited to "controversial media content, product recalls, deceptive marketing or advertising, ... predatory pricing, ... [and] excessive or hidden fees" MSCI ESG Research (2016, pp. 37–39).

Few firms in KLD have more than one product-related irresponsible controversy within a year. Specifically, over the 12-year data period, approximately 10.4% of firm observations have one product controversy in a year and approximately 85.9% of firm-year observations had no product controversy in a year. As a result, more than 96% of the data are instances where firm-year observations have either one or no irresponsible marketing behaviors. As such, the data were collapsed to a binary distribution and modeled using the logit link function to predict the likelihood a firm has product controversy (1: "yes") versus no product concerns (0: "no").

We chose this approach to measuring product-related irresponsible controversies, i.e., yes/no versus counting the total number of controversies, because of the relatively long period of study and changes in KLD data collection (Eccles et al., 2020). Within each year the count of controversies would be internally consistent; however, across time, changes in measurement practices pose more of a threat to the stability of a sensitive measure such as counts as opposed to a binary, yes/no measure. In essence, we argue that KLD measurements are likely more dependable in identifying a firm with some controversial action as opposed to accurately specifying the number of controversial actions of firms. As such, a yes/no proxy measure will more consistently reflect the underlying construct with less fluctuation due to spurious exogenous factors across long periods when compared with specific counts of irresponsible behavior.

3.3 | Independent variables

To examine the propagation of irresponsible marketing behavior, we measure the percentage of peer firms engaging in irresponsible marketing behavior, that is, *peers' irresponsible behavior*. To develop this measure, we define peers as rival firms within a similar sector (Kilduff et al., 2010; Schuler et al., 2002) using the two-digit

North American Industry Classification System (NAICS) category as a measure of firms competing in similar industries. Peers' irresponsible marketing behavior was calculated as the percent of firms with product controversies at the two-digit NAICS level, excluding the focal firm. *Firm size* was measured as the natural log of net sales reported in millions of dollars (Chen, 2021) of the focal firm. Both independent variables (peers' irresponsible behavior and firm size) were lagged by one year to guard against reverse causality which allows our model to capture the appropriate temporal ordering of a focal firm's reactions to the actions of others (Orlitzky et al., 2017).

3.4 | Control variables

The irresponsible behaviors of peer firms are just one of a few sector-level effects that may influence a firm's behavior. Firms in capital-intensive sectors, having specialized property, plant, and equipment with significant sunk costs may be more likely to cut corners (Hatfield et al., 1996) and respond to competitive pressures by utilizing a low-cost mechanism, namely, imitation. Addressing preexisting negative practices requires systematic, significant investments of unrecoverable costs incurred over time (Delmas et al., 2011; Russo & Fouts, 1997). Thus, in capital-intensive sectors, irresponsible marketing behaviors may persist due to the expensive, long, and uncertain payoff horizons for correcting these behaviors. The control variable *sector-level capital intensity* was measured as the weighted average "dollar value of plant, property, and equipment per employee," following previous research (Griffin et al., 2015; Miles et al., 1993, p. 169) and then aggregated at the two-digit NAICS sector level and scaled by a factor of 1000 to simplify reporting estimates.

To control for additional sector-level social pressures, we included a measure of *peers' responsible behavior* as positive socially responsible behaviors may co-exist with harmful behaviors (Mattingly & Berman, 2006). Pressures of conformity leading to diffusion of practices can induce replication of behaviors (Griffin et al., 2015) via a complex decision-making process that becomes mutually reinforcing (Hillenbrand et al., 2012) after a critical mass of firms make credible commitments (Griffin et al., 2015). This prosocial diffusion variable gives our model the ability to account for firm actions by peers within the same sector by examining product strengths, taken from the KLD data set (Griffin et al., 2015). Product strengths occur when a firm's products have been recognized for quality, innovation, benefits to economically disadvantaged consumers, or other noteworthy social benefits (MSCI, 2016). The measure is constructed in the same manner as peers' irresponsible behavior.

Following Staw and Szajkowski (1975), we control for *sector growth*, because firms operating in an environment of scarce resources, that is, when facing low or no growth, are more likely to commit illegal acts (from Dess & Beard, 1984, p. 55). A lack of industry-level growth might induce firm- or product-related

cost-cutting for organizations seek, but do not always find, environments that sustain growth (Dess & Beard, 1984). We measure sector growth at the two-digit NAICS level, as the sector's average three-year percent change in sales, similar to previous research (Griffin et al., 2015).

We also control for several firm-level variables. A firm's innovativeness, measured by *R&D expense*, has been linked to positive CSR behavior (Barnett & Salomon, 2012; Luo & Bhattacharya, 2006, 2009; Luo & Du, 2015; McWilliams & Siegel, 2001). We also include firm-level *advertising expense*, which is related to the consumer perceptions of a firm and can influence CSR and its effectiveness (Luo & Bhattacharya, 2006, 2009; Sen & Bhattacharya, 2001; Servaes & Tamayo, 2013). To simplify reporting parameter estimates, these values were scaled by a factor of 1000. *Risk tolerance* controls for highly leveraged firms that may approach decisions differently than firms with less debt and lower financial risk (Bryant et al., 2020). We use the long-term debt to total assets ratio as a measure of a firm's financial risk tolerance (Waddock & Graves, 1997).

To increase profitability, firms may increase harmful product-related behaviors. Or under conditions of scarcity (low profitability), firms may increase irresponsible behaviors by not investing in mitigating harmful hazards as short-term cost-cutting tactics. Low profitability may further exacerbate irresponsible harmful practices (Ansari et al., 2010; Becchetti et al., 2015; Cordeiro & Sarkis, 1997; Kang et al., 2016; Navarro, 1988; Westphal et al., 1997). In short, firms with higher profitability should be less likely to engage in risky, irresponsible behavior while firms with lower profitability should be more likely to engage in risky, irresponsible behavior. We control for profitability using three indicators to reflect accounting and market-based profitability: *return on assets*, *diluted earnings per share* excluding extraordinary income, and *dividends per share*.

Another reason firms may engage in positive, socially responsible activities is to deceive, respond to, mask, or serve as an insurance policy against bad deeds (Bryant et al., 2020;

Flammer, 2015; Godfrey, 2005; Griffin & Mahon, 1997; Shiu & Yang, 2017). Actions that strengthen product quality and consumer relations today may increase stakeholders' willingness to tolerate negative actions from the past, or create a halo on future, negative actions (Bhattacharya & Sen, 2004; Chernev & Blair, 2015; Godfrey et al., 2009; Kang et al., 2016; Luo & Bhattacharya, 2006, 2009; Sen & Bhattacharya, 2001). As such, firms may engage in positive product-related actions to counteract negative externalities, increased scrutiny, or product-related controversies. Consistent with prior research (Bryant et al., 2020) we control for a *firm responsible behavior* by including a dummy variable indicating if the firm has product strengths as measured by KLD (MSCI, 2016). As prior *firm irresponsible behavior* may lead to current irresponsible behaviors, we lagged the dependent variable by one year to account for each firm's past proclivity for irresponsible behaviors.

Dummy variables for each *year* are included in the KLD model as recommended by Eccles et al. (2020) to account for fixed effects of time due to the changes that have occurred in the KLD data collection process over our 12-year period. Similarly, we include a dummy variable for each *sector*. By including these fixed effects for both time and market sectors we are accounting for additional sources of potential omitted variable bias across these dimensions. All control variables, except for the year and the time-invariant sector fixed effects, are lagged by 1 year. By lagging the control variables, we match the one-year lag of the independent variables of interest.

4 | ANALYSIS, RESULTS, ROBUSTNESS TESTING, AND MODEL FIT

We begin by comparing the rate of firms having irresponsible behaviors across each independent variable: peer irresponsible behavior and firm size. High and low levels were created through a median split and charted in Figure 2 for each independent variable. Large

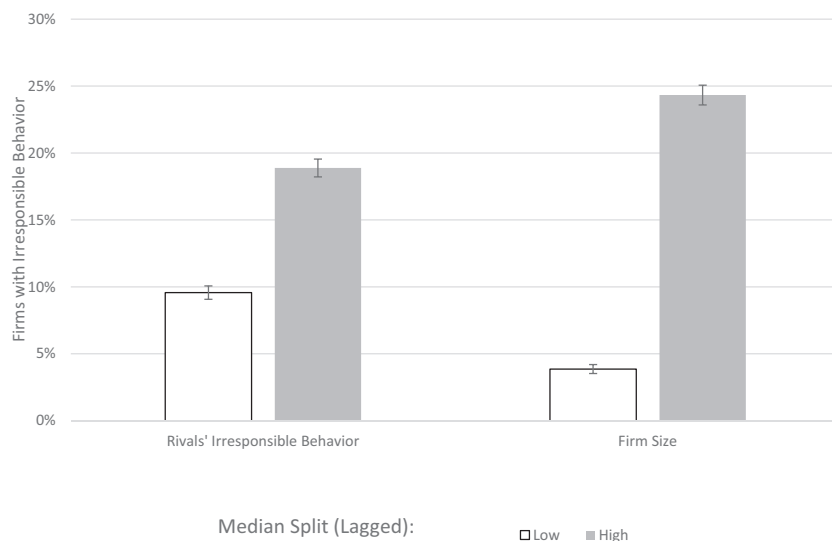


FIGURE 2 Percentage of firms with irresponsible behavior. Independent variables (x-axis) lagged by 1 year. Error bars represent the 95% confidence interval around the proportion of firms with irresponsible behaviors calculated using the normal approximation method.

differences exist in the rate of irresponsible behaviors corresponding with peer irresponsible behaviors and firm size, findings consistent with Hypotheses 1 and 2.

We test our hypotheses through a series of logistic regression models specified to test the robustness of our findings against alternate model specifications. Our full model has a rescaled R^2 value of 0.70 indicating a good fit. Because other measures of model fit are relative and/or depend on applying the model to a holdout sample, they will be discussed after the model-building process results are presented. We will designate results that are consistent across all alternate model specifications as robust while inconsistent significant effects will be described as fragile.

4.1 | Results

To test our hypotheses, we begin by estimating a model using only the independent variables associated with main effects, excluding an interaction term, and controlling for fixed effects by year and sector. This model shows a statistically significant ($\alpha = .05$) relationship for *peers' irresponsible behavior* ($\beta_{\text{PeerIrresponsibleBehavior}} = .91$, $p = .02$) and *firm size* ($\beta_{\text{FirmSize}} = .86$, $p < .01$) in predicting the odds of a focal firm's irresponsible actions. These results are consistent with Hypotheses 1 and 2.

Hypothesis 3 proposes an interaction effect such that the effect of peers' irresponsible actions and firm size are contingent on each other. To examine the contingent nature of this relationship, we add an interaction term to the basic main effects model. The results (Model 1, Table 2) show a statistically significant ($\alpha = .05$) relationship for *peers' irresponsible behavior* ($\beta_{\text{PeerIrresponsibleBehavior}} = 4.11$, $p < .01$) and *firm size* ($\beta_{\text{FirmSize}} = .93$, $p < .01$) in predicting the odds of a focal firm's irresponsible actions while the interaction between these two effects is also significant and negative ($\beta_{\text{Peer}^* \text{Size}} = -.41$, $p < .01$). Further, the addition of the interaction term improves the overall model fit by decreasing the Akaike Information Criterion ($\Delta\text{AIC} = 4$), where a smaller number indicates a better fit. The results from Model 1 indicate the effects of peer irresponsible actions and firm size jointly depend on each other. Further, the significance of the interaction between firm size with peers' prior irresponsible behavior remains even after adding control variables (Model 3).

The second model (Model 2, Table 2) is used as a baseline for comparison. It shows the results of a logistic regression model using only the control variables but none of the key independent variables of interest. The full model of control variables with all independent variables (Model 3, Table 2) shows an improved model fit over the baseline model ($\Delta\text{AIC} = 458$). Because of the improved fit of Model 3, we conclude that the independent variables improve the model's explanatory power in addition to the control variables used in Model 2. As with Model 1, Model 3 also shows a significant interaction ($\alpha = .05$) with all parameter estimates consistent in sign with Model 1. Thus, even after adding

the entire set of control variables, our findings from the full model (Model 3, Table 2) are consistent with the more parsimonious analysis (Model 1, Table 2). Because Model 3 with control variables has a superior fit compared with Model 1 ($\Delta\text{AIC} = 6705$), we will report statistics from this model when formally testing our hypotheses.

Hypothesis 1 predicted a positive relationship between peers' irresponsible marketing behavior and the focal firm's irresponsible consumer-related practices. When all control variables are added, in Model 3, this hypothesis is not supported. The main effect associated with peers' irresponsible behavior is positive ($\beta_{\text{PeerIrresponsibleBehavior}} = 2.67$, $p = .13$), yet not significant. Thus, the main effect of peers' irresponsible behavior has fragile support, as a significant relationship was only found under a simplified model without control variables (Model 1).

We find support for Hypothesis 2, which predicted a positive relationship between firm size and a firm's irresponsible marketing behavior. The main effect associated with firm size in Model 3 is positive and significant ($\beta_{\text{FirmSize}} = .55$, $p < .01$). This result is consistent even when the interaction term is removed from the model ($\beta_{\text{FirmSize}} = .48$, $p < .01$). Thus, we can conclude that larger firms are consistently more likely than smaller firms to have irresponsible practices.

We also find support for Hypothesis 3, which suggested that the effect size of peers' irresponsible marketing behavior on the firm's irresponsible marketing behavior decreases as firm size increases. The significant interaction ($\beta_{\text{Peer}^* \text{Size}} = -.45$, $p = .04$) term in Model 3 indicates that the effect of peers' irresponsible behavior and firm size on a firm's irresponsible behavior needs to be analyzed together to provide a complete understanding. The significant interaction term is robust and consistent in both Model 1 and 3 indicating a positive interaction between peers' irresponsible behavior and for firms of a certain size, the focal firm's irresponsible practices.

Finally, examining our control variables in Model 3, *capital intensity* ($p < .05$), *advertising expenses* ($p < .05$), *risk tolerance* ($p < .01$), and *firms' prior irresponsible behavior* ($p < .01$) all consistently correlate with a firm's subsequent harmful behaviors. A possible explanation for these findings is that higher levels of *capital intensity* and *risk tolerance* (i.e., debt ratios) could lead to more uncertainty and an increased incentive to engage in higher-risk imitative practices. *Advertising expenses* could be interpreted as a measure of industry competitiveness and dependency on consumers' short-term purchasing preferences, which also provides an incentive to imitate behaviors without considering longer-term consequences. In addition, *firms' prior irresponsible behavior* may account for the fact that irresponsible practices, once adopted, may become a continuous aspect of a firm's market participation, especially when other firms engage in similar behaviors, a form of 'normalized behaviors'.

Overall we find that *peers' irresponsible behavior* needs to be considered in conjunction with *firm size* to understand the potential effects of accelerating harmful behaviors through an interaction effect. The next section interrogates the interaction effect.

TABLE 2 Logistic regression models

Total observations (n) = 25,824	Model 1			Model 2			Model 3		
Firm-year "yes" pct. = 14.1%	Basic model			Control variables only			Full model		
Parameters	Estimate	SE	p-value	Estimate	SE	p-value	Estimate	SE	p-value
Intercept	-10.288	0.487	<.0001	-4.113	0.623	<.0001	-8.187	0.802	<.0001
Peer irresponsible behavior	4.105	1.325	.0019				2.667	1.777	.1334
Firm size: ln(sales)	0.927	0.030	<.0001				0.546	0.042	<.0001
Firm size × Peer irresponsible behavior	-0.408	0.162	.0118				-0.448	0.221	.0428
Capital intensity				-0.772	0.370	.0368	-0.856	0.378	.0234
Peer responsible behavior				1.236	0.611	.0431	1.026	0.629	.1030
Sector growth				-0.085	0.050	.0935	-0.081	0.049	.0965
R&D expense				0.382	0.065	<.0001	0.098	0.056	.0809
Advertising expense				0.551	0.090	<.0001	0.162	0.080	.0434
Risk tolerance				0.854	0.135	<.0001	0.671	0.143	<.0001
Profit: Return on assets				0.888	0.264	.0008	0.258	0.322	.4220
Profit: Earnings per share				0.007	0.004	.1219	-0.006	0.008	.4350
Profit: Dividends per share				0.032	0.015	.0404	-0.031	0.031	.3100
Firm responsible behavior				0.440	0.105	<.0001	0.141	0.106	.1843
Firm irresponsible behavior				4.911	0.066	<.0001	4.487	0.068	<.0001
Year fixed effects (2004–2015)	Included			Included			Included		
Sector fixed effects	Included			Included			Included		
<i>Model fit statistics</i>									
-2 Log L (smaller is better)	15,126			8864			8399		
AIC development data	15,200			8954			8495		
AUC development data	0.853			0.932			0.950		
Max-rescaled R ²	0.368			0.675			0.695		
AUC holdout data (2016)	0.858			0.920			0.940		
Accuracy (%) holdout data (2016)	92.7%			94.3%			94.4%		

Note: All variables listed with enumerated parameter estimates were lagged by 1 year.

4.1.1 | Examining the interaction effect of peers' irresponsible behavior and firm size

To portray the interaction effect of peer irresponsible behavior and firm size, Figure 3 charts the effect of *peers' irresponsible behavior* at different *firm sizes*, ceteris paribus. Figure 3 shows that larger firms (95th percentile) have a greater modeled probability of engaging in irresponsible behavior than small firms (5th percentile) if no peers have irresponsible behavior, shown at the y-axis intercept. For a larger firm (95th percentile) the association is negative, decreasing as the percentage of peer firms with irresponsible behavior increases. For a smaller firm (5th percentile), the likelihood/effect of irresponsible behavior increases as peers' irresponsible behavior increases.

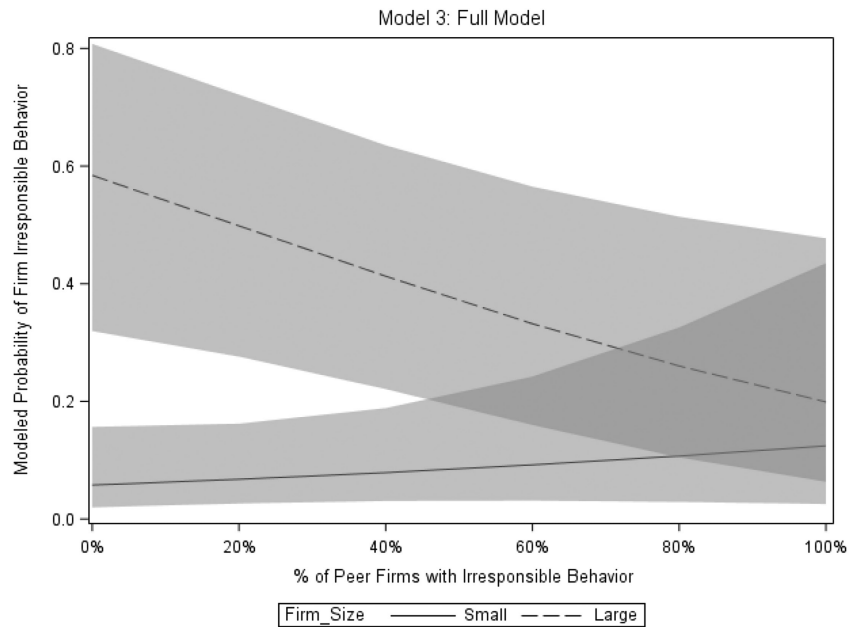
The positive slope suggests smaller firms are more susceptible to imitation effects due to their peers' irresponsible practices. Smaller

firms having peers with increasingly more irresponsible behavior are more likely to follow suit. For larger firms, however, the relationship moves in the opposite direction suggesting imitation affects smaller firms. Overall, the countervailing effects of peers' irresponsible behavior on small firms versus large firms support our hypothesis that the propagation of unethical marketing behavior is more likely to occur in smaller firms. Figure 3 and Model 3, together, depict the direct effects of firm size supporting Hypothesis 2 as well as the inverse, interaction effects of firm size and peers' irresponsible behavior supporting Hypothesis 3.

4.2 | Model appropriateness

Because KLD changed its methodology in 2011 (Eccles et al., 2020), we first check our model's appropriateness by splitting our data into

FIGURE 3 Firm size and peer irresponsible behavior effects on the probability of focal firm's irresponsible behavior. To chart the interactions, modeled probabilities are shown for different sizes of firms: Small (5th percentile) and large (95th percentile). The shaded area around the lines indicates 95% confidence intervals. All other variables are held constant, i.e., all effects shown are for the construction sector (NAICS = 22) in 2009 at average values for control variables.



two subsets: 2004–2010 and 2011–2015. Re-running Model 3 for each subset, we find consistent results. The main effect of peers' irresponsible behavior is positive but not significant (2004–2010 sample: $\beta_{\text{PeerIrresponsibleBehavior}} = 4.20$, $p = .10$; 2011–2015 sample: $\beta_{\text{PeerIrresponsibleBehavior}} = 4.31$, $p = .18$). The main effect of firm size is positive and significant (2004–2010 sample: $\beta_{\text{FirmSize}} = .68$, $p < .01$; 2011–2015 sample: $\beta_{\text{FirmSize}} = .54$, $p < .01$) and the interaction is negative and significant (2004–2010 sample: $\beta_{\text{Peer}^* \text{Size}} = -.77$, $p = .02$; 2011–2015 sample: $\beta_{\text{Peer}^* \text{Size}} = -1.15$, $p < .01$).

To further test the model's appropriateness, we examined the predictive strength of our full model (Model 3, Table 2) against an out-of-time holdout sample from 2016 ($n = 2073$) for model validation. As our development model (Model 3, Table 2) accounts for temporal differences with fixed effects, we treat the observations as if they occurred in 2015, the most recent year. We find 94.4% accuracy in predicting firms' 2016 irresponsible marketing behavior based on the predicted probability for each observation. For example, if an irresponsible marketing behavior is predicted to be more likely than not ($p[\text{irresponsible marketing behavior} = \text{'yes'}] > .5$), then we classify the observation as if a "yes" is predicted, indicating an irresponsible behavior is expected. Otherwise, we classify the observation as if a "no" is predicted. Using this classification system, we use the ratio of correctly classified observations to all observations as the measure of accuracy (Table 2).

Overall accuracy is only one measure of appropriate model fit. Simply predicting no firm will ever have an irresponsible marketing behavior, we could predict our development data set with 85.9% accuracy as only 14.1% of firm-year observations have such actions. This high accuracy rate examined in isolation could be misleading as it has no sensitivity, that is, the ability to identify firms with irresponsible marketing behavior. As a result, we use an additional measure of model fit, a Receiver Operator Characteristic (ROC) chart. A ROC chart plots model sensitivity, that is, the true positivity rate,

on the y-axis versus 1-specificity, that is, the false positivity rate, on the x-axis of the chart. The model fit is measured by the area under the curve (AUC). An AUC value of 1.00 corresponds with perfect prediction whereas an AUC = 0.50 is represented by a diagonal line in the ROC chart that has no predictive power. Figure 4 shows the ROC chart for our initial data sample used for model development ($\text{AUC}_{\text{Model3}} = 0.95$) and our 2016 out-of-time holdout sample for model validation ($\text{AUC}_{\text{Model3}} = 0.94$). Given these high AUC values, our model appears to be appropriate, accurate, and capable of distinguishing firms with irresponsible marketing behavior in our out-of-time holdout sample. Finally, visually we can compare the ROC charts which show similar patterns in development and validation charts. These data checks show relatively consistent results, indicating model appropriateness without suffering from issues of overfitting to the initial data set.

4.3 | Robustness of results

To check that our results are robust to alternate estimations, we employ Generalized Estimating Equations (GEE). This approach, also known as a population average model, is well suited to longitudinal/clustered data analysis (Hubbard et al., 2010; Zeger & Liang, 1986) which allows us to account for correlations within firms over time. GEE coefficients are interpreted as the effect of one unit of change on the population average, rather than the effect on an individual firm like with a generalized linear model (GLM). With GEE we conduct an analysis similar to the one used in Model 3. The dependent variable of irresponsible behavior is treated as binary (yes/no) using a logit link function and allowing firm observations to be correlated using an autoregressive structure. All covariates in this analysis are identical to those in Model 3. Table 3, GEE 1 column shows the results consistent with Model 3. The main effect of peers' irresponsible

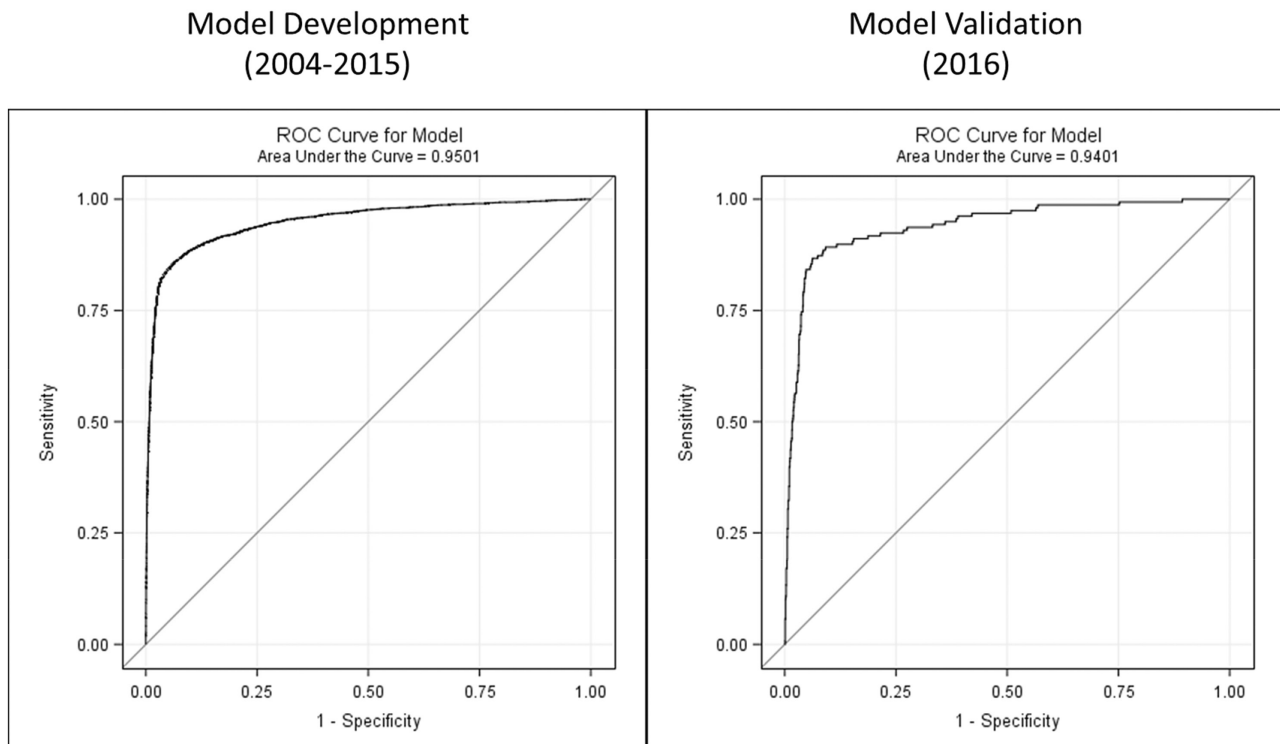


FIGURE 4 Model shows 94% accuracy using out-of-time hold out sample, 2016

behavior is positive but not significant ($\beta_{\text{PeerIrresponsibleBehavior}} = 2.63$, $p = .11$), the main effect of firm size is positive and significant ($\beta_{\text{FirmSize}} = .54$, $p < .01$), and the interaction is negative and significant ($\beta_{\text{Peer} * \text{Size}} = -.44$, $p = .04$).

To further analyze the robustness of our findings we alter the measurement of firm irresponsible behaviors. That is, the choice to collapse firm-level irresponsible behavior to a binary yes/no indicator was previously discussed, but these data could also be conceptualized as count data instead of binary. Count data bring a dimension of magnitude into play, that is, multiple irresponsible behaviors are recognized. To examine how peers' irresponsible behavior and firm size are related to this count measure, we employ a GEE analysis similar to the one previously described. In this case, we alter the dependent variable to be the count of firm irresponsible behavior for each year. To account for this change, we use a natural logarithm link function with a negative binomial distribution, a non-negative discrete distribution commonly used to model count data. Otherwise, no other changes were made to the previous analysis, i.e., the same correlation structure and covariates are used. The results of this analysis again portray consistent conclusions and can be seen in Table 3 (GEE 2 column) with one exception. In this case, the main effect of peers' irresponsible behavior is positive and significant ($\beta_{\text{PeerIrresponsibleBehavior}} = 1.79$, $p = .03$), the main effect of firm size is positive and significant ($\beta_{\text{FirmSize}} = .31$, $p < .01$), and the interaction is negative and significant ($\beta_{\text{Peer} * \text{Size}} = -.24$, $p = .01$). These robustness checks indicate that using both a different analytic technique and different measurement techniques of irresponsible behavior result in similar

conclusions; smaller firms (vs. larger firms) appear more likely to respond to an increase in peers' irresponsible behavior with their own irresponsible behavior.

Finally, examining the control variables with significant relationships in the main analysis, we find that *risk tolerance* ($p < .01$) and *prior firm irresponsible behavior* ($p < .01$) are significant and consistent in direction, which indicates a robust relationship. *Capital intensity* and *advertising expense* are not consistently significant in both GEE analyses, potentially indicating a fragile relationship with firms' irresponsible behaviors. To further explore if these control variables also depend on the actions of peer firms, a post hoc analysis was conducted (Appendix B) where firm size was replaced in the interaction with peers' irresponsible behavior. No significant interaction was found in this post hoc analysis.

5 | DISCUSSION AND IMPLICATIONS

Clarity regarding the extent to which firms imitate others' unethical, harmful behavior is a first step in bringing awareness to the harm and proliferation of unethical behaviors in society, across multiple firms. Based on theories of imitation, the present study adds to the sparse literature around irresponsible marketing behavior by identifying conditions under which larger firms are more likely to commit, while smaller firms are more likely to proliferate, unethical marketing behaviors. We argue that imitating the behaviors of other firms reduces uncertainty, especially for smaller firms competing within the same industry (Gupta et al., 2021; Cyert & March, 1963), despite

TABLE 3 Generalized estimating equations: Binary and count irresponsible behavior measurements

Total observations (n) = 25,824	GEE 1 - Binary			GEE 2 - Count		
	Dependent variable: Irresponsible behavior yes (vs no)			Dependent variable: Irresponsible behavior (0, 1, 2, 3, or 4)		
Firm-year "yes" pct. = 14.1%	Estimate	SE	p-value	Estimate	SE	p-value
Intercept	-8.129	0.606	<.0001	-5.262	0.328	<.0001
Peer irresponsible behavior	2.627	1.648	.1108	1.792	0.812	.0274
Firm size: ln(sales)	0.540	0.041	<.0001	0.312	0.022	<.0001
Firm size × Peer irresponsible behavior	-0.440	0.209	.0355	-0.244	0.095	.0105
Capital intensity	-0.855	0.417	.0403	-0.290	0.167	.0824
Peer responsible behavior	0.999	0.714	.1615	0.826	0.346	.0171
Sector growth	-0.084	0.047	.0724	-0.009	0.020	.6666
R&D expense	0.095	0.059	.1073	0.028	0.013	.0276
Advertising expense	0.161	0.098	.1015	0.027	0.023	.2436
Risk tolerance	0.668	0.153	<.0001	0.426	0.083	<.0001
Profit: Return on assets	0.263	0.300	.3819	0.329	0.145	.023
Profit: Earnings per share	-0.006	0.007	.3802	-0.003	0.003	.2974
Profit: Dividends per share	-0.031	0.029	.2954	-0.003	0.013	.7932
Firm responsible behavior	0.136	0.103	.1849	0.049	0.041	.2315
Firm irresponsible behavior	4.541	0.076	<.0001	2.665	0.060	<.0001
Year fixed effects (2004–2015)	Included			Included		
Sector fixed effects	Included			Included		
<i>GEE details</i>						
Correlation structure	Autoregressive (1)			Autoregressive (1)		
Distribution	Binary			Negative binomial		
Link	Logistic			Log		

Note: All variables listed with enumerated parameter estimates were lagged by 1 year. Standard errors (SE) and *p*-values are based on empirical standard error estimates.

reputational and legal risks stemming from harmful consumer-related behavior.

We extend prior work on imitation theory and the proliferation of harmful consumer behaviors which finds that firms imitate successful, in-group referents (Bhatnagar et al., 2016; Crane, 2020; Nikolaeva & Bicho, 2011), by offering a model that examines the out-sized role of firm size in the likelihood of proliferating irresponsible consumer behaviors.

We found support for our contention that rivalry- and information-based imitation disproportionately influence the likelihood of smaller firms' irresponsible marketing behaviors, once initiated. Our findings suggest that once harmful behavior occurs, conditional upon smaller size, firms are more likely to engage in irresponsible marketing behaviors when peers competing in the same sector engage in harmful practices in the prior year.

From a regulatory perspective, these findings further underscore that harmful behavior from a subset of firms within an industry sector (e.g., VW among EU carmakers; BP's Deepwater Horizon oil spill in the Gulf of Mexico; or, Philip Morris and RJR in the global tobacco industry) can potentially cascade through a

sector (Aqueveque et al., 2018; Griffin, 2021; Healy & Griffin, 2004; Mahon & McGowan, 1996; Prakash & Griffin, 2012) as the harmful behaviors become 'normalized' or taken-for-granted and adopted by others. This potential proliferation of unethical product-related practices (e.g., product safety issues, deceptive marketing practices) that might have started with larger firms but can be widely shared through smaller firms, should be of great interest to business ethics scholars, marketers, public policymakers, and regulators because the irresponsible behavior of a few firms may be contagious, expanding the negative consequences for society. Smaller firms may unwittingly be expanding irresponsible behaviors more readily if peers have already adopted irresponsible practices.

From a scholarly perspective, these results confirm previous studies that found that it may be risky for firms to unwittingly adopt imitation-based, me-too, consumer strategies (Hildebrand et al., 2011; Mena & Chabowski, 2015). In addition, we interrogate the out-sized influence of larger firms in pre-conditioning harmful behaviors as an acceptable business practice and the concomitant proliferation. More research is warranted on the role of larger firms' behavior, in combination with peers' behaviors, that might act as legitimating,

information-based referents of, acceptable business behavior. We also re-focus on the societal implications of CSiR with our focus on irresponsible behaviors having untold consequences for numerous consumers through proliferation.

From a managerial perspective, we found that certain conditions may encourage the diffusion of harmful behaviors that other firms seem compelled to follow (Aqueveque et al., 2018). Managers within firms that rely upon advertising likely have a larger financial risk tolerance, and prior irresponsible behaviors are more likely to lead to subsequent irresponsible behaviors, increasing regulatory, investor relations, and reputational risk. Taken together, a dependency on advertising may signal a firm's communications-focused CSR strategy (talking the talk) and when combined alongside a firm's risk-willingness (through high financial risk and previous irresponsible consumer behavior), could lend itself to continued risk-willingness for future irresponsible marketing practices. More research is needed to understand if punitive penalties, changes in consumer sentiments, or media exposure might change firm behavior for the better or worse.

Finally, contrary to expectations, we found that firms in lower capital-intensive sectors are more likely to have irresponsible marketing behaviors. This result may be due to different regulatory environments, more managerial discretion, or consumer dependency leading to CSR cynicism within low capital-intensive firms (Kim, 2021). Alternatively, this could be due to the relatively more pro-social, regulated, long-time horizon nature of firms in capital-intensive sectors (Chapple et al., 2001).

6 | LIMITATIONS AND CONCLUSIONS

Using rivalry- and information-based theories of imitation, we have argued that firm size directly affects diffusion and moderates the proliferation of irresponsible marketing behavior such that smaller firms facing uncertainty are more likely to propagate unethical behavior of larger firms. We build on prior work in rivalry-based and information-based imitation theory by suggesting that the size of referent firms (Lieberman & Asaba, 2006), moderates the likelihood of propagating irresponsible behavior toward consumers. Overall, our results suggest larger firms are more likely to have irresponsible behavior. But smaller firms are more likely to adopt the practices of others potentially due to the assumption that other firms have superior information on how to effectively compete under uncertainty (Lieberman & Asaba, 2006).

As this is an initial study, there are several limitations requiring future research examining why and under what conditions imitation and contagions occur, propagating irresponsible business behaviors broadly across sectors. Further research is needed to tease out and compare the specific conditions under which positive and negative diffusion with proliferation is more likely to occur. The proliferation of prosocial, voluntary employee engagement, for example, might be more likely in controversial sectors (e.g., Foxconn and Apple, c.f. Griffin et al., 2015) or within sectors having persistent product-related controversies such as tobacco,

drinks, or petrochemical sectors (Aqueveque et al., 2018; Derry & Waikar, 2008). Alternatively, the mechanisms underlying the proliferation of irresponsible behaviors may be due to competitive pressures (e.g., race to the bottom) or industry norms. It may also be the case that imitation theory is less relevant to harmful behaviors toward other essential stakeholders, such as employees. Further, this research could be extended by examining the traits of firms that are being copied, as our research only examined the imitating firm's characteristics.

This research relies upon secondary data, which data are consistent with previous research, to examine prosocial and harmful business behaviors. While we include temporal lags and attempt to statistically isolate the effects of peer irresponsible behavior with the use of multiple control variables and fixed effects by sector, these results are still correlational. Stronger causal evidence could come from randomized experiments or other primary data. Future research using primary data is needed to uncover the underlying mechanisms that propagate irresponsible behavior.³

As the decision-making processes underlying these decisions are likely complex and nuanced, fully understanding and predicting a firm's irresponsible behavior require additional examination. Future research should examine the relationship between product concerns and current or future product strengths. Further research into the specific unethical, or illegal product practices that are more likely to lead to imitation by other firms is also warranted.

Overall, we found irresponsible consumer-related practices in approximately 14 percent of the firm-year observations in our sample, with these infractions more common among larger firms. To the extent that larger firms have higher market share, more power in the marketplace, and can influence the behaviors of other smaller firms, especially in concentrated industries, this finding has important implications for regulatory policy and scholarly research.

From a regulatory policy perspective, this research suggests that it is important to monitor the actions of larger, market-leading firms carefully because these firms may be the exemplar for others within the sector. However, when predominantly focusing on larger firms, regulators and the media may fail to notice the actions of the many, smaller firms which are more susceptible to imitating others' controversial practices potentially leading to the proliferation of harmful behavior as a contagion effect. Cumulatively, the many, smaller firms might collectively have more harmful effects from their controversial product-related practices and thus a focus on less visible, yet contagious harmful behaviors may create a 'greater bang for the marginal, policy buck'.

PEER REVIEW

The peer review history for this article is available at <https://publons.com/publon/10.1111/beer.12484>.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from Compustat and MSCI (formerly KLD and GMI). Restrictions apply

to the availability of these data, which were used under license for this study. Data are available from Wharton Research Data Services (<https://wrds-www.wharton.upenn.edu/>).

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ENDNOTES

- ¹ Bandwagon effects are a cognitive bias by which public opinion has the tendency to alter consumers' adoption of certain behaviors, styles, or attitudes because others are doing so (Bhatnagar et al., 2016; Hillebrand et al., 2011; Wu et al., 2003).
- ² Although examining the mechanisms underlying socially responsible practices (e.g., community education and outreach campaigns, philanthropic endeavors, etc.) is beyond the focus of this paper, we control for prosocial behaviors in our model. Our statistically significant results after controlling for prosocial behaviors suggests that irresponsible practices and the imitation thereof result from distinctly different influences than would be the case for socially responsible practices.
- ³ Thanks to a reviewer for highlighting the limitations of secondary data and the potential value of primary data.

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APPENDIX A: KLD PRODUCT CONCERNS*

NEGATIVE SOCIAL PERFORMANCE INDICATORS PRODUCT QUALITY & SAFETY (PRO-CON-A)

This indicator measures the severity of controversies related to the quality and/or safety of a firm's products and services.

Topics covered include, for example, food safety, controversial media content, product recalls, service disruptions, and the use of chemicals of concern in company products. This indicator also includes companies with major business involvement in gambling and tobacco.

MARKETING & ADVERTISING (PRO-CON-D)

This indicator measures the severity of controversies related to a firm's marketing and advertising practices. Topics covered include, for example, false or deceptive marketing or advertising, marketing of products for off-label uses, controversies regarding the marketing of products to children or other vulnerable populations, labeling controversies, and spam or ad-ware. Controversies about known product safety issues are covered under the Product Safety & Quality KPI. This indicator also includes business involvement in alcohol.

ANTICOMPETITIVE PRACTICES (PRO-CON-E)

This indicator measures the severity of controversies related to a firm's anti-competitive business practices. Topics covered include, for example, price-fixing, collusion, bid-rigging, and predatory pricing. Business-to-business claims are generally not covered unless a regulator joins the suit. Likewise, standard pre-merger regulatory inquiries are not considered controversial.

CUSTOMER RELATIONS (PRO-CON-F)

This indicator measures the severity of controversies related to how a firm treats its customers or potential customers. Topics covered include, for example, fraudulent or improper billing, excessive or hidden fees, predatory financial products, and restricted or discriminatory access to products or services. Customer privacy and data security issues are covered under the Privacy & Data Security KPI.

PRO-CON-G: PRIVACY & DATA SECURITY[^]

This indicator measures the severity of controversies related to a firm's privacy and data security practices. Issues covered include, for example, controversial legal uses of personal data, security breaches, regulatory action against the company, and changes to a company's policies or practices that erode customer privacy.

OTHER CONCERNS (PRO-CON-X)

This indicator is designed to assess the severity of customer-related controversies not covered by any other MSCI ESG Research negative social indicator.

*These measure definitions are quoted from MSCI ESG Research (2016, pp. 37–39).

[^]This measure was introduced in the 2015 data set with 0.6% and 0.4% of the firms marked as having privacy & data security concerns in 2015 and 2016, respectively.

APPENDIX B: ALTERNATIVE EXPLANATIONS FOR ACCELERATING HARMFUL BEHAVIORS

Mimicking larger firms as in-group referents within an industry rife with competitive uncertainty, as we have argued that rivalry- and information-based imitation theory are not the only reasoning behind why firms may imitate others. For example, similarity in national business systems or corporate governance structures might create the conditions for conformity of CSR conduct (Zaman et al., 2022). Alternatively, firms may benchmark marketing and R&D investments to gather signals from the broader market (Lieberman & Asaba, 2006) or macro-economic conditions (e.g., inflation, interest rates, etc.) and change behaviors accordingly (Fu et al., 2021). And contrary to what we hypothesized, in situations of high environmental uncertainty, differentiation (or the lack of imitation) can be a risky strategy (Lieberman & Asaba, 2006), especially for business conduct toward an essential stakeholder such as consumers (Fu et al., 2021). That is, the level of financial, social, political, or climate risk a firm may tolerate may influence a firm's propensity to imitate others' behaviors (Bryant et al., 2020) and in turn, propagate harmful behaviors toward consumers (consumer-related risks) as we argue in this paper.

Because of the potential for additional underlying mechanisms affecting the uptake, imitation, and proliferation of irresponsible consumer-related practices, we explore additional interactions using Generalized Estimating Equations (GEE) as a post hoc analysis. The interactions selected were based on the significant effects of several control variables in Model 3 (rather than theorizing interaction relationships) and therefore should not be considered to be hypothesized a priori.

The analyses in Tables A1 and A2 parallel our Robustness of Results section. We replaced the variable *firm size* with four alternative variables: *capital intensity* (Model GEE 3), *advertising expense* (Model GEE 4), *risk tolerance* (Model GEE 5), and *firm's prior irresponsible behavior* (Model GEE 6) in the interaction with *peers' irresponsible behavior* to ascertain their effect on firm's irresponsible behavior. While none of the replacement interactions are significant ($\alpha = .05$), it is worth highlighting that the interaction of *advertising expense* ($\beta_{Peer} * AdvExpens = -2.20, p = .052$) with *peers' irresponsible behavior* in Model GEE 4 is significant and negative at less stringent significance standard ($\alpha = .10$). This interaction may indicate that firms that rely heavily on advertising may avoid irresponsible consumer-related behavior as a differentiation strategy when peers' irresponsible consumer-related behavior is high. More theorizing on the mechanisms underlying and the competitive context in which firms that rely heavily on advertising (c.f. consumer-facing industries) might avoid harmful consumer-facing behavior is warranted.

TABLE A1 Generalized estimating equations using alternative interactions

Total observations (n) = 25,824 Firm-year "yes" pct. = 14.1%	GEE 3 - Binary			GEE 4 - Binary		
	Dependent variable: Irresponsible behavior yes (vs no)			Dependent variable: Irresponsible behavior yes (vs no)		
Parameters	Estimate	SE	p-value	Estimate	SE	p-value
Intercept	-7.604	0.600	<.0001	-7.581	0.600	<.0001
Peer irresponsible behavior	-0.768	0.704	.276	-0.572	0.650	.378
Firm size: ln(sales)	0.470	0.025	<.0001	0.469	0.025	<.0001
Capital intensity	-0.823	0.433	.057	-0.806	0.421	.056
Capital intensity × Peer irresponsible behavior	0.312	1.284	.808			
Peer responsible behavior	0.907	0.716	.205	0.951	0.711	.181
Sector growth	-0.082	0.047	.081	-0.082	0.047	.079
R&D expense	0.112	0.059	.058	0.086	0.061	.159
Advertising expense	0.154	0.104	.140	0.559	0.228	.014
Advertising expense × Peer irresponsible behavior				-2.197	1.132	.052
Risk tolerance	0.668	0.153	<.0001	0.669	0.153	<.0001
Risk tolerance × Peer irresponsible behavior						
Profit: Return on assets	0.234	0.301	.437	0.246	0.301	.414
Profit: Earnings per share	-0.006	0.007	.391	-0.006	0.007	.383
Profit: Dividends per share	-0.030	0.029	.300	-0.029	0.029	.316
Firm responsible behavior	0.136	0.103	.186	0.134	0.102	.189
Firm irresponsible behavior	4.544	0.076	<.0001	4.539	0.076	<.0001
Firm irresponsible behavior × Peer irresponsible behavior						
Year fixed effects (2004–2015)	Included			Included		
Sector fixed effects	Included			Included		
<i>GEE details</i>						
Correlation structure	Autoregressive (1)			Autoregressive (1)		
Distribution	Binary			Binary		
Link	Logistic			Logistic		

Note: Newly added interactions are in bold, all variables listed with enumerated parameter estimates were lagged by 1 year. Standard errors (SE) and p-values are based on empirical standard error estimates.

TABLE A2 Generalized estimating equations using alternative interactions

Total observations (n) = 25,824 Firm-year "yes" pct. = 14.1%	GEE 5 - Binary			GEE 6 - Binary		
	Dependent variable: Irresponsible behavior yes (vs no)			Dependent variable: Irresponsible behavior yes (vs no)		
Parameters	Estimate	SE	p-value	Estimate	SE	p-value
Intercept	-7.669	0.609	<.0001	-7.571	0.615	<.0001
Peer irresponsible behavior	-0.385	0.776	.620	-0.920	0.767	.231
Firm Size: ln(sales)	0.470	0.025	<.0001	0.471	0.025	<.0001
Capital intensity	-0.851	0.420	.043	-0.849	0.421	.044
Capital intensity × Peer irresponsible behavior						
Peer responsible behavior	0.931	0.709	.189	0.909	0.710	.201
Sector growth	-0.082	0.047	.083	-0.082	0.047	.081
R&D expense	0.113	0.059	.058	0.112	0.060	.060
Advertising expense	0.153	0.105	.142	0.155	0.104	.137
Advertising expense × Peer irresponsible behavior						
Risk tolerance	0.837	0.290	.004	0.668	0.153	<.0001
Risk tolerance × Peer irresponsible behavior	-1.160	1.536	.450			
Profit: Return on assets	0.228	0.302	.451	0.234	0.301	.437
Profit: Earnings per share	-0.006	0.007	.386	-0.006	0.007	.401
Profit: Dividends per share	-0.030	0.029	.300	-0.030	0.029	.300
Firm responsible behavior	0.137	0.103	.184	0.136	0.103	.187
Firm irresponsible behavior	4.545	0.076	<.0001	4.469	0.148	<.0001
Firm irresponsible behavior × Peer irresponsible behavior				0.433	0.774	.576
Year fixed effects (2004–2015)	Included			Included		
Sector fixed effects	Included			Included		
<i>GEE details</i>						
Correlation structure	Autoregressive (1)			Autoregressive (1)		
Distribution	Binary			Binary		
Link	Logistic			Logistic		

Note: Newly added interactions are bolded, all variables listed with enumerated parameter estimates were lagged by 1 year. Standard errors (SE) and p-values are based on empirical standard error estimates.