

Second-order effects of CEO characteristics: How rivals' perceptions of CEOs as submissive and provocative precipitate competitive attacks

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Research Summary: Integrating victimization into competitive dynamics and upper echelons theorizing, we develop and test theory articulating how rivals' perceptions of a CEO precipitate attacks on the CEO's firm. Rather than treating CEOs' characteristics solely as perpetrating action (a first-order effect, like research integrating upper echelons into competitive dynamics), we argue firms with CEOs possessing characteristics perceived as more submissive or more provocative are subject to more competitive actions directed toward their firms (a second-order effect, like victimization research). Empirical analyses of a sample of Fortune 500 CEOs supports our theorizing while interviews of executives corroborate our premise as well. Our framework offers a more complete and socialized understanding of CEOs' roles in competitive dynamics, providing both theoretical and practical insights as well as future research avenues.

Managerial Summary: We articulate how CEOs possessing certain psychological, behavioral, and social characteristics may unknowingly precipitate competitive attacks on their firms. Our explanation integrates insights from victimology which explain how individuals are subject to more attacks if they possess characteristics others perceive as more submissive or more provocative. While prior research articulates that CEOs' characteristics affect decisions such as attacking rivals, integrating theories of victimization into this line of inquiry paints a more socialized view of why firms may be subject to competitive attacks as well. The logic and evidence we provide advances theoretical explanations of firms' competitive behaviors and executives' roles therein. At the same time, providing knowledge about how CEO characteristics precipitate

competitive actions toward their firms can aid in prevention and intervention strategies.

KEY WORDS

CEOs, competitive attacks, competitive dynamics, upper echelons, victimization

1 | INTRODUCTION

History is replete with examples of military commanders and sporting combatants using their perceptions of rival decisionmakers in deciding how to engage those rivals—such as Russian commanders employing Napoleon's hubris against him (Zamoyski, 2005) and Muhammad Ali devising the “rope-a-dope” knowing his opponent would be ultra-aggressive (Dundee & Sugar, 2009). Interviews and biographical accounts suggest modern business executives are applying the same principles as well. For example, Fuld (2014) notes that when asking executives if they agreed with statements to the effect that “CEOs not only can, but should, be watching their counterparts closely, assessing their strengths, weaknesses and predilections, and developing counter-measures accordingly,” findings indicate the claim “was not only true but almost an understatement.” Fuld's interviews, coupled with executive biographies (e.g., Ilian, 2016) suggest these decisionmakers actively gather information about their rivals' likely actions and responses and also, to very high degrees, base competitive maneuvers upon that information as well. Despite this practical reality, however, neither upper echelons theory (which articulates the role of executives in firm action; Hambrick & Mason, 1984) nor competitive dynamics research (which focuses on understanding firms' competitive actions vis-à-vis rivals; Ketchen, Snow, & Hoover, 2004; Smith, Ferrier, & Ndofor, 2005) advance theoretical explanations of how this phenomenon unfolds. Moreover, although competitive dynamics research builds on the premise that “expectations about how rivals will respond drive competitive decision making” (Gao, Yu, & Cannella, 2017, p. 132), empirical research supporting this notion is lacking.

The absence of theoretical explanations and empirical tests of the contention that rivals' perceptions of CEOs factor into decisions about how to engage those CEOs' firms is problematic in at least two ways. First, failure to incorporate perceptions about the individual most central to determining rivals' reactions—the rival CEO—inhibits developing a more socialized and complete theory of competitive action. Second, and related, is the characteristics of executives, and particularly CEOs, have long been seen as affecting firm action (for a review, see Finkelstein, Hambrick, & Cannella, 2009). Understanding how these characteristics affect CEOs' firms in totality is limited by overlooking how rival executives may form perceptions based upon executives' characteristics and utilize this information in competitive interactions.

To address the lack of theory and evidence about CEOs' roles in precipitating rival attacks, we integrate upper echelons and competitive dynamics theorizing with insights from victimization (Curtis, 1974; Schafer, 1968; Wolfgang, 1957). Victimization theorizing argues that “to gain a more complete understanding of the factors that explain these behaviors [i.e., actions directed toward others], it is equally important to consider the victim's role” as it is the role of other predictors (Aquino & Lamertz, 2004, p. 1023). We adopt a similar stance, arguing both that current explanations of firm competitive actions are incomplete and that a more thorough understanding is possible

by addressing how attackers' perceptions of a CEO affect attacks on the CEO's firm. As in the examples of Russian commanders and Muhammad Ali basing competitive actions upon perceptions of their opponents' hubris/aggressiveness as well as practitioner insights (Fuld, 2014; Ilian, 2016), we expect CEOs to base competitive actions toward other firms at least in part on their perceptions of rival CEOs. We propose that as the people ultimately responsible for making decisions on behalf of their firms, CEO characteristics may not only inform whether and how they will perpetuate an attack, as studies integrating upper echelons theory into competitive dynamics suggest (e.g., Miller, Kets de Vries, & Toulouse, 1982; Stephan, Murmann, Boeker, & Goodstein, 2003), but also precipitate these same executives being attacked, as theories of victimization suggest.

Consistent with our portrayal of executives as both perpetrators of firms' action in an upper echelons theory sense and as being subject to rivals' perceptions as victimization suggests, we build upon theory suggesting individuals possessing certain psychological, behavioral, or social characteristics which others perceive as either more submissive or more provocative are subject to more attacks (e.g., Einarsen, 2000; Hogh & Viitasara, 2005; Olweus, 1978). Extending this tenet of victimization theorizing, we hypothesize that firms with CEOs possessing characteristics consistent with typical victims will be perceived by rivals in ways that affect attacks directed at these CEOs' firms. Importantly, while extant research highlights numerous attacking and target firm aspects as well as situational factors that affect competitive actions (for reviews, see Chen & Miller, 2012; Smith et al., 2005; Ketchen et al., 2004), we expect CEO characteristics to offer additional explanatory power beyond those predictors, not in place of them.

To test our theorizing, we employ videometric measurement of CEOs where third-party raters use validated instruments to assess focal constructs from videographic data (Hill, Petrenko, Ridge, & Aime, 2019; Petrenko, Aime, Ridge, & Hill, 2016; see also Gupta & Misangyi, 2018). We combine videometric measures of CEOs with data drawn from RavenPack News Analytics. RavenPack uses a patented algorithm to classify and aggregate press releases which is commonly used to capture firms' competitive actions (e.g., Connelly, Tihanyi, Ketchen, Carnes, & Ferrier, 2017; Lin, Massa, & Zhang, 2014; Twedt, 2016). Researchers have long employed press releases and news articles to manually code firms' competitive actions (e.g., Smith et al., 2005; Upson, Ketchen, Connelly, & Ranft, 2012). With both the volume and diversity of news articles and press releases as well as the possible sources from which to draw increasing, Raven Pack's algorithm improves measurement precision by avoiding limitations of manual extraction (e.g., double-counting; missing information; fatigue and human error in coding).

Advancing theory and offering evidence about how CEOs' characteristics precipitate rivals' actions toward these CEOs' firms offers a more socialized and complete view of the competitive attacks firms face. In doing so, we offer a number of contributions to theory and practice. First, leveraging perceptions of rivals' traits when planning competitive actions is a long-held practitioner notion—for example, Sun Tzu's Fifth Century BC text (Tzu, 2005) and Machiavelli's writings during the Renaissance (Machiavelli, 1966) both advocate weighing rival decisionmakers' likely moves in strategic decisions. Offering theoretical grounding and empirical evidence for long-held insights both central to competitive dynamics (Gao et al., 2017) and relevant to practitioners (Fuld, 2014; Ilian, 2016) is an important step in a more socialized view of competitive attacks. The clearer picture of CEOs' roles in precipitating competitive actions offers a basis for research on attacks firms face and CEOs' roles therein, providing many avenues for future investigation.

Second, we extend upper echelons theory by arguing CEOs' characteristics not only affect the actions of their own firms, but also affect how rivals perceive CEOs and thus influence competitive actions of their rivals toward their respective firms. Our theory development about how rivals'

perception of a CEO's characteristics affects actions toward a firm in essence levers upper echelons theory's mechanisms in reverse by incorporating insights from victimization. Thus, we extend theory by treating characteristics of CEOs as not only having a "first-order effect" which predicts the actions of the CEOs' firms, but also as prompting a "second-order effect" whereby others' perceptions of those same CEO characteristics play a role in subjecting firms to rivals' actions. Extending upper echelons research in this way deepens understanding of how CEOs influence both their firms and the broader competitive landscape as well.

Third, we extend the scope of victimization theorizing. Extant research finds many characteristics subjecting individuals to more attacks across various contexts (e.g., Aquino & Thau, 2009; Einarsen, 2000; Hoel, Rayner, & Cooper, 1999; Hogh & Viitasara, 2005). We expand conceptualizations of victimization to the context of firm-level attacks. Further, we as scholars face consistent scrutiny for our inability to both integrate insights of practitioners into our theories and offer proscriptive advice for issues they face (e.g., Hambrick, 1994; Pfeffer, 2007; Tihanyi, Graffin, & George, 2014). This paper answers both calls: we incorporate insights of acting executives (Fuld, 2014; Ilian, 2016) into theoretical explanations, and as executives must consider whether and how rivals' competitive moves will be directed at their firms, offer a more complete explanation for a phenomenon of concern to practitioners as well.

2 | THEORY AND HYPOTHESES

Research on competitive dynamics "embraces as the primary object of study the competitive *actions* of a firm" (emphasis in original: Chen & Miller, 2012, p. 137). As "the principle vehicle by which firms position themselves in the competitive environment," competitive action—defined as an "externally directed, specific, and observable competitive move initiated by a firm"—is seen as an important predictor of firms' relative positioning, performance, and survival (Smith et al., 2005, p. 321). Research highlights a diverse set of antecedents to firms' competitive actions such as market conditions (Caves, 1980; Haveman & Nonnemaker, 2000) as well as firms' prior performance (Ferrier, 2001), governance mechanisms (Connelly et al., 2017), and relative resource allotments (Yoffie & Cusumano, 1999). Since competitive actions offer firms a means to improve positioning and/or profit at the expense of rivals (e.g., acquiring market share or reducing anticipated returns; Chen, 1996; Chen, Katila, McDonald, & Eisenhardt, 2010), research also shows how competitive actions affect firms' performance in relative and absolute terms. For example, competitive actions may drive rivals to react with their own actions, triggering an on-going series of attacks and counterattacks as firms jockey for supremacy over time (e.g., Ndofor, Sirmon, & He, 2011). Ultimately, competitive actions may force some firms out of a market or into insolvency while preventing rivals from entering a market or industry, insulating profits for those currently in operation.

As the individuals tasked with determining firm actions, executives have long held a central role in competitive dynamics research. For example, Hambrick, Cho, and Chen (1996) found more heterogeneous top management teams have a greater propensity to engage in competitive actions while Stephan et al. (2003) found that newer CEOs are less likely to adopt forbearance toward rivals. The role of executives in this line of inquiry is perhaps not surprising given competitive dynamics builds on the premise that when choosing competitive actions, firms' decisionmakers "must not only consider how their actions will affect their customers but also how rivals may react" (Ketchen et al., 2004, p. 781). Using Porter's (1980) insights about preventing rivals' possible countermoves through means like creating entry barriers and switching costs, MacMillan (1980, 1988) and colleagues were among the first to use organizational theory to explain observations from settings such as warfare,

games of strategy, and business practice about how executives can help their firms gain or remove competitive advantages by anticipating their rival executives' responses and tailoring competitive actions accordingly (MacMillan & McCaffery, 1982; MacMillan, McCaffery, & Van Wijk, 1985). Although MacMillan et al.'s premise is both central to competitive dynamics and long held, little theoretical or empirical attention has been given to how executives may form and act upon such perceptions. To address this issue, we draw on theories of victimization to articulate how rivals' perceptions of a firm's CEO affect competitive actions directed at the CEO's firm.

2.1 | Theories of victimization

As Meier and Miethe (1993, p. 460) note in a review of theories of victimization, evidence has long shown "that no picture" of attacks directed toward other individuals "can ever be complete without information about the victim of these offenses." Thus, while victimization scholars acknowledge both attacker and situational factors play a role in bringing about attacks, they focus attention on characteristics of the victim to more fully understand the phenomenon. Aquino (2000) and colleagues (e.g., Aquino & Bradfield, 2000; Aquino & Byron, 2002; Aquino, Grover, Bradfield, & Allen, 1999; Aquino & Lamertz, 2004) note that victimization theorizing presents a consistent portrait of people subject to more attacks across a host of settings ranging from crime victims (Curtis, 1974; Wolfgang, 1957) to bullying in schools (Olweus, 1978, 2003) and various workplace incivilities such as harassment, ostracism, and undermining. Indeed, a wealth of evidence suggests certain psychological, behavioral, and social characteristics—or what Schafer (1968) labels "victim elements"—are perceived in ways that subject those possessing these elements to more attacks from others (e.g., Aquino & Thau, 2009; Einarsen, 2000; Hoel et al., 1999; Hogh & Viitasara, 2005).

A first group of victims in victimization research are referred to as *submissive* victims. Submissive victims possess characteristics others perceive as making them more unwilling or unable to respond to attacks. Seeing these individuals as less willing or able to respond, attackers have less fear of response (e.g., fighting back) or reprisal (e.g., injury) from attacks on more submissive victims. As such, when deciding whom to attack, submissive individuals are "sought out" as "easy marks" or "easier targets" (Olweus, 1978, 2003). At the same time, by either not fighting back or offering limited counter threats, submissive victims further embolden attackers and precipitate additional attacks. Taken together, the perception that more submissive people lack either the willingness or ability to respond coupled with their absent or acquiescent responses subjects more submissive people to a greater number of attacks.

Research identifies a number of characteristics perceived as more submissive, and hence, are associated with a greater number of attacks. For example, it may be of little surprise that studies of schoolyard bullying show that smaller and physically weaker children are attacked more by their peers since these targets are less able to fight back (Olweus, 1978, 2003). Similarly, Egan and Perry (1998, p. 299) find children with lower self-esteem are victimized more because their peers perceive them as having "reduced motivation or ability to assert and defend themselves effectively." Bowling and Beehr's (2006) meta-analytic investigation of victimization in organizations offers empirical support for this notion as well. Dealing with conflict in an avoiding or obliging manner is another characteristic associated with perceptions of lacking the ability or desire to fight back and thus, being victim to more attacks (Aquino, 2000). Several studies note victims' social status and support play a role in victimization as well (e.g., Aquino & Bommer, 2003; Aquino et al., 1999). As a case in point, Jensen, Patel, and Raver (2014) highlight a wealth of research suggesting those of lower standing are perceived as easier targets because they lack the resources necessary to counter attacks directed at them. Similarly, Hodges, Malone, and Perry (1997) highlight children lacking friends to support them

in the event of attacks are victimized more, a finding illustrated in various work contexts as well (Aquino & Thau, 2009; Hoel et al., 1999; Hogh & Viitasara, 2005).

A second group of victims in victimization research are referred to as *provocative* victims. Provocative victims are attacked because their psychological, behavioral, and social characteristics manifest in ways perceived as threatening to the point that others are provoked to “direct aggressive action against the perceived source” (Aquino & Bradfield, 2000, p. 527). Two distinct but complimentary explanations link individuals seen as more provocative to a greater number of attacks (Aquino et al., 1999).

The first explanation is that provocative victims threaten others’ sense of what “ought to be,” eliciting attacks in an effort to either “get even” or to make the victims conform to perpetrators’ own views (e.g., Aquino & Bradfield, 2000). For example, people with more hostile or dominating interpersonal styles may act in ways others perceive as violating social and behavioral norms to such an extent that others attack the provocateur either as a retributive quid pro quo or to get the provocateurs to alter their offensive ways (Aquino, 2000). Similarly, even though they may not pose material danger to those with which they interact, individuals with poor social skills or who are difficult to interact with (e.g., constant complaining; crying) are nonetheless perceived in ways that evoke negative reactions; as such, these individuals tend to experience greater victimization in workplaces and school settings alike as others react hostilely to the behaviors or attack in an attempt to modify the provocative behavior (Aquino & Thau, 2009; Einarsen, 2000; Hoel et al., 1999; Hogh & Viitasara, 2005). Another example is poor organizational citizens, who may be “viewed in a negative light because they fail to exhibit minimal standards of cooperativeness and social sensitivity” and as such, “increase their risk of being victimized” (Aquino & Bommer, 2003, p. 375).

The second explanation is that being perceived as threatening by others poses danger to individuals’ relative standing or security, provoking them to attack the provocative victim to neutralize or eliminate the threat (Olweus, 1978, 2003). For example, Jensen et al. (2014, p. 298) find support for their logic that since “rate-busting” high performers threaten to raise expectations of what is possible on the job, “coworkers are motivated to [attack them in an effort to] maintain the work group’s current performance expectations, solidarity, and their individual positive self-regard”; as such, high performers suffer more attacks aimed at hindering their relative productivity (e.g., sabotage; withholding needed resources). Across multiple studies and contexts, Kim and Glomb (2010, 2014) find support for similar arguments that higher ability people evoke negative reactions (e.g., resentment; envy) and threaten others relative standing to such an extent that these individuals are subject to more attacks as well. Verbal and/or physical acts that either threaten how people see themselves or believe others see them (e.g., belittling or making someone look bad) as well as using intimidation and/or otherwise jeopardizing others’ sense of security are shown to precipitate attacks on the source as well. For example, Felson and colleagues’ research highlights how challenging others’ identity may prompt them to attempt to “save face” by attacking the challenger (Felson, 1992; Felson, Baccaglini, & Gmelch, 1986; Felson & Steadman, 1983).

In the same way, fear for security may evoke “fight or flight” responses resulting in more attacks on the source of the threat to try to eliminate the threat before experiencing harm (cf. Aquino et al., 1999). As such, while “the principal goal of individuals using intimidation” and like acts that pose potential harm “is to be seen by others as tenacious and forceful” (Bolino & Turnley, 2003, p. 238), victimization research shows how such actions precipitate higher levels of attacks for those who act in these threatening or intimidating ways. Simply put, individuals acting in an intimidating fashion overtly threaten others’ relative standing (e.g., seen as less powerful; try to prove mettle by attacking) or security, which provokes attacks to vanquish or eliminate the intimidator/threat. Given fear of

reprisal from those seen as more intimidating, it is perhaps not surprising that people with characteristics seen as submissive constitute a larger portion of victims than those perceived as provocative (Olweus, 1978, 2003). Yet, all else equal, threatening others increases the chances of attacks in response to the threat, resulting in more attacks on those perceived as more provocative as well (e.g., Aquino & Byron, 2002).

Notably, Aquino et al. (1999, p. 262) highlight how threats to both others' sense of what "ought to be" and relative standing or security are "complimentary arguments" such that "neither explanation nullifies the other." To illustrate, consider two victims: the first, an obsequious "kowtow" or "kiss up" and the second, hyperaggressive. Both people may be seen as acting in ways at odds with social norms. To the extent such conduct is seen as resulting in favorable outcomes (e.g., supervisors reward ingratiation; aggressive people seize opportunities before they are available to others), both also pose threats to others' relative standing (if not security with hyperaggression; Aquino & Bradfield, 2000). While both mechanisms provoke attacks independent of the other, then, attackers may react to the threats simultaneously as well. For example, negative moods and emotions of those higher in negative affectivity may be perceived as inappropriate and unfavorable while such moods and emotions also foster a climate of hostility as well; collectively, then, people higher in negative affectivity experience more attacks because the trait is both counter-normative and threatens others' sense of security (Aquino et al., 1999; Coyne, Seigne, & Randall, 2000).

A wealth of research across a host of settings supports the tenets of victimization theorizing that people who possess characteristics consistent with more submissive and more provocative victims are subject to more attacks (Aquino & Thau, 2009; Einarsen, 2000; Hoel et al., 1999; Hogh & Viitasaara, 2005). Three interrelated caveats are important to clarify regarding victimization research, however. First, victimization theories suggest various characteristics—those others tend to perceive as more submissive or more provocative—subject people to more attacks. Not all characteristics are seen by others as submissive or provocative, however, and those traits that are not perceived as such do not fall into the realm of victim elements. For example, research on Big 5 personality traits provides inconsistent findings, suggesting these traits may not be consistently perceived in ways that precipitate victimization (Aquino & Thau, 2009).

Second, although victimization may be misconstrued as blaming victims for attacks, victimologists are clear to note this is not the intent (Curtis, 1974; Meier & Miethe, 1993). Rather, victimologists note that while the vast majority of victims unknowingly precipitate attack, studying the full range explanations—attackers, situations, and victims—is necessary to fully understand the phenomenon (Aquino & Lamertz, 2004; Jensen et al., 2014). Central to victimization, then, is underscoring that being perceived as more submissive or more provocative may be unintentional and yet those seen as such still precipitate attacks.

Third, perceptions of potential victims' submissiveness and provocativeness form through both direct interactions as well as "less direct ways" like distal or casual observations of readily apparent elements (Meier & Miethe, 1993, p. 462). For example, Hickey (2006) notes that submissive victims often do not know their attackers; instead, attackers happen upon the victim and see an opportunity to attack someone whom they perceive as posing little counter threat. Such is often the case in muggings where attackers act without fully knowing victims' willingness or ability to defend themselves. Similarly, in studying violent crime, both Wolfgang (1957) and Curtis (1974) note how provocative victims suffer attacks principally because they do not know their eventual attacker well, if at all; rather, the victim provokes others without realizing that others may attack (for if they did know, they would likely avoid provoking them). Such victim precipitation occurs in settings such as barroom fights and attacks against notable figures (e.g., celebrities; politicians) where the eventual victim

unknowingly provokes others they do not know well into attacking them (e.g., performance in a game; envy; political positions). In sum, even while engaging in routine activities and normal lifestyle activities, peoples' psychological, behavioral, and social characteristics affect how others perceive them—whether through extensive interactions or distal observations.

2.2 | Victimization and attacks on firms with more submissive or more provocative CEOs

We argue victimization logic can be extended to upper echelons and competitive dynamics theorizing such that while various factors predict attacks against a firm (Chen & Miller, 2012; Ketchen et al., 2004; Smith et al., 2005), so too will characteristics that make rivals see a firm's CEO as more submissive (and hence, an easier target) or more provocative (and hence, threatens rivals to such a degree they attack). Underlying our theorizing are two-related arguments: (a) Characteristics consistent with submissive and provocative victims are present in CEOs and (b) Rivals are aware of, and base competitive attacks on, these factors.

With respect to the former point, stereotypes of CEOs may challenge the view that these people possess characteristics others perceive as more submissive given the liabilities of such factors in career progression. At the same time, CEOs may be typecast as universally more provocative since some requisite level of characteristics others tend to perceive in this light (e.g., aggressiveness; hubris) may be necessary to advance through the ranks (e.g., Hiller & Hambrick, 2005; Rosenthal & Pittinsky, 2006). Stereotypical views aside, evidence suggests CEOs not only possess psychological, behavioral, and social characteristics consistent with both submissive and provocative victims but also exhibit variance in the degree to which they do so. For example, Finkelstein et al. (2009) note how scholars have long labeled executives as risk-averse and timid on one hand (consistent with submissive victims) while acknowledging elements that make them bold and self-aggrandizing on the other (consistent with provocative victims). As an illustration, in contrasting Tech CEOs Eric Schmidt of Google and Steve Jobs of Apple, body language scholars and industry commentators labeled the former "too nice" and even "scared" while deeming the latter as "ruthless" and "cutthroat" (Gobry, 2010; Manjoo, 2010). Both the Finkelstein et al. (2009) review of executive scholarship and the forgoing example suggest the presence of characteristics typical of both types of victims in the CEO position—the CEO perceived as "too nice to fight back" who is likely to be seen by others as more submissive and the interpersonally alienating CEO who provokes others into attacking. Moreover, even if executives are on average less submissive and more provocative than the general population, as with other characteristics in which executives differ from the mean individual (e.g., lower humility; higher narcissism; Hiller & Hambrick, 2005), evidence suggests CEOs exhibit significant variance in a number of characteristics that others tend to perceive as submissive and provocative. For example, executives vary in their self-confidence (Chen, Crossland, & Luo, 2015) and have interpersonal styles matching both submissive and provocative victim typologies (Aquino, 2000).

Regarding whether CEOs are aware of and act upon perceptions of their counterparts, practical evidence and theoretical logic lead us to expect that they do. Practically speaking, Fuld's (2014) interviews asking executives if they gather information about rival executives and use the perceptions they form in developing strategies to engage those executives' firms suggests they do. Biographical accounts support Fuld's evidence as well (e.g., Ilian, 2016). Moreover, while CEOs often come to know each other through personal interactions (e.g., trade shows; common educational affiliation or career progressions) and glean information through third-party accounts (e.g., common suppliers, customers, and acquaintances), there is no shortage of possible sources from which to draw information about other executives. Indeed, media accounts of CEOs are plentiful, executives are increasingly taking to social media to express opinions, and firms often produce information about their

executives. Collectively, these sources offer a number of direct and indirect means by which CEOs may form perceptions of counterparts (cf. Meier & Miethe, 1993).

Beyond the reality that executives are gathering information about rivals and using it in decisions about how to engage those rivals' firms (Fuld, 2014; Ilian, 2016), there are theoretical reasons to expect CEOs to act in these ways as well. A central tenet of competitive dynamics theorizing is that executives gather information about their counterparts and base strategic actions accordingly (e.g., Gao et al., 2017; Smith et al., 2005). Social comparison theories offer complementary rationale, suggesting CEOs perceive themselves as part of an elite group who not only pay attention to and socialize with others in the group but also compare themselves to and compete with each other (Finkelstein et al., 2009). Moreover, in uncertain and complex decision-making situations, CEOs attempt to reduce cognitive effort through the use of heuristics and the evaluation of easily obtained information (Hitt & Tyler, 1991). In this way, victim characteristic of competitor CEOs is an easily substituted piece of information to simplify strategic decisions. What is more, as Aquino and Lamertz note (2004, p. 1026), given attacks on others "can be found at all levels of the organization," not to mention society at large, "there is no reason to assume" that the mechanisms of victimization are restricted to any given population or setting. Extending this logic, there is reason to assume victimization will play out in CEOs as well.

Of course, the context of business firms and CEOs is different than criminal behavior, schoolyard bullying, or targeting coworkers. Yet, victimization shares commonalities across contexts that lead us to think we will observe similar attacks being directed at CEOs and the firms' they lead. First, the majority of victimization occurs on unknowing victims who suffer various attacks like verbal confrontation, sabotage, and even withholding resources (e.g., Jensen et al., 2014). Similarly, victimized CEOs may be unaware they are perceived as more submissive or more provocative and perpetrating CEOs have a myriad of ways to attack rival firms. Akin to the rarity of physical attack and murder, then, CEOs may be unlikely to try a hostile takeover simply because another CEO is more submissive or more provocative but can attack in many ways such as pricing actions, product introductions, and marketing campaigns as well as entry to new markets (Upson et al., 2012). Second, victimology research shows that attacks occur from both intimate and relatively unknown attackers as well as that seemingly innocuous characteristics affect how others perceive an eventual victim and precipitate attack (Curtis, 1974; Meier & Miethe, 1993). As such, a CEO may not need to know a counterpart well to form and act upon perceptions with an attack. Finally, as with attacking a submissive victim who is an easy target or reacting to the threat of a provocateur, attacking rivals offers CEOs both a means to improve positioning and/or profit (e.g., acquiring rivals' market share; reducing their anticipated sales; improving relative performance; Chen, 1996; Chen et al., 2010). Attacks also offer opportunities to retaliate or eliminate threats (Chen & Miller, 2012) stemming from rivals perceived as more provocative. Taken together, we believe theory and support evidence suggests it is reasonable to expect that CEOs assess their counterparts and react to the perceptions they form and there are various means to do so (e.g., price wars, market entry; Porter, 1980).

Consistent with theories of victimization, we expect that firms led by CEOs who rivals perceive as more submissive will be seen as particularly unwilling or unable to respond to rivals' competitive attacks directed at their firms (Olweus, 1978, 2003). If rivals perceive a focal firm's CEO as more submissive and hence, less willing or able to respond to attacks, those rivals will have less fear the CEO will attempt to counter or to do so in ways that might damage the attacking firm. For example, more submissive CEOs may be seen as unlikely to respond to a price cut directed at their firms or expected to react in particularly meek fashion. Attacks on firms led by such individuals, then, pose little threat to the attacking firm and provide greater prospects for strategic advancements without the

fear of reprisal. As such, when rivals' look for ways to improve their relative position, firms with CEOs they perceive as more submissive are likely seen as particularly attractive targets of competitive attacks (i.e., are sought out as easier marks or targets; Olweus, 1978, 2003). Thus, as a firm's CEO is perceived as more submissive, rivals are motivated to exploit the perception that the more submissive CEO will be less willing or able to respond and direct competitive attacks at that firm.

Hypothesis (H1): *Perceptions of CEO submissiveness will relate positively to attacks on the CEO's firm.*

Similarly, we expect there are two reasons why a firm led by a CEO perceived by others as more provocative will be subject to more attacks. First, more provocative individuals are attacked by those whom they provoke in an effort for those others to restore their view of what "ought to be" (e.g., Aquino & Bradfield, 2000). In this way, attackers are motivated to both "get even" for perceived provocations (e.g., Andersson & Pearson, 1999; Aquino & Bommer, 2003) as well as affect the source of provocation in such a way as to alter the offending behavior (Olweus, 1978). Like attacks on more provocative victims in other settings, attacks on more provocative CEOs offer rivals both an outlet for their negative emotions (i.e., a chance at retribution by responding to provocation with an attack) and a means to bring about their own view of how their counterparts should act (Aquino et al., 1999; Aquino & Lamertz, 2004; Jensen et al., 2014; Kim & Glomb, 2010, 2014). For example, more provocative CEOs may be seen as lacking decorum expected from executives and need to be "sent a message" to change their ways, prompting rivals to use various attacks (e.g., advertising battles; market entry) in an effort to do so. Moreover, as a CEO is perceived as more provocative, rivals not only retaliate with attacks but also attempt to elicit changes to the provocative behavior toward what they deem as appropriate, increasing the attacks the CEO's firm faces.

Second, more provocative individuals threaten others' relative standing or security, provoking attacks out of self-preservation (i.e., to "save face" in their own other others' eyes and/or to reduce or remove peril; Aquino & Lamertz, 2004). When rivals perceive a CEO as threatening to their relative standing or sense of security in the competitive landscape, they are likely motivated to direct competitive attacks at the provocateur's firm as well. Attacking a perceived threat offers CEOs a means to prove their mettle to both peers and themselves. At the same time, seizing the initiative and attacking a provocative rival can help neutralize or even eliminate a perceived danger to a CEO's firm, and by extension, him or herself given personal wealth and employment prospects are tied to the firms they lead (Eisenhardt, 1989). As such, there are social (i.e., save face) as well as both competitive and personal (i.e., preempt threats) reasons why rivals can be expected to attack the firms of CEOs they perceive as more threatening.

Moreover, although evidence suggests people perceived as more threatening are subject to more attacks across a number of settings, there are reasons to expect the desire to "save face" and preempt threats by attacking the source are particularly apparent in the context of CEOs. Executives are particularly sensitive to social comparison (e.g., Finkelstein et al., 2009; Wade, Porac, Pollock, & Graffin, 2006). As such, ensuring threats to their social standing are eradicated is likely particularly important for executives. At the same time, unlike other contexts where avoiding an altercation with a provocateur (i.e., flight) may be favorable to attacking (i.e., fight), options to flee perceived provocateurs are limited for business firms. Indeed, a firm cannot simply exit a market or industry even if such a move is desirable (Porter, 1980) and doing so without proper justification is likely to place the CEO's job in jeopardy. Even the meekest of CEOs may both have and see limited options except to respond to perceived provocation by attacking. In essence, CEOs who perceive a threat may be "backed into a

corner" and thus be attacked or attack. Given limited choices, CEOs who perceive a threat may be particularly apt to attack in effort to eliminate the threat.

Taken together, since CEOs who threaten rivals to a greater extent provoke more attacks on their firms as means of reprisal and behavior modification as well as to restore relative standing or security, we expect a positive relationship between others' perceptions of the provocativeness of a firm's CEO and the number of attacks rivals direct at the firm.

Hypothesis (H2): *Perceptions of CEO provocativeness will relate positively to attacks on the CEO's firm.*

3 | METHODS

For hypotheses testing, we use a sample of Fortune 500 CEOs from 2000 to 2016 (the first and most recent years with data available in RavenPack, a database we use to measure competitive actions). For temporal spacing, we measure all independent variables in the year t and dependent variables in the year $t + 1$. As we detail below, we use a videometric methodology to assess the degree to which CEOs are perceived as more submissive or more provocative (Hill et al., 2019; Petrenko et al., 2016). As such, we use only CEOs for whom we can locate publicly available videos amenable for this method and we include all years the focal CEO held the position in the focal firm. In addition to RavenPack and videoographic data, we draw data from Factiva, Compustat, and ExecuComp. Our final sample consists of 102 CEOs across 718 firm years where complete data is available on all study variables.

3.1 | Measures

3.1.1 | Independent variables

We employ a videometric methodology using third-party perceptions of CEO submissiveness and CEO provocativeness as assessed on psychometrically validated instruments (Hill et al., 2019; Petrenko et al., 2016; see also Gupta & Misangyi, 2018). Videometric measurement presents multiple benefits. First and foremost, the approach is consistent with our theorizing about how others' views of a CEO precipitate actions toward the CEO's firm and with victimization research suggesting attackers' can form and act upon remote observations of victims (Meier & Miethe, 1993). Second, this unobtrusive method avoids confounds of social desirability and nonresponse bias common to surveying executives (Cycyota & Harrison, 2002, 2006) and instead uses third-party assessments which research suggests likely have greater operational validity (Oh, Wang, & Mount, 2011) by avoiding inflationary biases (Van Iddekinge, Raymark, & Roth, 2005). Finally, videometric methods allow the use of validated instruments, enabling assessments of measurement validity and avoiding issues with proxies to capture such characteristics (Hill, White, & Wallace, 2014; Lawrence, 1997; Priem, Lyon, & Dess, 1999).

We leverage publicly available videos of CEOs drawn from online sources in 2017, identifying video segments or otherwise editing the videos to remove potentially biasing information (e.g., name or title of CEO or firm). For example, to guard against the possibility raters would capture aspects other than the CEO, we avoid clips in which potentially confounding aspects (e.g., firm performance; reputation) and potentially stigmatizing events (e.g., job layoffs; environmental disasters) are discussed. We also edit video segments to exclude interviewers, other individuals, and camera shots not focused on the CEO. Petrenko et al. (2016) and Hill et al. (2019) analyzed varying lengths of videos

and find improvements in validity stop at a video length of approximately 2 min 30 s. We specify the same approximate video length, with variation only to avoid video segments ending with a CEO in mid-sentence (see also Gupta & Misangyi, 2018). Two doctoral students experienced in assessment and blind to our hypotheses served as raters and were compensated for their services (Hill et al., 2019). Each rater assessed each CEO using a 7-point Likert scale on the respective instrument and responses of two raters, which exhibited significant correlation, were averaged to arrive at final measures.

We use the Interpersonal Adjective Scales (Wiggins, 1979) to capture perceptions of CEO submissiveness and provocativeness. Specifically, we assess submissiveness with adjectives corresponding to an unassured-submissive interpersonal style (scale HI) and provocativeness with adjectives capturing “a blend of dominance and hostility” (scale BC; Markey & Markey, 2009, p. 352), which, as Aquino and Byron (2002, p. 73) note, are “consistent with the provocative victim type.” Our measures of *CEO submissiveness* and *CEO provocativeness* show sound reliability ($\alpha > 0.90$) while confirmatory factor analyses suggest the items exhibit significant loadings on the specified factor. For robustness, we test both the original adjectives as well as a reduced set adapted from Wiggins, Trapnell, and Phillips (1988), with findings consistent across both approaches. As research suggests CEO traits are highly consistent over time, we treat these independent variables as invariant (Gupta & Misangyi, 2018; Hill et al., 2019; Petrenko et al., 2016). To test whether our treatment of these characteristics as time invariant is valid, we used the same procedures as outlined above to collect ratings on a set of videos filmed in two different years, at least 3 years apart, for 44 CEOs in our sample. We then tested whether there were significant differences between the ratings drawn from different time periods. The results of mean comparison show no significant differences for CEO submissiveness ($t = -0.60, p = 0.55$) or CEO provocativeness ($t = 0.26, p = 0.79$), supporting our treatment of perceptions of submissiveness and provocativeness as time invariant.

3.1.2 | Dependent variables

To measure competitive attacks, we use RavenPack News Analytics, a database which captures competitive actions from press releases and media sources via a patented algorithm (e.g., Connolly et al., 2017; Lin et al., 2014; Twedt, 2016). Compared to the long-used approach of manually coding competitive actions from the same sources, RavenPack improves accuracy by avoiding errors such as missing or duplicating sources. To measure attacks, we capture four actions in which the focal firm or CEO is listed as a *target* of the action: 1. *Pricing attacks* such as price cuts and price wars aimed at the focal CEO's firm; 2. *Product attacks* which include product releases within a market in which the attacking and focal CEO's firm already competes; 3. *Marketing attacks* which include promotional actions referencing the focal CEO's firm (e.g., comparing or discussing features of the firm or its' products and/or services); and 4. *Expansion attacks* which involve entry, or stated intent to enter, the product or geographic markets where the attacking firm does not compete but the focal CEO's firm does (Upson et al., 2012).

To increase measurement precision, we take several steps. First, we use Raven Pack's relevance score to filter observations. Specifically, Raven Pack's data is not limited to keywords or simple mentions alone but instead assesses the roles focal entities (e.g., CEOs; CEOs' firms) play and assigns a relevance score from 0 to 100 based upon the degree to which a focal entity is central to the news article or press release. Hafez (2009) finds that about 80% of all news articles are low in relevance and filtering for relevance can improve the accuracy of measurement upwards of 300% while Shi, Liu, and Ho (2016) find that failing to restrict for relevance can affect results such that previously identified relationships become insignificant after removing less relevant sources. As such, we first

filter to include events with relevance scores equal to 100 to ensure the focal entity is central to the news article or press release (Dai, Parwada, & Zhang, 2015; Dang, Moshirian, & Zhang, 2015). Next, we filter for first mentions of each attack event to avoid duplicate counting of an attack. Finally, we standardize the total number of attacks by two-digit standard industrial classification (SIC) to account for differences across industries for each attack action and use the sum of each respective action directed at the focal CEO's firm in a given year.

3.1.3 | Control variables

We include a comprehensive set of control variables drawn from the extant literature to help account for factors of firms and their competitive environments that may also help predict competitive attacks directed at firms (Chen & Miller, 2012; Ketchen et al., 2004; Smith et al., 2005). To account for potential confounding effects of *CEO media prominence*, we include a control operationalized as the total number of articles in which the focal CEO was mentioned in a headline in a given year. This data was collected using Factiva and only articles appearing in prominent business media sources (e.g., the *Wall Street Journal*, *The Financial Times*, *The New York Times*, and the *Washington Post*) were counted. We winsorize this variable at the 0.05 level to reduce the effect of extreme values. To control for characteristics of the CEOs' firm which may affect the proclivity of firms to attack, we include measures of *firm size* (log of assets), *prior performance* (return on sales; results are robust to return on assets as well), and *diversification* (entropy measure of sales by each segment; Palepu, 1985). As a firm's competitive actions and the competitive activity in an industry may drive competitive attacks by other firms, we control for each of the four competitive action measures used as dependent variables at both the firm- and industry-levels. Specifically, following our measurement of the dependent variable but using the number of times a firm engages in an action rather than is target of an action, we capture *firm pricing actions*, *firm product actions*, *firm marketing actions*, and *firm expansion actions*. We then repeat this process to account for competitive actions in the firm's industry, summing the total number of competitive actions in a firm's four-digit SIC for *industry pricing actions*, *industry product actions*, *industry marketing actions*, and *industry expansion actions*. To control for broader conditions within an industry in a given year, we include measures of munificence, dynamism, and complexity. These variables were calculated following Dess and Beard (1984) for each firm's two-digit SIC, where *environmental munificence* reflects capacity for growth (measured by the regression slope coefficient divided mean value of sales in the industry), *environmental dynamism* reflects the degree of instability (measured using the standard error of the regression divided by mean value of sales in the industry), and *environmental complexity* represents the degree of heterogeneity (measured by specialization ratio of primary business line sales scaled by firm sales and aggregated for all firms).

We also include a number of variables related to a firm's CEO to help isolate the effect of our focal variables. As CEOs serving as Chairperson of the Board of Directors (known as *CEO Duality*) may both have greater latitude of action and attract attention (wanted or not) from various stakeholders, we capture this variable with a value of one for duality and zero otherwise. Compensation serves as a comparative tool that may elicit tournament style competitive responses from those who find themselves desirous or envious of others' pay (Lazear & Rosen, 1981). As such, we control for *CEO total compensation*, measured as the log of the total compensation calculated on the basis of the Black-Scholes present value method computed in Execucomp (e.g., Ridge, Hill, & Aime, 2017; Siegel & Hambrick, 2005). CEOs' experiences affect how they view and respond to the situations they face (Finkelstein et al., 2009) and may affect how others' view the ability and willingness of a CEO to react to an attack. As such, we include controls for associated CEO experiences, including *CEO*

tenure (number of years as CEO of the focal firm) and *CEO industry experience*, measured as the total number of years ExecuComp reports the executive working in a firm in the focal firm's primary industry.¹ As *CEO gender* may give rise to stereotypes affecting how others act toward the CEO (e.g., Hill, Upadhyay, & Beekun, 2015; Lee & James, 2007), we include a dummy variable taking on a value of 1 for a male and 0 for a female. Finally, we capture time effects with the value of the focal *Year* because dummy variables were collinear with invariant CEO variables.

4 | ANALYSIS AND RESULTS

Our data is structured as an unbalanced panel with multiple observations per CEO. Following research analyzing invariant CEO characteristics (e.g., Gupta & Misangyi, 2018; Petrenko et al., 2016), we employ generalized estimating equations (GEE) (Liang & Zeger, 1986). As our dependent variables are attack counts, we specify a negative-binomial model. Descriptive statistics and correlations for our study variables appear in Table 1. Table 2 displays results of GEE analyses testing how CEO submissiveness and CEO provocativeness relate to attacks on the CEOs firm. Findings appearing in Table 2 offer support for both Hypothesis 1) and Hypothesis 2) across each measure of attacks directed at the CEO's firm. Specifically, Table 2 shows how CEO submissiveness positively and significantly associates with pricing attacks ($b = 1.23$; $p < 0.01$), product attacks ($b = 1.26$; $p < 0.01$), marketing attacks ($b = 0.90$; $p < 0.01$), and expansion attacks ($b = 0.71$; $p < 0.01$). Similarly, CEO provocativeness is significantly and positively associated with pricing attacks ($b = 0.39$; $p < 0.01$), product attacks ($b = 0.24$; $p = 0.01$), marketing attacks ($b = 0.30$; $p < 0.01$), and expansion attacks ($b = 0.46$; $p < 0.01$). Importantly, the relationships with CEO submissiveness and CEO provocativeness are significant while controlling for the competitive actions of firm and industry rivals as well as environmental conditions that may give rise to attacks. The fact that our hypothesized variables predict competitive attacks above and beyond these variables support our victimization theorizing that rivals base competitive attacks in part on perceiving a firm's CEO as being more submissive or more provocative. Moreover, our results show rivals are not responding consistently to basic demographic characteristics with competitive attacks, as CEO tenure, industry experience, and gender vary in direction and significance across models. As such, our findings do not seem to stem from rivals' portrayals of basic demographic traits in a consistent fashion but instead suggest rivals consistently base decisions to attack on deeper characterizations of CEOs, which supports our theorizing.

The results of our study also have practical meaning. Drawing on Table 2, as CEO submissiveness increases from the mean value to one standard deviation above the mean, attacks on the CEO's firm rise as follows: pricing and product attacks nearly double while marketing and expansion attacks increase about 64 and 48%, respectively. As CEO provocativeness increases one standard deviation from the mean, the rise in attacks is smaller but also meaningful: pricing, product, marketing, and expansion attacks increase about 50, 27, 35, and 58%, respectively. As a single competitive attack or series of attacks can often have negative ramifications for firms directly while also triggering firms to respond by dedicating valuable resources that could otherwise be directed elsewhere toward counter-attacking, increasing attacks anywhere from about 25 to 100% likely has substantial implications for firms.

¹CEO age, tenure, experience, and industry experience may capture partially redundant constructs and create collinearity issues. As such, we repeat analyses with various combinations of these variables and find consistent results for our focal relationships. To avoid collinearity issues, we retain CEO tenure and CEO industry experience in our final models because of the aforementioned variables, these two were the strongest predictors of rivals' attacks on firms in our analyses.

TABLE 1 Descriptive statistics and correlation matrix for study variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Pricing attacks	2.93	8.82																									
2. Product attacks	83.73	162.73	.74																								
3. Marketing attacks	5.46	12.51	.75	.75																							
4. Expansion attacks	1.88	5.23	.66	.62	.82																						
5. CEO submissiveness	2.42	0.55	.06	.14	.03	.01																					
6. CEO provocativeness	2.89	1.00	.01	-.06	.01	.03	-.15																				
7. CEO media prominence	23.10	36.28	.05	.17	.12	.10	-.10	-.20																			
8. Firm size	10.82	1.55	.05	.17	.10	.08	.03	-.24	.42																		
9. Prior performance	0.09	0.11	.15	.13	.15	.13	.00	-.04	.07	.22																	
10. Diversification	0.67	0.75	.15	.14	.13	.11	.04	-.12	.12	.11	.04																
11. Firm pricing actions	1.17	5.25	.03	.17	.07	.07	-.06	-.01	.06	.14	.05	-.11															
12. Firm product actions	30.32	50.87	.34	.53	.40	.29	-.02	-.15	.29	.30	.13	.13	.58														
13. Firm marketing actions	2.01	5.96	.10	.26	.19	.15	-.10	-.10	.29	.16	.15	-.11	.61	.57													
14. Firm expansion actions	0.74	2.54	.09	.18	.14	.15	-.05	-.04	.17	.14	.09	-.10	.55	.47	.64												
15. Industry pricing actions	1.71	5.96	.13	.27	.17	.16	-.03	-.02	.12	.20	.07	-.11	.93	.65	.58	.54											
16. Industry product actions	51.83	90.39	.38	.52	.46	.38	.10	-.13	.35	.36	.17	.08	.40	.81	.50	.42	.59										
17. Industry marketing actions	3.42	9.03	.20	.31	.40	.31	.02	-.09	.24	.22	.19	-.04	.42	.59	.74	.51	.54	.77									
18. Industry expansion actions	1.23	3.70	.24	.29	.34	.39	-.02	-.05	.20	.18	.12	-.05	.41	.51	.53	.81	.53	.66	.71								
19. Environmental munificence	0.00	0.00	.09	.13	.06	.05	.08	-.28	.05	.27	.13	.03	.07	.12	.07	.06	.08	.14	.08	.04							
20. Environmental dynamism	0.01	0.02	-.03	-.10	.04	-.04	-.11	.37	-.06	-.19	-.04	-.04	-.05	.04	-.04	-.02	.01	.13	-.01	-.48							
21. Environmental complexity	0.39	0.19	-.14	-.27	-.22	-.12	-.05	-.09	.18	.03	-.12	.09	.01	-.07	-.07	.05	-.02	-.09	-.11	.02	-.03	-.02					
22. CEO duality	0.73	0.45	-.07	-.13	-.10	-.10	-.06	-.20	.11	.08	.02	-.04	-.06	.03	-.03	-.05	-.04	.02	-.04	-.04	.09	-.08	.17				
23. CEO compensation	9.11	1.41	.08	.15	.11	.10	-.36	-.05	-.05	.06	.02	-.04	-.07	.07	-.06	-.14	-.07	-.13	-.21	-.15	.03	-.05	-.17	.18			
24. CEO tenure	8.48	9.51	-.05	-.04	-.06	-.05	-.08	-.08	.20	-.10	-.03	.11	-.04	-.10	-.04	.05	-.08	-.06	-.08	.01	.00	-.02	.25	.22	-.16		
25. CEO industry experience	12.43	5.69	.05	.07	.01	.00	.09	.10	-.01	.03	-.08	-.03	.02	-.03	-.05	.08	-.01	-.02	-.07	.02	.07	.03	.00	.17	.01	.56	
26. CEO gender	0.97	0.18	-.09	-.10	-.26	-.18	.16	.12	-.14	-.05	-.03	-.03	-.02	-.23	-.11	-.04	-.07	-.23	-.30	-.22	-.06	.02	.06	-.08	-.09	.10	.06

Note. *n* = 718 firm-year observations for 102 CEOs.

TABLE 2 GEE analysis. CEO submissiveness, CEO provocativeness, and competitive attacks

	Pricing attacks	Product attacks	Marketing attacks	Expansion attacks				
CEO submissiveness	1.23 (0.17)	[0.00] (0.16)	1.26 (0.16)	[0.00] (0.16)	0.90 (0.18)	[0.00]	0.71 (0.18)	[0.00]
CEO provocativeness	0.39 (0.09)	[0.00] (0.09)	0.24 (0.09)	[0.01] (0.08)	0.30 (0.08)	[0.00] (0.08)	0.46 (0.09)	[0.00]
CEO media prominence	0.00 (0.00)	[0.33] (0.00)	0.00 (0.00)	[0.45] (0.00)	0.01 (0.00)	[0.00] (0.00)	0.01 (0.00)	[0.00]
Firm size	-0.33 (0.08)	[0.00] (0.06)	0.08 (0.06)	[0.15] (0.06)	-0.14 (0.06)	[0.03] (0.06)	-0.26 (0.08)	[0.00]
Prior performance	0.36 (0.61)	[0.56] (0.38)	0.68 (0.38)	[0.08] (0.53)	-0.12 (0.53)	[0.82] (0.62)	0.54 (0.62)	[0.39]
Diversification	0.14 (0.11)	[0.20] (0.08)	-0.39 (0.08)	[0.00] (0.10)	-0.13 (0.10)	[0.16] (0.11)	0.11 (0.11)	[0.33]
Firm pricing actions	-0.24 (0.03)	[0.00] (0.03)	-0.02 (0.03)	[0.35] (0.03)	-0.01 (0.03)	[0.72] (0.04)	0.04 (0.04)	[0.25]
Firm product actions	0.02 (0.00)	[0.00] (0.00)	0.00 (0.00)	[0.20] (0.00)	0.01 (0.00)	[0.00] (0.00)	0.01 (0.00)	[0.00]
Firm marketing actions	0.04 (0.02)	[0.03] (0.02)	0.08 (0.02)	[0.00] (0.02)	-0.01 (0.02)	[0.72] (0.02)	0.03 (0.02)	[0.11]
Firm expansion actions	0.03 (0.04)	[0.46] (0.03)	0.02 (0.03)	[0.44] (0.04)	0.00 (0.04)	[0.97] (0.04)	-0.14 (0.04)	[0.00]
Industry pricing actions	0.17 (0.03)	[0.00] (0.02)	-0.01 (0.02)	[0.67] (0.03)	-0.04 (0.03)	[0.17] (0.03)	-0.07 (0.03)	[0.03]
Industry product actions	0.00 (0.00)	[0.03] (0.00)	0.01 (0.00)	[0.00] (0.00)	0.00 (0.00)	[0.02] (0.00)	0.00 (0.00)	[0.08]
Industry marketing actions	-0.03 (0.02)	[0.03] (0.01)	-0.04 (0.01)	[0.00] (0.01)	0.05 (0.01)	[0.00] (0.02)	-0.01 (0.02)	[0.47]
Industry expansion actions	-0.05 (0.03)	[0.15] (0.02)	-0.06 (0.02)	[0.01] (0.02)	-0.07 (0.03)	[0.01] (0.03)	0.09 (0.03)	[0.01]
Environmental munificence	24.27 (32.85)	[0.46] (19.31)	62.75 (19.31)	[0.00] (27.73)	23.03 (27.73)	[0.41] (35.88)	-69.72 (35.88)	[0.05]
Environmental dynamism	-6.61 (4.61)	[0.15] (3.08)	-2.15 (3.08)	[0.49] (3.93)	-5.78 (3.93)	[0.14] (4.79)	-12.19 (4.79)	[0.01]
Environmental complexity	-0.67 (0.46)	[0.15] (0.38)	-1.95 (0.38)	[0.00] (0.43)	-2.42 (0.43)	[0.00] (0.47)	0.01 (0.47)	[0.99]
CEO duality	-0.62 (0.15)	[0.00] (0.11)	-0.24 (0.11)	[0.03] (0.14)	-0.39 (0.14)	[0.00] (0.16)	-0.27 (0.16)	[0.09]
CEO compensation	0.35 (0.07)	[0.00] (0.05)	0.48 (0.05)	[0.00] (0.06)	0.36 (0.06)	[0.00] (0.08)	0.28 (0.08)	[0.00]
CEO tenure	-0.04 (0.02)	[0.03] (0.01)	0.04 (0.01)	[0.00] (0.01)	0.02 (0.01)	[0.15] (0.02)	-0.03 (0.02)	[0.04]
CEO industry experience	0.05 (0.02)	[0.01] (0.02)	-0.02 (0.02)	[0.13] (0.02)	-0.01 (0.02)	[0.42] (0.02)	0.01 (0.02)	[0.49]
CEO gender	0.09 (0.42)	[0.84] (0.41)	-0.23 (0.41)	[0.58] (0.39)	-0.54 (0.39)	[0.17] (0.44)	-0.04 (0.44)	[0.92]

TABLE 2 (Continued)

	Pricing attacks		Product attacks		Marketing attacks		Expansion attacks	
Year	0.29	[0.00]	0.25	[0.00]	0.28	[0.00]	0.40	[0.00]
	(0.03)		(0.02)		(0.02)		(0.03)	
Constant	-583.25	[0.00]	-498.45	[0.00]	-563.35	[0.00]	-806.76	[0.00]
	(52.33)		(30.45)		(42.29)		(62.82)	
χ^2	588.11	[0.00]	1,712.89	[0.00]	606.45	[0.00]	351.42	[0.00]
Change in χ^2	59.33	[0.00]	63.98	[0.00]	37.80	[0.00]	31.88	[0.00]
CEO submissiveness = CEO provocativeness	23.15	[0.00]	37.53	[0.00]	13.12	[0.00]	1.83	[0.18]

Note. $n = 718$ firm-year observations for 102 CEOs. Standard errors in parentheses; p values in square brackets to right of coefficients. Control models omitted, but Change in χ^2 assesses adding CEO submissiveness and CEO provocativeness to control model.

Coupling our findings with interviews and biographies suggesting executives are basing competitive moves on their perceptions of those in C-Suites at other firms (Fuld, 2014; Ilian, 2016) and with evidence individuals tend to gauge similar others and respond based upon their perceptions (e.g., Lazear & Rosen, 1981), we believe it is safe to say evidence supports our theorizing. As further evidence, we also find CEO Total Compensation relates positively to attacks at the .001 level of analyses in all of our models in Table 2. Consistent with victimization theorizing, this finding suggests attacks may occur when those with an otherwise desirable trait (e.g., high performance; high ability) threaten others' relative standing (here, are paid less and thus worse off), precipitating attacks (Jensen et al., 2014; Kim & Glomb, 2010, 2014).

4.1 | Robustness tests

To extend our analyses and assess the robustness of our results, we conduct various additional tests.

First, we note that we do not find a consistent pattern of results with CEO media prominence, as there is a significant relationship with marketing and expansion attacks ($p < 0.01$), but not pricing ($p = 0.33$) or product attacks ($p = 0.45$). While this finding may stem in part from limitations of capturing prominence through news accounts alone, it raises a question as to whether informational fidelity or possible jealousy over such attention affects our results. We therefore interact CEO media prominence with both CEO submissiveness and CEO provocativeness to test whether our results are stronger or weaker as a CEO is more prominent in the media. We fail to find statistically significant interactions at the 0.05 level on any attack outcome, suggesting media prominence does not affect rivals' proclivity to attack more submissive or more provocative CEOs. Beyond measurement limitations, the finding may be due in part to sampling CEO's of Fortune 500 firms (which are likely well known and attract relatively high levels of attention). Issues with context and measure aside, these results are consistent with victimization research suggesting various informational sources affect perceptions of victims (Meier & Miethe, 1993), lending credence to our assumption that CEOs have various sources from which to draw information. That is, the abundance of possible sources of information about CEOs today (e.g., personal interactions, social media, and shared acquaintances) may limit the effect of any one source (here, media) on how rivals react to perceptions of another CEO. This finding does open up questions for future research which we detail in the discussion.

Second, victimology research suggests that being seen as unable or unwilling to fight back against attacks casts victims as easier targets, being perceived as submissive may subject people to attacks more than being seen as provocative—even if the latter is still a strong predictor (Olweus, 1978, 2003). To test this logic, we compare coefficients for CEO submissiveness and CEO

provocativeness. Across three of the four types of competitive attacks, we find CEO submissiveness is a significantly stronger predictor than CEO provocativeness, as tests reject the Null hypothesis of equal effects for all attacks except expansion attacks (which is not statistically significant; $p = 0.18$). While CEO provocativeness positively relates to attacks on a CEO's firm, these results speak to perceived submissiveness as especially salient in precipitating attacks.

Third, we assess if the relationship between our focal CEO variables and attacks on the CEO's firm is mediated by the focal firm's competitive actions. To do so, we conduct a Sobel test of the corresponding firm action to each attack to assess if the action mediates our focal relationships. In each model in Table 2, we fail to find statistical support for mediation. Specifically, for pricing, product, marketing, and expansion attacks, the value of the Sobel tests assessing CEO submissiveness to focal firm action to attacks on focal firm is $p = 0.36$, 0.61, 0.17, and 0.49 while the values for CEO provocativeness for the same mediated relationships are $p = 0.59$, 0.40, 0.62, and 0.55. These results suggest the relationship with each of the four types of attacks for CEO submissiveness and CEO provocativeness is not mediated by the focal firm's competitive actions. As such, our result does not indicate CEO traits trigger a tit-for-tat whereby traits predict attacks and precipitate responses but rather, perceptions of CEO's subject firms to more attacks.

Fourth, as Hambrick (2007) notes, executive research is fraught with possible endogeneity both because of problems with unobserved variables (e.g., effects may be due to the board's desires, typically unobserved, driving executives to act rather than executives' characteristics) and because of simultaneity (here, estimates of hypothesized variables on rival attacks may be confounded by simultaneous correlation with variables controlling for firm actions). Noting inevitable confounds of omitted variables and simultaneous correlation of predictors and outcomes "puts social scientists forever in a quandary" (p. 149), Frank (2000) developed the impact threshold of a confounding variable (ITCV) to assess the degree to which such confounds "would be great enough to alter an inference with regard to a regression coefficient" (p. 150). We apply ITCV to models in Table 2, assessing thresholds with which possible confounds would need to reach to overturn our estimates. Results of ITCV suggest that to invalidate our inferences, an omitted variable would need to jointly exhibit correlation with a predictor and given outcome at a level which is not observed for any single variable in any of our models. "Assuming that we have a reasonable set of controls variables," as Hubbard, Christensen, and Graffin (2017, p. 2262) note, this finding suggests estimates in our models "are not likely driven by a correlated omitted variable." Moreover, results of ITCV indicate that to invalidate inferences for CEO submissiveness, 72.58, 75.08, 64.92, and 49.33% of estimates on pricing, product, marketing, and expansion attacks, respectively, would have to stem from bias. To invalidate estimates of CEO submissiveness, this means that, in order of models in Tables 2, 521, 539, 466, and 354 cases in our sample would have to be replaced with cases with an effect of 0. ITCV tests also suggest that to invalidate estimates of CEO provocativeness on pricing, product, marketing, and expansion attacks, 55.13, 29.70, 45.28, and 59.84% of the estimates must be due to bias; this means that 396, 213, 325, and 430 cases in our sample would have to be replaced by cases with no effect to overturn our inferences, respectively. Although "absolute standards for impact thresholds are difficult to establish" given the context of estimates differ (Larcker & Rusticus, 2010, p. 203), the fact that such large portions of our sample would have to substitute cases with effects of 0 to invalidate our estimates leads us to believe our results are not likely due to confounding variables to such an extent as to alter our inferences.

Finally, to isolate whether rivals are in fact responding to a CEO, we match RavenPack attack data (available starting in 2000) with CEO changes identified in ExecuComp where data is available and matches our test conditions. Importantly, while a prior CEO may be more or less submissive or

provocative than a successor, we are unable to accurately measure these variables across CEOs for so many observations. However, evidence of a change in attacks directed at a firm associated with a CEO change offers some support rivals are responding to a CEO at least to some degree. To capture whether there are changes in attacks associated with changes in CEOs, we calculate the absolute value of the change in each of our attack measures from the last year of a former CEO's tenure to the year of the change in CEO event (i.e., absolute value of each form of attack in year $t - 1$ minus the corresponding attack in year t) and from the year of the change in CEO event to the first year of the new CEOs tenure (i.e., absolute value of each form of attack in year t minus the corresponding attack in year $t + 1$). Using absolute values of the change in attacks allow us to determine if there is a difference in attack value (whether more or less, with the absolute value) corresponding to a change in CEO (so that higher values indicate greater changes in attacks associated with a change in CEO). To account for mid-year successions, we repeat analyses using years $t - 2$ and $t - 1$ (the last full year of the prior CEO) and years $t + 1$ and $t + 2$ (the first full year of the new CEO).

For each of the four types of attacks (i.e., pricing, product, marketing, and expansion attacks), we conduct a t -test to compare the absolute change in the number of attacks directed toward the focal firm across the aforementioned time periods. We find a significant difference associated with a change in CEO across all four types of attacks at the 0.01 level of analyses. However, we find no statistical difference in the change in total number of actions in which the focal firm engages during the same period ($t = 0.64$), suggesting new CEOs do not engage in more or fewer actions which in turn elicit changes in the number of attacks directed at their firms in response. That is, the change in attacks directed toward a firm we observe does not appear to be driven by a new CEO changing the firm's competitive action frequency which in turn elicits changes in attacks directed at the firm. Moreover, when we compare the absolute value of change in attacks directed at the focal firm from $t + 1$ to $t + 2$ to the same calculation across $t + 2$ and $t + 3$, we do not find a single statistically significant difference at the 0.05 level of significance for any of the four types of attacks directed at the firm within the new CEOs' tenure. That is, while rivals significantly change their attacks directed at a firm when there is a CEO change, there is not a similar change in attacks directed at the firm during the CEO's first full year as CEO to second full year in the role. Taken together, our analyses of changes in attacks associated with the CEO changes suggest rivals change their competitive attacks toward a firm based upon the CEO and this change in competitive attack profile persists into subsequent years of the new CEO's tenure (as indicated by lack of change in competitive attacks during periods without CEO changes). Further, the change in attacks we observe with a CEO change does not appear to be due to new CEOs changing competitive actions in turn eliciting a corresponding change in attacks on the firm.

4.2 | Interviews of executives

Our results rely on the assumption that CEOs base firm-level decisions on their perceptions of rivals. We also argue CEOs have various ways to gather information about rivals (often distal in nature), allowing a tie to our measurement approach. While victimization research and both interview (Fuld, 2014) and biographies (Ilian, 2016) offer some support of our logic, we sought to further verify our findings supporting these arguments by interviewing executives. We posed two questions to each executive: (1) based on Fuld's conclusion, we asked whether they "had gathered information about rival executives' and used this information in firm decisions" and (2) if they answered yes, we asked how they had done so.

With regard to question one, responses not only verified Fuld's (2014) summary that executives gather and use information about rivals, but reached what Glaser and Strauss (1967, p. 65) referred to

as “theoretical saturation,” meaning answers exhibited “similar instances over and over again” to such an extent we became “empirically confident” in the evidence. Indeed, each executive suggested having done just what we asked. Like Pearson Education’s CEO telling Fuld he knew a rival would avoid product development and try to poach sales people and thus developed countermeasures accordingly, one executive remarked similarly, noting the CEO of a competing firm was a “known hot-head” who would react so strongly to losing head-to-head bids that the firm had contingency plans in place to “counter the outbursts when they happen—we literally have responses canned [pre-planned] before it even occurs.” Similar to David Norton of Harrah’s telling Fuld he knew “no one else would go to the extent [his firm] did” to leverage knowledge of customer behavior, another executive noted a rival’s laziness—“this one [person] is so [extremely] lazy it is amazing – [the person] isn’t going to make changes and we just keep picking off customers one-by-one.” Other interviewees cited using perceptions of rivals’ narcissism and the associated desire to make splashy moves as well as what seemed to amount to risk aversion and/or high prevention focus where they believed a rival CEO would only act when outcomes appeared more certain. Exemplifying the latter point, one CEO commented about a rival who was “so cautious” it allowed the executive’s firm to delay moves and gather additional data since there was “no way [the rival] “moves quicker than us.” Another recalled Yoffie’s work, stating that “in a competitive climate, you need to exploit any tidbit about rivals—like Yoffie’s judo strategy thing, if you know the other [person] has some trait, you’re [foolish] if you don’t use that to your advantage” (Yoffie & Cusumano, 1999). The executive continued “the board often asks about what I think a competitor may do, and it’s often not phrased as what [competing companies] may do, but what [the CEOs’ names] may do—so I’d better know or I’m going to be [in trouble and out of a job].”

While executives noted with ubiquity that they gathered data on rivals, responses to question two illuminated various paths by which they do so. Mutual acquaintances were noted multiple times as offering insights about other executives as was drawing inferences from observing rivals and their tactics. One CEO’s comment seemed to summarize the general opinion of the interviews well: “It’s like walking down the street and judging whether you walk into a bar by what the customers outside look like and then when you go in you form snap judgements of people based upon what you see them do or how they dress—it’s the same [stuff]—I see these [rival executives] and the things they do, and I think about what they may do next. I do it all the time.” Like Watts Water Technology’s CEO telling Fuld (2014) he was “personally obsessed with” knowing about his rivals, one executive offered similar sentiments, stating “you teach getting competitor intelligence, right, we do almost anything we can to get to know our competitors—who they are, what they might do, anything.” Noting the lengths to which executives might go to gather information on each other, one noted “I am not sure it is legal,” before stating of hearing about firms that use data from credit card companies, which includes purchasers’ names and addresses, to build profiles of executives’ “debt load, purchasing behaviors, you name it. Look at what Google does with information on customers—you don’t think this is used for executives? This is big bucks we’re talking about.” As with Bob Crandall of American Airlines telling Fuld it was “like running a national intelligence network,” multiple executives noted leveraging widely available information and technology to get to know their counterparts, such as following Twitter accounts (including with “dummy” accounts so rivals did not know they were doing so) and having their staff track press releases, videos, and other documents. One executive stated “look, I don’t know [all the rivals] personally, but if there is a source of information I can use and it isn’t illegal, I’ve likely looked at it.” In sum, executives cited a wide range of tactics by which information about rivals’ is gathered.

We believe the response to our interviews further support our assumptions that executives are not only gauging each other and basing decisions off of the perceptions they form of rivals, but also doing so in a variety of indirect ways that align with our method of measuring perceptions from observations of CEOs. While our interviews may not benefit from a purely grounded approach, we nonetheless avoided priming respondents and see the answers to our open-ended questions as offering insights for our inquiry (cf. Glaser & Strauss, 1967). Taking the totality of evidence in concert, we believe our empirical analyses and interviews offer evidence suggesting executives are gathering information and forming perceptions of their counterparts and then basing competitive actions vis-à-vis those counterparts' firms accordingly.

5 | DISCUSSION

This paper builds theory and offers evidence about how rivals' perceptions of a CEO's characteristics subject the CEO's firm to more attacks. Specifically, we integrate into upper echelons and competitive dynamics theorizing the concept of victimization, providing theory and empirical evidence suggesting CEOs possessing characteristics rivals perceive as more submissive or provocative precipitate attacks toward their firms. Moreover, our interviews of acting executives support both prior research (Fuld, 2014) and our theorizing that executives base competitive decisions on the perceptions they form of their rivals. Building knowledge of how CEOs precipitate attacks on their firms advances theory in three related ways.

First, by incorporating how the perceptions of a firm's CEO affect actions directed at the CEO's firm, we offer a more socialized and comprehensive view of competitive dynamics. As "any attempt to understand aggression is insufficient without consideration of the characteristics of and behaviors enacted by people who are victimized" applies to attacks in schools and workplaces, we argue and show that the same can be said for attacks on firms; that is, there is a need to consider the characteristics of those responsible for enacting prevention and counteractions for such actions—firms' CEOs (Jensen et al., 2014, p. 297). What is more, while contentions that firms' executives should consider rivals in developing strategies has been central to competitive dynamics theorizing for some time (e.g., MacMillan, 1980, 1988; MacMillan & McCaffery, 1982; MacMillan et al., 1985), both theory regarding how this relationship unfolds and evidence as to whether or not the premise holds are lacking. Our theory and evidence, then, both offers a more complete picture of competitive attacks by addressing how perceptions of a firm's CEO affect how other firms engage the CEO's firm and provides evidence to substantiate claims that firms' competitive moves and countermoves are developed in consideration of rival executives' likely actions and reactions.

Second, we contribute to upper echelons theory by broadening the scope of the theory from firm actions as a reflection of CEO characteristics to include actions toward firms as a reflection of how others perceive those CEO characteristics. Practically speaking, we apply upper echelons theory in reverse—rather than viewing executives as perpetrators such that their characteristics affect how their firms act, we view executives as victims such that their characteristics affect how rivals act toward their firms. In this sense, we extend upper echelons theory beyond a "first-order effect" where executives' characteristics affect actions the firm initiates (both generally speaking and toward rivals specifically) to articulate a "second-order effect" such that those same characteristics affect actions initiated toward the firm as well.

Third, we broaden the scope of victimization theorizing. Expressly, we extend victimization from contexts of crime, schoolyards, and workplace incivilities (Aquino & Thau, 2009; Einarsen, 2000) to the firm level, suggesting that as the people ultimately tasked with reacting to rivals' competitive

attacks, CEOs may also be subject to victimization. Thus, we extend theories of victimization to the context of firm-level attacks and advance understanding of the contexts in which victim elements precipitate attacks.

Beyond the related advancements to theoretical understanding, there are practical implications of our research as well. First, our use of victimization in models of firm-level attacks offers theory underlying practitioners' insights about developing strategies based upon their perceptions of rival CEOs (Fuld, 2014; Ilian, 2016). Incorporating practitioner insights to management theorizing answers consistent calls for providing theory with a practical bent that both considers insights of actual managers and addresses issues of concern (cf. Hambrick, 1994; Pfeffer, 2007; Tihanyi et al., 2014). At the same time, our theory and evidence also offer implications for practice. Knowledge of victims' roles in precipitating attacks has long been used to develop intervention and prevention strategies to combat attacks across various settings; programs targeting school bullying, domestic violence, and criminal activity as well as human resource concerns such as harassment and sabotage in organizations employ insights from victimology (e.g., Aquino & Thau, 2009; Meier & Miethé, 1993). In a similar way, arming CEOs (or even other members of the board room and executive suite) with understanding about how traits others perceive as more submissive or more provocative precipitate actions against their firms, training programs can be developed to help executives both manage impressions and be considerate of the perceptions they portray. For example, CEOs who are "too nice" can be counseled to be considerate of this element while those with domineering styles that elicit responses from others can be trained to manage this characteristic (cf. Aquino, 2000).

While we develop theory focusing on CEOs being perceived as more submissive or provocative and offer evidence relating these perceptions to attacks directed at the CEO's firm, many questions remain. At the same time, there are limitations to our paper that future investigations can overcome. Taken together, we see ample opportunities to extend knowledge of executives' roles in competitive dynamics beyond what we offer in this paper. First, with respect to CEOs, research delving into which characteristics are perceived as submissive or provocative in these executives may extend understanding. Here, research may be well served to focus on characteristics extant research identifies with victimization in other contexts as well as characteristics scholars have yet to examine. Investigating the former characteristics may shed light on contextual differences while researching the latter characteristics can enhance knowledge of victimization more generally. For example, while being physically smaller consistently predicts victimization in children (Olweus, 1978, 2003), the same may not be true for all contexts. Likewise, it stands to reason some characteristics associated with victimization in schoolyards and at lower levels of organizations might not be predictive of competitive attacks on CEOs, offering important contextual insights.

A particularly salient issue for both characteristics and context has to do with perceptions of intimidation. Victimization theorizing and evidence suggests intimidation may threaten others to such an extent it provokes more attacks on those who use such techniques (Olweus, 1978, 2003). Conceivably, intimidation may be used to affect others' behaviors and at certain levels, could be beneficial to the intimidator without provoking attacks (Bolino & Turnley, 2003). At the same time, victimization logic relating intimidation to more attacks developed in contexts where physical security is threatened (e.g., bullying) and may apply somewhat differently in contexts where this is not the case. The notion that CEOs attack those who intimidate them either to prove their mettle or to neutralize the intimidator before receiving attack seems to hold logically, albeit with different forms of "saving face" and fears (e.g., fear of "harm" in bullying; fear of job or status loss in CEOs). Yet, certain elements doubtlessly differ. At the same time, verbal attacks amongst firms' decisionmakers are common and such "war of words" may be motivated much like intimidation—to be seen in a light that affects rivals'

subsequent actions (Gao et al., 2017). Taken together, identifying CEO's language usage and parsing out more specifically the timing of language, firm actions, and other variables associated with intimidation can add nuance to our understanding. Similarly, parsing out these aforementioned factors can help disentangle both intimidation and effective levels of intimidation from other forms of provocation.

Second, our focus on the CEO does not preclude a role for characteristics of other executives or even the executive group as precipitating attacks against a firm. Rather, more complex dyadic and intragroup factors within the executive suite may give rise to perceptions which act either similarly to, or in concert with, the relationships we propose. However, extending our focus beyond the CEO obfuscates the clarity of who or what precipitates attack. Thus, on a practical level, focusing on the CEO alone may eliminate confounds in empirical tests and yield a clearer explanation but research may expand knowledge of executives' roles in attacks firms face as well. Similarly, while we investigate CEOs in the Fortune 500, future research can add understanding about executives in contexts where information about rivals is likely not as plentiful. For example, do CEOs of small businesses use different informational sources and perhaps, react more or less strongly to sources such as the media? Our finding that victimization of a CEO is not affected as a CEO's media prominence rises opens questions about whether other informational sources act similarly. Investigations into particularly salient triggers of victimization of CEOs and their firms can follow research at the individual level in identifying such triggers (e.g., Jensen et al., 2014).

Third, investigating attacked firms' CEOs offers avenues to extend knowledge about drivers of competitive attacks and, at the same time, may aid understanding responses as well as escalation (or lack thereof) of competitive 'tit for tats' amongst firms. While we offer evidence that a CEO's characteristics may subject the CEO's firm to more attacks from rivals, future research can expand our understanding of attack types. Victimization may not precipitate all attacks, such as those larger in scale like hostile takeovers. Akin to victimization in workplaces attempting to uncover more detail about attack types (cf. covert versus overt incivility; Jensen et al., 2014), future research can offer insights into which types of attacks associate with victimization of CEOs. A related way is expanding on the nature of the attacks. Gao et al. (2017) develop a 2×2 matrix highlighting how attacks firms face vary in size of resources committed and complexity, and their insights offer means to understand differences in attacks firms face as well. Moreover, the data we use is aggregated both over a given year and combines all attacks on a focal firm. Insights can be gained by delving more deeply into specific firm-rival and action-counteraction dyads as well as the nature and timing of actions. For example, it may be informative to see if the type or timing of action directed at a firm are different given perceptions of a focal firm's CEO and characteristics of his or her actions. It may be that CEOs can keep rivals off balance through different patterns of actions and that different CEOs elicit different attacks given their characteristics, actions, or combinations thereof. Finally, although our arguments apply to perceptions of CEOs on a broad-level, future research can better lever CEO changes to more clearly parse out effects. Insights about preceding and successor CEOs open numerous avenues for inquiries into how perceptions of executives are formed and various other aspects of victimization that the context of CEO changes may help illuminate.

Ultimately, our paper provides a more socialized view of competitive dynamics that offers a number of contributions to extant research, and, at the same time, may confront or change existing empirical work—that is, to the degree that overlooking the role of CEOs characteristics as an explanatory variable in prior investigations constitutes an omitted variable bias, prior results may need revisiting with the more socialized model we develop. Thus, future work may also wish to return to previously held ideals and test if they hold while accounting for the theoretical logic developed in this paper

while taking advantage of continual advancements to better measure and test the focal relationships as well.

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