Three Essays on Corporate Social Responsibility: Social Threat Framing in Crowdfunding, Corporate Diversity Commitment, and Corporate Responsibility Devolvement

By

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ABSTRACT

This thesis consists of three essays on corporate social responsibility (CSR). In the first essay, I focus on a particular practice of social threat framing in crowdfunding and investigate how this framing relates to fundraising performance. Crowdfunding is an online financing tool that entrepreneurs use to raise funds for their businesses from potential investors in the general public. I attempt to find out whether social threat framing in crowdfunding proposal improves funding performance. I will also look into the factors that may make social threat framing more effective in contributing to funding success. In the second essay, I examine the impact of corporate diversity commitment. My goal is to understand the impact of corporate diversity commitment on key aspects of firm operation, beyond financial performance. First, I will look at whether diversity commitment help firms reduce reputational risk. That is, whether diversity reduces the number of concerns in managing social issues. Second, I am curious whether increased diversity commitment may augment the general sense of social responsibility for the firm such that the firms may increase CSR investment in other areas as well. I choose environmental performance as an indicator to find an answer to this inquiry. In the third essay, I aim to understand the phenomenon of corporate responsibility devolvement and explore potential mechanisms that help sustain the devolvement considering the challenges by stakeholders. There has been very little research on this industrial practice. I will define the phenomenon first, and then explore a few mechanisms that contribute to the acceptance of corporate responsibility devolvement among stakeholders.

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GENERAL INTRODUCTION

This thesis consists of three essays on corporate social responsibility (CSR). The concept of CSR is not new and the investment on CSR in the business community has been on an upward trend. The challenge of managing and integrating social issues effectively, however, has been escalating for firms at the same time, especially when social issues involve new developments in society. For example, there has been a growing number of ventures that integrate a social goal in their business at the very beginning, some of which are clearly positioned as social entrepreneurship while others are more of for-profit businesses with an integral social purpose. Many of these ventures take advantage of crowdfunding in growing their business, and they often frame their business activities explicitly around CSR (Defazio et al., 2021). Yet we remain lack of understanding how ventures can best frame social issues in their business proposals for crowdfunding. The other new development in the past few years is the quickly increased attention on equity, diversity and inclusion (EDI). Organizations of all types have been making great efforts to improve diversity such as workforce diversity, gender diversity, as well as cultural diversity (Richard et al., 2021). In managing these issues and meeting societal demands, firms, and scholarly alike, need to understand how diversity investment influences key aspects of business such as performance and reputation, and what factors may potentially strengthen or weaken the alignment between diversity and business.

In this thesis research, I aim to look into these relatively new areas of CSR and seek insights that may provide guidance to business as well as theory that informs research in this field. In particular, I will dedicate Essay 1 to explore the framing of social issues as it relates to crowdfunding success, and use Essay 2 to develop a comprehensive understanding of the impact

of diversity commitment. In addition, I develop Essay 3 to identify and theorize a phenomenon of CSR that has become increasingly controversial: a phenomenon, which I named corporate responsibility devolvement, where firms shift more of their responsibilities to customers yet sustain such a practice successfully. For example, customers often find themselves paying more on healthy food options and they become the ones to blame if they stick to unhealthy food. Though sharing responsibility between firms and customers on a product and/or service is common in industry, the dynamics on their relative portion of responsibility has received little attention. Yet, as customers become increasingly informed and vociferous, it will be important to look at how past shift of responsibility has been sustained and how some shift may be resisted more or less in the future. I hope to get the conversation going on this phenomenon by analyzing the mechanisms that contribute to the sustainability of responsibility development. Taking together, I attempt to use the three essays to highlight some new challenges of social issues management and generate new knowledge that inform firms, scholars and policy makers.

In Essay 1, I focus on a particular practice of social threat framing in crowdfunding and investigate how this framing relates to fundraising performance. Crowdfunding is an online financing tool that entrepreneurs use to raise funds for their businesses from potential investors in the general public (Anglin et al, 2018). A group of scholars have contributed to the understanding of crowdfunding ventures' framing practices with respect to social and environmental issues (Defazio et al., 2021; Maehle et al., 2021). Given the frequent use of social threat framing, I attempt to find out whether social threat framing in crowdfunding proposal improves funding performance. I will also look into the factors that may make social threat framing more effective in contributing to funding success.

In Essay 2, I examine the impact of corporate diversity commitment. Prior studies have examined the impact of diversity commitment on firm performance (Havrylyshyn et al., 2022), with some reporting a positive effect (e.g., Liu et al., 2020), while others reporting negative (Frijns et al., 2016). My goal is to examine the impact of diversity commitment on additional key measures in addition to firm performance. First, I will look at whether diversity commitment help firms reduce reputational risk. That is, whether diversity reduces the number of concerns (e.g, negative incidents and media coverage) in managing social issues and environmental issues. This relationship may sound natural, but the picture does not turn out to be straightforward as conditional factors are considered. Second, I am curious whether increased diversity commitment may augment the general sense of social responsibility for the firm such that the firms may increase CSR investment in other areas as well. I choose environmental performance as an indicator to find an answer to this inquiry.

In Essay 3, I focus on understanding the phenomenon of corporate responsibility devolvement and discover what mechanisms enable the devolvement to be sustained considering the challenges by stakeholders. There has been very little research on this industrial practice. I will define the phenomenon first, and then explore a few potential mechanisms that contribute to the acceptance of corporate responsibility devolvement among stakeholders.

Essay 1: The Impact of Social Threat Framing on Fundraising Performance: Evidence from Equity-Based Crowdfunding

ABSTRACT

In this study, I seek to investigate whether framing social issues as a societal threat influences a firm's fundraising performance in equity-based crowdfunding. Many crowdfunding proposals include some social causes either as a way to attract investors or as part of their identity or marketing positioning. I argue that social threat framing in crowdfunding proposals promotes the fundraising performance. This is because investors tend to value the prosocial cues more strongly when presented with a threat framing. I find support using a sample of 217 U.S., equity crowdfunding firms from 2015 to 2021. In addition, I examine some conditional variables for such an effect, including family involvement, firm local orientation, emotional expression in language, and analytical thinking in crowdfunding proposals. I find that, while emotional expression in language strengthens the relationship between social threat framing and fundraising performance, analytical thinking in language weakens this relationship. Also, I find that family involvement only marginally strengthens the main relationship, whereas I do not find significant moderating effect of local orientation. The implications of the findings to crowdfunding of a social cause is discussed.

Keywords:

Social threat framing, fundraising performance, equity-based crowdfunding, family involvement, locally-oriented firm, emotional expression in language, analytical thinking in language

INTRODUCTION

With growing awareness and recognition of social and environmental issues, business ventures have increasingly incorporated sustainability goals in their business plans (Winston, 2022). This trend has also become clear in crowdfunding projects. Crowdfunding is an online financing method that allows entrepreneurs to raise funds from investors (Anglin et al., 2018). Scholars have investigated the impact of sustainability values of crowdfunding campaigns on fundraising performance (Calic & Mosakowski, 2016; Maehle et al., 2021). For instance, Calic and Mosakowski (2016) find that a sustainability orientation, which reflects the degree of a firm's commitment to social and environmental goals, increases crowdfunding's funding performance. Vismara (2019) shows that entrepreneur's commitment to address a social or environment issue in crowdfunding proposal increases the number of novice investors.

Nevertheless, social objectives may be communicated in many ways in crowdfunding practice (Defazio et al., 2021; Parhankangas & Renko, 2017). For example, some ventures may frame social and environmental issues as a business opportunity (Allison et al., 2015), others may use pro-social framing to highlight their social objectives (Defazio et al., 2021). In this study, I attempt to focus on a particular type of framing – social threat framing. Social threat framing has been less covered by existing literatures on framing in crowdfunding performance, yet important. Threat indicates "a negative situation in which potential loss is likely and over which one has relatively little control" (Dutton & Kackson, 1987: 80). In my study, I refer social threat framing to a venture's practice to frame social issue as a societal threat, which may cause potential harm to people's health, public safety or the environment, within the crowdfunding proposal. Similar approaches of framing social issues have been used in crowdfunding. For

instance, to frame climate change, entrepreneurs often highlight climate-related threats and problems to motivate investors to support crowdfunding campaigns (Maehle et al., 2021).

Effective framing helps select, package, and organize information to persuade target audiences (Giorgi & Weber, 2015). It influences audiences' interpretation of events and their subsequent responses (Rhee & Fiss, 2004). A well-framed prosocial crowdfunding can increase the importance of a venture's social objective, thereby attracting potential investor's attention (Defazio et al., 2021). In particular, I aim to examine the impact of social threat framing on venture's fundraising performance within the context of equity-based crowdfunding in the U.S. market. I argue that social threat framing improves funding success by increasing the perceived importance of social issues in the minds of crowdfunding audiences. I also look at four factors that I believe moderate this relationship. Specifically, I analyze two firm-level factors, including family involvement and local orientation of business. Meanwhile, I look at the crowdfunding proposal itself, and consider two linguistic styles in proposal language, namely emotional expression and analytical thinking.

My study extends literatures on the literatures on the impact of social framing on crowdfunding performance (Allison et al., 2015; Di Pietro et al., 2020) by examining a particular framing approach – social threat framing. Further, I highlight the important role of family involvement in crowdfunding success (Cumming et al., 2019), which may indicate family business's capabilities in storytelling. Finally, my study adds nuance to social framing literatures by incorporating linguistic styles (Anglin et al., 2018; Parhankangas & Renko, 2017). In the rest of the paper, I first provide some theoretical background about crowdfunding, then develop hypotheses, test the theory, and discuss the results and contributions.

1.2 CROWDFUNDING AND SOCIAL FRAMING IN CROWDFUNDING

1.2.1 Crowdfunding for Ventures

Crowdfunding helps entrepreneurs receive about $34 billion annually, and is expected to surpass venture capital as a leading source of start-up funding (Anglin et al., 2018). There are four main types of crowdfunding, including donation-based, rewards-based, lending-based, and equity-based crowdfunding (Berns et al., 2020). These types differ in terms of the exchange relationships between fundraising ventures and investors (Berns et al., 2020).

Specifically, donation-based crowdfunding involves obtaining either in-kind or monetary donations from individuals who do not expect any form of return (Belleflamme et al., 2015). For example, campaigns raise funds to support humanitarian causes like disaster relief efforts, or medical expenses for individuals in need. Contributors make donations voluntarily, driven by their empathy and desire to help. Rewards-based crowdfunding, on the other hand, offers non-monetary rewards, such as free copies of new products, to individuals who contribute funds to the crowdfunding campaign (Mollick, 2014). It often focuses on engaging individuals with unique offerings, and creating a sense of exclusivity and excitement around the champaign (Taeuscher et al., 2021). Further, lending-based crowdfunding provides lenders with monetary compensation through fixed interest rates on their loans (Berns et al., 2020). The return tends to be more stable and certain compared with that of other types of crowdfunding (Berns et al., 2020). Lastly, equity-based crowdfunding allows investors to acquire shares in the funded ventures, making them shareholders who seek for financial returns from their investments (Ahlers et al., 2015).

Equity-based crowdfunding stands out from other types of crowdfunding as it allows entrepreneurs to raise funds by selling equity-like shares (Cumming et al., 2019). Investors often

have high expectations for the performance of equity crowdfunding ventures because investors have a financial stake in the success of the campaign (Ahlers et al., 2015; Cumming et al., 2019). If the venture performs well, the value of investor's equity increases, leading to potential capital gains. Additionally, investors may also receive dividends. As a result, investors may pay more attentions to the growth potential or likelihood of campaign success when considering investing in equity-based crowdfunding (Cumming & Groh, 2018). This further implies that different crowdfunding platforms attract investors or backers with distinct motivations and preferences (Berns et al., 2020; Kollenda, 2022).

For example, in donation-based crowdfunding, individuals typically exhibit a high interest in supporting venturers that contribute to social and environmental causes (Belleflamme et al., 2015). They are more inclined to recognize and appreciate sustainability-related goals in crowdfunding proposal. Equity-based crowdfunding, however, may encounter challenges in selling social values along with a business purpose (Van de Ven et al., 2007). As mentioned, investors are generally driven by financial motives. Consequently, it becomes important for equity-based crowdfunding ventures to employ proper framing strategies when integrating social issues into their campaigns. Doing so, venturers may effectively appeal to investors who prioritize financial returns while highlighting the social impact of the campaign.

1.2.2 Social Threat Framing in Crowdfunding

It is not uncommon that firms highlight social causes in proposed business plans (Maehle et al., 2021), and this practice of social framing has been found to improve funding performance across various crowdfunding platforms (Defazio et al., 2021; Figueroa-Armijos & Berns, 2022). For instance, Calic and Mosakowski (2016) find that presented orientation to sustainability in crowdfunding proposal increases the venture's funding performance on Kickstarter – a reward-

based crowdfunding platform. Also drawing on Kickstarter, Chan et al. (2020) find that sustainability intention mitigates the negative effects of money-related terms used in proposal on funding performance in rewards-based crowdfunding. Meanwhile, Moss et al. (2018) find crowdfunding ventures receive funds more quickly when they emphasize more on social values over economic values. In addition, Taeuscher et al. (2021) show that claimed contribution to community positively influences new ventures' fundraising performance. Finally, Rossolini et al. (2021) look at opposite framings and find that positive framing promotes the success of agri-food crowdfunding campaigns, whereas negative framing is more effective in campaigns related to clean energy and climate preservation.

Despite the growing interest in social framing in crowdfunding, little has been done about what types of social framing is more important in impressing and securing support from audiences. This is especially so for the equity-based crowdfunding (Allison et al., 2015; Vismara, 2019), as past studies linking social framing to crowdfunding mainly focus on the reward-based (Calic & Mosakowski, 2016; Chan et al., 2020), and lending-based crowdfunding platforms like Kiva (Moss et al., 2018). Different types of framing may influence how much audiences resonate with and value the prosocial cues presented in the crowdfunding narratives (Defazio et al., 2021; Figueroa-Armijos & Berns, 2021). After all, crowdfunding proposal works like an informational mechanism (Da Cruz, 2018), and it needs to guide audiences to make sense of key messages. For example, Horisch (2015) find that merely presenting an environmental orientation in the proposal without effectively addressing its importance is less likely to attract investors' attentions. Therefore, it is essential to carefully consider the framing practice to effectively engage and communicate with audiences in crowdfunding.

In this regard, social threat framing focuses on particular, or an area of, threat that presents either current or potential serious damage to society and that the proposed business activity could help solve or help ameliorate. A few examples of social threat framings in crowdfunding have been provided in the table 1 below. These examples suggest that social threat framing in crowdfunding often underscores the widespread nature of a social issue, indicating that it affects a significant portion of population. Several examples highlight the wide societal or global implication of social issues, such as economic burdens, environmental degradation, or strain on resources. Also, social threat framing explicitly outlines detrimental effects resulting from social issues, and call for immediate solutions to address those issues. Further, social threat framing often incorporates statistics or data to substantiate the negative impact of a social issue. The supporting data provides a factual basis for the framing. This may help enhance the persuasiveness of the framing to show the existence, severity, and magnitude of the social issue at hand.

Insert Table 1 about here

1.3 HYPOTHESES DEVELOPMENT

In this section, I develop the theoretical model that explains the relationship between a social threat framing and fundraising performance. The model is shown in figure 1.

Insert Figure 1 about here

1.3.1 Social Threat Framing and Fundraising Performance

I propose that the social threat framing enhances funding performance for the three main reasons. Firstly, using a social threat framing in crowdfunding proposal helps firm communicate a sense of urgency towards social and environmental issues to investors. Such urgency makes the focal issue appear legitimate to the audiences (Litrico & David, 2017). It increases the perceived importance of promoted prosocial initiatives and garnering support for the crowdfunding projects. At the same time, the threat framing, such as those emphasizing climate-related crises or a fatal disease, may create a time-sensitive environment that prompts individuals to act promptly (James et al., 2011). The time pressure may motivate individuals to contribute to the crowdfunding projects before the negative situation occurs or further deteriorates (Maehle et al., 2021). Likewise, the threat framing implies a negative situation in which a potential loss is likely to occur (Dutton & Kachson, 1987). It reinforces individuals' awareness of the issue, thereby driving them to prevent losses (Kennedy & Fiss, 2009) and support the crowdfunding project as a proactive measure.

Second, social threat framing may evoke fear-related emotions among individuals in response to the issues depicted in the crowdfunding proposal. Fear appeals have been employed in many health campaigns and charitable advertising to persuade individuals to change their behaviours (e.g., Brennan & Binney, 2010; Hastings & Stead, 2004). The goal is to elicit fear emotions about a particular issue, such as obesity, and motivate individuals to support the firm's offering or solution, like sugar-free beverages. In this regard, fear emotions trigger various coping behaviours to address a perceived threat or danger within an individual's capabilities (Witte & Allen, 2000). Additionally, fear emotions may cultivate an individual's sense of responsibility to prevent the negative outcomes, either for themselves (Atalay et al., 2022) or for

others (Vitaglione & Barnett, 2003). Therefore, fear emotions are likely to motivate investors to share the social responsibility by offering support to ventures and crowdfunding campaigns that are planning to tackle the social threat.

Therefore, I propose the following hypothesis:

H1: Social threat framing in crowdfunding is positively associated with fundraising performance.

Below, I will introduce four moderators, including family involvement, local orientation, emotional expression in language, and analytical thinking in language, that I believe may influence the relationship between social threat framing and crowdfunding performance. The inclusion of these four moderators is based on their relevance and potential impact on crowdfunding outcomes.

Family involvement and local orientation represent firm-level factors that have gained increasing attention in the CSR literatures (Mariani et al., 2023; Garner, 2017). Family involvement may amplify the impact of social threat framing due to persuasive influence of social values in engaging individuals. Further, it may be plausible that local orientation fosters a sense of shared identity and collective responsibility, making social threat framing compelling to local individuals. In addition, linguistic styles used in language can influence the attractiveness of crowdfunding projects among investors (Anglin et al., 2018). For example, Anglin et al. (2018) find that a positive linguistic style used in language enhances crowdfunding performance by signaling an entrepreneur's ability to achieve goals and fostering optimism among investors. Further, prior studies also suggest emotional tones and rational thinking in languages tend to differently influence crowdfunding performance (Patel et al., 2021). Given these insights, I aim

to understand the nuances of how social threat framing interacts with these factors to shape fundraising performance.

1.3.2 Family Involvement

Family involvement in crowdfunding refers to a venture where two or more family members serve in the (Cumming et al., 2019). Although family involvement has received less attention in crowdfunding context (Cumming et al., 2019), it holds potential significance for crowdfunding performance. Campaigns launched by family businesses are often perceived as safer investments by investors as compared those launched by nonfamily businesses (Cumming et al., 2019). Thus, I am interested to see whether family involvement may enhance or attenuate the impact of social threat framing on fundraising performance.

I propose that family involvement strengthens the effect of social threat framing on fundraising performance. Social threat framing involves storytelling: describing a threat situation and presenting a story about how the proposed business will help solve or address the social threat. Given the nature of family businesses, it is a common practice for them to incorporate story telling about their family business legacy and quality commitment in external communications such as advertising and products descriptions. Family businesses often engage in storytelling and sense-giving activities to shape and strengthen their unique identity (Berrone et al., 2012), and communicate their family traditions and values to stakeholders (Chrisman et al., 2013). Therefore, family businesses are likely to possess more experienced than nonfamily businesses in framing social issues, presenting threats, and proposing solutions, thereby making social threat framing more effective in attracting investors.

Moreover, family businesses, in addition to pursuing profits, prioritize socioemotional wealth (Zellweger et al., 2013), and value their reputation (Deephouse & Jaskiewicz, 2015). This is often demonstrated through their commitment to serving and supporting (Dyer & Whetten, 2006). As external audiences are more accustomed to family business's storytelling and have observed its support to local social issues, they are generally more receptive to a social threat framing story presented by a family business. In other words, family firms may benefit from a higher level of trust and credibility in crowdfunding with a social threat framing. Investors are more likely to be convinced that a societal threat is real, and that the issues are urgent. Furthermore, family businesses tend to have a stronger commitment to philanthropic activities than nonfamily businesses (Berrone et al., 2012). As a result, investors would have more confidence in family businesses' social and/or environmental initiatives to bring positive impacts to different stakeholders. The persuasiveness of social threat framing in crowdfunding would be increased.

Therefore, I propose the following hypothesis:

H2: Family involvement will strengthen the relationship between social threat framing and fundraising performance in crowdfunding, such that social threat framing will have stronger positive effect on fundraising performance when family involvement is high.

1.3.3 Local Orientation of Business

Local orientation of business refers to a venture's commitment to contributing to local community, such as facilitating local economy or addressing local environmental issues (Collins & Kearins, 2010). Some examples of local orientation in business also include using locally sourced materials or ingredients, hiring local employees, and manufacturing products locally

(Collins & Kearins, 2010). For example, Hawaiian Ola Brewing Inc. stated: "our mission is to encourage growth in Hawaii's agricultural economy by purchasing local ingredients … By contracting Hawaii based farmers, we are also creating more job opportunities within our community" (https://www.startengine.com/ola-brew). I would argue that local orientation strengthens the positive relationship between social threat framing and fundraising performance in crowdfunding.

Local orientation may signal a venture's commitment to social responsibility (Ben-Ner & Siemsen, 2017), which promotes the credibility of a venture's social framing in crowdfunding campaigns. The business plan presented in crowdfunding may go hand in hand with a firm's ongoing commitment to local community such as local employment. Studies also discuss the importance of localism efforts in reducing negative environmental impact (Dutta, 2017) (Rousseau et al., 2019). For instance, engaging in local sourcing and production allows firm to mitigate environmental costs associated with transportation (Ben-Ner & Siemsen, 2017; Dibrell et al., 2011). Such synergy between local orientation and a prosocial initiative in crowdfunding proposal enhances a venture's ability to effectively frame the severity of the social and environmental threat. As a result, investors and other stakeholders may be less likely to challenge a venture's storytelling in social threat framing.

For example, many crowdfunding projects include introduction of a new food or beverage. In 2022, the food and beverage segment approximately accounted for 24% share of the global crowdfunding market (Grand View Research, 2023). Consumers tend to exhibit a favorable attitude towards food and beverage products that possess characteristics associated with local orientation, such as local ingredients, local farmers, and so on (Feldman & Hamm, 2015; Garner, 2017). Food products labelled as local often convey a perception of superior

quality (Garner, 2017). Consequently, venture offering food products with a local label may utilize social threat framing by highlighting the negative outcomes with unhealthy eating habits or food safety. Venture would align with consumer's concerns about health and wellness, therefore making social threat framing more compelling and likely to attract support from investors.

Therefore, I propose the following hypothesis:

H3: Firm's local orientation w*ill strengthen the relationship between social threat framing and fundraising performance in crowdfunding, such that social threat framing will have stronger positive effect on fundraising performance when crowdfunding firms are more locally oriented.*

1.3.4 Emotional Expression in Language

The use of emotion-related words and phrases, such as "excited", "sad", "angry", and alike, is common in the crowdfunding proposal, in both video and written text presentations (Patel et al., 2021). For example, PopCom Company states that: "We're also excited to soon be able to publicly announce our cornerstone customer in the alcohol space, one of the largest wine producers and distributors on the planet …" (https://www.startengine.com/popcom). Prior studies suggest that social entrepreneurs often leverage emotional manipulation to inspire active support from their targeted audiences (Jarvis et al., 2019; Phillips & Lawrence, 2012; Tracey, 2016).

I propose that a high emotional expression in language will strengthen the relationship between a social threat framing and fundraising performance. Emotional language may intensify the emotional arousal experienced by audiences when confronted with a social threat framing.

This heightened emotional arousal can create a sense of personal connection towards the issue (Barbera-Tomas et al., 2019), increasing the likelihood of support. Moreover, it may help captivate the attention of audiences and serve as a persuasive tool, influencing the audiences' attitudes and behaviours (Jarvis et al., 2019). Research suggests that emotional appeals are effective in shaping individuals' decision-making processes and motivating them to take actions (Jarvis et al., 2019; Tracey, 2016). In this regard, emotional expression in language may reinforce the impact of social threat framing by amplifying emotional responses, such as empathy, resonation or a sense of responsibility. Audiences may then be interested and willing to support and learn more about the proposed solutions to address the social issues.

Furthermore, entrepreneurs use both verbal and visual elements in crowdfunding to convey their business ideas or highlight a key event. While visual presentations can evoke emotions to persuade supporters (Javis et al., 2019), such emotions may be complemented by the verbal texts. To make a social issue appealing, crowdfunding pitches often visually illustrate the negative impacts of the issue. For instance, the use of images to exhibit the consequences of climate change or humanitarian crises during a war helps foster a deep connection between audiences and the issue (O'Neill & Smith, 2014). However, relying on visual presentations may result in short-lived effects and appeal for the cause (Barbera-Tomas et al., 2019). Effective textual discourses with a high emotional expression would enhance the impact of visual presentations, eliciting strong emotions towards societal threats and motivating people to respond (O'neill & Nicholson-Cole, 2009). (O'neill & Nicholson-Cole, 2009).

Therefore, I propose the following hypothesis:

H4: Emotional expression in language will strengthen the relationship between social threat framing in crowdfunding and fundraising performance, such that social threat framing

will have stronger positive effect on fundraising performance when emotional expression in language is high.

1.3.5 Analytical Thinking in Language

Analytical thinking in language refers to the extent to which entrepreneurs use words or phrases that aim to foster formal, rational, and logical thinking patterns (Pennebaker et al., 2015). I propose that an analytical thinking in language weakens the relationship between a social threat framing and the fundraising performance. When audiences encounter language that indicates high analytical thinking, they are more likely to be guided by rationality over emotions or perceptions (Patel et al., 2021). That is, audiences are inclined to evaluate the crowdfunding narrative from a logical standpoint rather than being swayed by sensory experiences or emotional cues. Patel et al. (2021) show that using more logical and rational language leads to detrimental effects on the relationship between image-based rhetoric and crowdfunding performance. Image-based rhetoric evokes people's perceptions and emotions with the vivid imagery in a scenario (Patel et al., 2021), aligning with the approach often employed in social threat framing. Therefore, the impact of social threat framing may be compromised, as analytical thinking in language reduces audiences' resonance with or perception for the urgency and severity of societal threat.

Furthermore, analytical thinking in language primarily aims at clarifying and improving understanding of crowdfunding narrative, instead of persuasion. Although an enhanced understanding might result in positive attitudes, an excessive emphasis on logic and reasoning may diminish persuasion by triggering heightened scrutiny (Petty & Brinol, 2015). As a result, the effectiveness of social threat framing in persuading potential investors may be reduced. Moreover, language that fosters formal thinking patterns is often perceived as cold and less

personal (Pennebaker et al., 2015), which can, in turn, create the psychological distance between audiences and the crowdfunding campaign (Parhankangas & Renko, 2017). This psychological distance may diminish the personal involvement of audiences with the crowdfunding proposal. Consequently, it would be more challenging for social threat framing to evoke resonance and engagement when discussing social issues.

Therefore, I propose the following hypothesis:

H5: Analytical thinking in language will weaken the relationship between social threat framing in crowdfunding and fundraising performance, such that social threat framing will have weaker effect on fundraising performance when analytical thinking in language is high.

1.4 METHODOLOGY

1.4.1 Data and Sample

My initial sample comprises 244 equity-based crowdfunding ventures launched on Startengine from it was founded in 2015 through March 2021. Startengine is a typical equity-based crowdfunding website platform in the U.S., and has obtained approximately $10.5 million from more than 950,000 investors to date (Burke, 2022). In my study, I look at the sustainability-oriented firms who indicate their commitments to provide social and/or environmental issues in the crowdfunding proposals (Calic & Mosakowski, 2016; Parhankangas & Renko, 2017). Among 244 ventures, 75 have adopted a social threat framing practice to frame social issues as a societal threat in their crowdfunding proposal. I dropped 27 firms that have missing values in measures of dependent variable – fundraising performance, which results in a total of 217 firms from 2015 to 2021 in my sample.

1.4.2 Measures

Dependent Variable

Fundraising performance. To measure fundraising performance, I follow previous literatures on crowdfunding (e.g., Anglin et al., 2018; Belleflamme et al., 2014) and adopt two measures, which are total amount raised and number of investors. Total amount raised is measured by total funds that a crowdfunding project has raised until the end of its campaign. These values are winsorized at the 0.5 and 99.5 percentiles to alleviate potential effects of outliers. The values are then log transformed to address skewness. Number of investors is measured by counting how many individuals support a project by the end of its campaign period. These values are also winsorized, and log transformed. Only one value of total amount raised is changed after being winsorized.

Independent Variable

Social threat framing. The data for the independent variable is based on mined texts, including both written texts and video transcripts, in each sampled crowdfunding project. I operationalize social threat framing with a dichotomous variable assessing whether or not a firm presents and discusses a negative situation (a societal threat) to frame social issues in crowdfunding proposal. I focus on the information related to a danger, crisis, or harm, either currently existing or gradually emerging, that will befall individuals and/or the environment.

The variable is coded as 1 if firm uses social threat framing in the crowdfunding proposal, and 0 otherwise. Thus, the value of 0 indicates that the firm only stated its commitment in sustainability initiatives without addressing any negative situations (threats). For example, in the crowdfunding context, ventures may only indicate their contribution claims to

make donations or provide benefits to community (Fisher et al., 2017; Taeuscher et al., 2021). Likewise, some firms only indicate that their green technologies or innovations are to conserve energy consumption, or to protect the environment. In these cases, I do not observe any negative situations or threats that could generate losses had appeared in the proposal.

Moderating Variables

Family involvement. I implement a dummy variable: family involvement equals to 1, and 0 otherwise. I go to each crowdfunding's website and view team section that has information of all individuals in top management team. Following the prior literatures (e.g., Cumming et al., 2019; Kotlar et al., 2018), family involvement refers to two or more members who have the same last name in crowdfunding firm's top management team.

Local orientation of business. I also implement a dummy variable: local orientation equals to 1, and 0 otherwise. The value 1 indicates that a firm shows a commitment to local community, such as promoting local economy (e.g., support local farmers, hire local employees, etc.), or addressing local social issues in crowdfunding proposal.

Emotional expression in language. I operationalize emotional expression in language by using a computer-aided text analysis software. I extract both spoken and written texts from the crowdfunding website and analyze these textual data with LIWC (i.e., Linguistic Inquiry and Word Count) software package. LIWC analyzes textual data by counting the frequency of words that are used in the text based on pre-determined linguistic categories. It has been used in prior entrepreneurial and management literatures (e.g., Parhankangas & Renko, 2017; Siganos et al., 2017). Emotional expression in language is measured using the LIWC category that assesses both positive and negative emotion tone dimensions of the text. The variable puts the two

dimensions into a single summary variable assessing the overall level of emotion-related words use in the text.

Analytical thinking in language. This variable is also measured through LIWC. Analytical thinking in language captures a degree to which people use words that suggest formal, logical, and hierarchical thinking patterns (Pennebaker et al., 2015). A high score indicates more formal and reasoning skills in language, whereas a low score indicates the language use is more intuitive and personal.

Both emotional expression in language and analytical thinking in language are mean-centered to construct the interaction terms with social threat framing, respectively. This can help account for the potential multicollinearity (Raffaelli & Glynn, 2014). Also, the mean-centering aids in the interpretation of the moderating effect (Nalick et al., 2019). I set the baseline reference point at the mean value of the moderator.

Control Variable

Consistent with previous studies, I include a group of control variables that are related to firm-specific and offering-related characteristics that may influence fundraising performance.

Firm age is measured by counting the number of years since crowdfunding firm is founded until the date when firm launches the crowdfunding campaign.

Firm size is measured with a categorical variable that represents the number of employees working for crowdfunding firm. Specifically, the value takes 1 if the firm has 1 to 10 employees, 2 if it has 11 to 50 employees, and 3 if it has more than 50 employees (Jin et al., 2022). Firm age and firm size may signal that firm has more experiences or capabilities to reach its goals, thus influencing investors' decisions to make investments.

Prior funding experience. A firm's past successful funding record may influence investors' perceptions of firm. I thus control for prior funding experience by using a binary variable coded 1 if firm has received any prior funding, and 0 otherwise. I obtain such information of firm's prior funding activities from the Crunchbase dataset. It is a database that records financing history of start-up firms, such as venture capital funds, crowdfunding, and so forth.

Offering percentage. I control for the offering percentage, which is the portion of a venture's equity being offered to investors through the crowdfunding platform. Offering percentage represents the ownership stake that is made available to investors who invest in the project. It is an important aspect in crowdfunding as it determines the level of ownership or return on investment that investors will receive if the business is successful. It can influence investors' decisions and overall interest in participating in the crowdfunding campaign.

Moreover, I control for firm's **total revenue** to account for the level of sales made by firm each year. I also control for crowdfunding campaign's **funding target** in order to account for possible effects of funding policies. To do so, I collect data of these variables from the offering documents/details, which are available on crowdfunding website. These two variables are winsorized and log transformed to account for outliers and skewness. In each variable, two values are changed after being winsorized.

Additionally, I control for variables representing CEO's demographic characteristics, namely **CEO race**, **Team race**, and **CEO gender**. I classify CEO race and team race into five categories including White, African American, American Indian or Alaska Native, Asian and Native Hawaiian, or other Pacific Islander by following the U.S. Census Bureau's definition (Jin et al., 2022). To do so, I visit crowdfunding website and assess photo and last name of each

CEO. CEO race is coded as "1" if CEO is classified as White, and "0" is CEO is a racial minority (i.e., non-White). Previous studies conclude that CEO race and gender influence the crowdfunding's performance, respectively (e.g., Anglin et al., 2018; Freeland & Keister, 2016). Likewise, team race is the number of members who are racial minorities (i.e., non-White) in the top management team. Further, CEO gender is coded "1" for the firm that is led by a male, and "0" otherwise.

Moreover, I control for **industry dummies** and **year dummies**. I classify firms into 10 industries based on Standard Industrial Classification (SIC) codes. Due to the limited sample size in this study, the distribution of ventures across industries is uneven. Certain industries have a small number of ventures. So, I drop the industries that only contain less than 10 firms. I include five industry dummies that account for most of ventures in my sample to control for the impact of industry on fundraising performance. These included five industries are the agriculture, forestry & fishing industry, the manufacturing industry, the transportation & public utilities industry, the service industry, and the public administration industry. In particular, the manufacturing industry comprises the highest number of ventures, totaling 118, followed by the service industry that has 56 ventures. Finally, my sample is from 2015 to 2021, I use five-year dummies to account for the potential year effect on fundraising performance.

1.4.3 Model Specification

The data is a cross-sectional dataset. I use Stata as statistical analysis package, and run Ordinary Least Squares (OLS) regression with heteroskedasticity consistent standard errors to examine my proposed hypotheses. OLS regression is well-suited for analyzing the association between independent variable and dependent variable when dealing with a cross-sectional dataset (e.g., Deephouse & Jaskiewicz, 2013). I have two continuous variables, including

number of investors and total amount raised, as proxies of dependent variable – fundraising performance. I observe the changes in the fundraising performance associated with changes in social threat framing while controlling for other potential confounding factors in my study. Since the maximum variance inflation factor obtained in any of the regression analyses is below the suggested benchmark of 3, multicollinearity is not a concern (Cohen et al., 2014). To further illustrate, the model to test the main relationship between social threat framing and fundraising performance is shown below:

$$\gamma_I = \alpha + \beta_1 \text{Social threat framing}_i + \beta_2 \text{Moderators}_i + \beta_3 \text{Social threat framing}_i \times \text{Moderators}_i + \beta_4 \text{Controls}_i + \varepsilon_i$$

In this equation, γ_I represent dependent variables, which are number of investors and total amount raised. α is the intercept. β_1 is the coefficient of independent variable – social threat framing. β_2 is the coefficient of moderators, including family involvement, local orientation, emotional expression in language, and analytical thinking in language. β_3 is the coefficient of interaction between social threat framing and moderators. β_4 is the coefficient of control variables. Lastly, ε_I represents the residual error term that captures the unexplained variation in fundraising performance.

1.5 RESULTS

Table 2 provides the original values of descriptive statistics for the main variables. Table 2.1 provides the descriptive statistics of the transformed values that are used in regression analysis. Specifically, in table 2, the average number of investors for the crowdfunding venturers in my sample is around 871, with a standard deviation of approximately 1,528. This indicates that the number of investors varies widely around the average value. Some ventures

may have relatively fewer investors, while others may have substantially more. In addition, the average amount of funding raised is around 936,230 U.S. dollars, with a standard deviation of about 2,581,737 U.S. dollars. There is also a considerable spread in the amounts raised by the ventures in my sample. Some ventures may secure lower funding, whereas others can raise significantly larger amounts.

Insert Table 2 about here

Furthermore, the average venture age is about 6.3. In my sample, there are 145 ventures launching their current crowdfunding campaigns with less than six years in business. The relatively young firm age implies that crowdfunding is being utilized as an early-stage financing method for many ventures. Moreover, around 31% of ventures use social threat framing practices in their crowdfunding proposals. Also, there are about 34% of ventures with family involvement, and 11% of ventures that indicate local orientations in the proposal. Specifically, among ventures with family involvement, approximately 29% employ social threat framing, while among ventures without family involvement, the usage of social threat framing increases to about 32%. In addition, almost half of the ventures (46%) have at least one funding experience prior to launching their current campaigns. In terms of the top management team, the majority of founders are white (86%) and male (90%) entrepreneurs in my sample.

In table 2.1, as mentioned earlier, two measures of dependent variable are winsorized and log transformed. Number of investors has a mean of 5,79 and a standard deviation of 1.48. Amounts raised has a mean of 12.45 and a standard deviation of 1.57. Furthermore, both emotional expression in language and analytical thinking in language are mean-centered. In particularly, venturers exhibit a higher degree of variability in emotional expression (with a

standard deviation of 17.25) compared to the variability observed in analytical thinking in language (with a standard deviation of 4.21).

Insert Table 2.1 about here

Table 3 provides correlations among main variables used in the study. Number of investors and total amount raised are positively and significantly correlated at $p < 0.001$. Ventures that can raise large amounts of funding tend to exhibit a high number of investors in crowdfunding campaigns. Moreover, social threat framing is positively correlated with both number of investors and amounts raised. Especially, its correlation with amounts raised is significant at $p < 0.05$. Further, family involvement does not significantly correlate with fundraising performance, whereas local orientation exhibits positive and significant correlations. Finally, emotional expression in language exhibits a negative and significant correlation with fundraising performance. However, analytical thinking in language does not show any significant correlation. So, it is evident that main variables in my study have distinct correlations with the dependent variable. It is worth further investigating the relationship between variables proposed in each hypothesis.

Insert Table 3 about here

Table 4 presents the results of all hypotheses testing by using "number of investors" as the dependent variable. Hypothesis 1 predicts that social threat framing positively influences fundraising performance. As shown in model 5, the main effect of the independent variable (i.e., social threat framing) is positive but only marginally significant in predicting the number of investors ($b = 6.95$, $p < 0.10$) after including all interaction effects and control variables.

Hypothesis 2 proposes that family involvement strengthens the positive relationship between social threat framing and fundraising performance. The joint effect of social threat framing and family involvement is positive and significant in predicting the number of investors (b = 0.85, p < 0.05). Hypothesis 3 proposes that local orientation strengthens the positive relationship between social threat framing and fundraising performance. However, I unfortunately do not find any significant joint effect of social threat framing and local orientation (b = -0.12, p > 0.1).

Furthermore, hypothesis 4 proposes that emotional expression in language strengthens the positive relationship between social threat framing and fundraising performance. I find a positive and significant joint effect of social threat framing and emotional expression in language on the number of investors (b = 0.02, p < 0.05). Finally, hypothesis 5 proposes that analytical thinking in language weakens the positive impact of social threat framing on fundraising performance. As expected, I find a negative and significant joint effect of social threat framing and analytic thinking in language on the number of investors (b = -0.09, p < 0.05).

Insert Table 4 about here

Table 5 presents the results of all hypotheses testing by using "amount raised" as the dependent variable. Overall, the results are consistent with those in table 4, except for the main relationship between social threat framing and fundraising performance. As shown in model 5, I find that social threat framing significantly increases total amount raised (b = 9.18, p < 0.05). Moreover, I show that the joint effect of social threat framing and family involvement on total amount raised is positive and significant (b = 0.87, p < 0.05). Nevertheless, I still do not find any significant joint effect of social threat framing and local orientation on total amount raised (b = 0.27, p > 0.10). So, hypothesis 1 is partially supported, since social threat framing only

significantly increases total amount raised. The impact of social threat framing on number of investors is marginally significant. Hypothesis 2 is supported as family involvement significantly strengthens the positive effects of social threat framing on both measures of fundraising performance. Hypothesis 3 is not supported because no significant moderating effect of local orientation is found.

In addition, the result shows a positive and significant joint impact of social threat framing and emotional expression in language on total amount raised (b = 0.03, p < 0.05). Finally, I find a negative and significant joint effect of social threat framing and analytical thinking in language on total amount raised (b = -0.12, p < 0.01). The results of interaction effects are consistent with those from model 5 in table 4. Therefore, hypotheses 4 and 5 are supported. While emotional expression in language strengthens the positive impact of social threat framing on fundraising performance, analytical thinking in language weakens this positive impact.

Insert Table 5 about here

To illustrate the moderation effects, the figure 2 below displays the interaction effect between social threat framing and family involvement on fundraising performance. The figure 3 shows the interaction of social threat framing and emotional expression in language. Finally, the figure 4 displays the interaction of social threat framing and analytical thinking in language.

Insert Figures 2, 3, and 4 about here

1.6 DISCUSSION

In this research, I find social threat framing positively influences total amount raised by crowdfunding campaigns. In the context of crowdfunding, my finding is consistent with prior studies regarding the role of different framing strategies in promoting entrepreneur's abilities to increase funding amount (e.g., Allison et al., 2015; Figueroa-Armijos et al., 2021). For example, Figueroa-Armijos et al. (2021) show that framing the entrepreneur as possessing characteristics of individual vulnerability increases the likelihood of reaching or exceeding the funding target. Furthermore, the positive impact of social threat framing is in line with previous studies suggesting that threat or crisis framing enhances message effectiveness in persuading audiences (e.g., James et al., 2011; Yoon & Tinkham, 2013). By increasing total funding amount, social threat framing is proofed to make individuals passionate, and willing to contribute more resources to support the proposed solution.

Nevertheless, the positive impact of social threat framing on the number of investors is only marginally significant. So, it is important to note that social threat framing may be more appealing to a specific group of individuals, but less appealing to others. Social threat framing highlights potential loss, which may foster a perception of heightened risks associated with the campaign. Such perception may further make some potential investors hesitant to participate or contribute. Especially, many risk-averse investors often prioritize safety and stability in their investment decisions (Cumming et al., 2019). In this regard, investors may not appreciate the message delivered through a social threat framing. Instead, Anglin et al. (2018) indicate that many investors tend to prefer crowdfunding campaigns with a more positive and optimal narrative content.

Next, I find that family involvement significantly strengthens the positive relationship between social threat framing and fundraising performance. Existing literature on family business in crowdfunding is relatively scarce (Cumming et al., 2019). Cumming et al. (2019) show that crowdfunding campaigns launched by family businesses exhibit higher survival rates than nonfamily businesses. Investors perceive family business as being long-term oriented and conservative, making the crowdfunding project seem to be safer.

However, I do not find any significant moderating effect of local orientation. One possible reason could be the limited information provided in the crowdfunding proposals regarding a venture's local orientation. In my sample, many times ventures only briefly mention their activities to, for instance, source materials locally, hire local labour, or support the local economy. As a result, such fleeting information may not effectively highlight a venture's local orientation, potentially failing to capture investor's attention. In this regard, Defazio et al. (2021) suggest that a moderated emphasis on prosocial framing in terms of the frequency of prosocial cues in text is essential to drive crowdfunding success.

Finally, I find that while emotional expression in language enhances the relationship between social threat framing and fundraising performance, analytical thinking in language has the opposite effect. My finding aligns with existing literatures suggesting the positive impact of emotional displays on crowdfunding performance (e.g., Davis et al., 2017; Wolfe & Shepherd, 2015). Notably, in the context of equity crowdfunding, investors are generally less professional and unsophisticated (Cumming et al., 2019). Novice investors are more likely to be influenced by the emotional cues (Patel et al., 2021). Adding to this point, Shafi and Mohammadi (2020) also argue that investor's moods play an important role in affecting the decision to invest in equity crowdfunding. Further, the finding supports literatures suggesting that formality and

logics in message create the psychological distance between investors and crowdfunding, thereby posing challenges to the funding success (Parhankangas & Renko, 2017).

In this study, I made several contributions. First, my study extends literatures on social framing in crowdfunding context (e.g., Allison et al., 2015; Di Pietro et al., 2020) by examining the impact of social threat framing. Doing so, my study sheds light on a relatively less explored aspect of crowdfunding communication. I advance the understanding of how crowdfunding venturers may strategically communicate with potential investors and stakeholders (Allison et al., 2017; Defazio et al., 2021). Especially, entrepreneurs highlight societal challenges alongside proposed business activities as potential solutions to enhance the persuasion in pro-social crowdfunding. In particular, by showing that social threat framing increases the funding amount, I extend literature on the determinants of crowdfunding success (Di Pietro et al., 2020). Social threat framing addresses the urgency and severity of social issues to motivate investors to support the crowdfunding campaign, ultimately leading to increased funding amounts.

Second, I contribute to the literatures on family business in crowdfunding by examining the joint effect of family involvement and framing on crowdfunding performance. My study is one of the a few studies that explore the role of family business in the context of crowdfunding, especially in equity-based crowdfunding (Cumming et al., 2019). For example, Cumming et al. (2019) draw on family business's characteristics including long-term orientation and risk aversion, which help reduce perceived uncertainty in crowdfunding. In addition, in my study, the positive moderating effect of family involvement may suggest a venture may exhibit more capabilities in storytelling when family members get involved in the top management team. Such capability in storytelling enhances the overall framing effectiveness, thus making framing more persuasive to audiences.

Finally, my study adds nuance to social framing literature by incorporating linguistic styles used in crowdfunding proposals (Anglin et al., 2018; Clarke et al., 2019; Parhankangas & Renko, 2017). Entrepreneurs utilize linguistic style to engage audiences (Anglin et al., 2018). By studying the conditional effects of emotional expression and analytical thinking in language, I extend the understanding about how different linguistic styles interact with a venture's framing to affect crowdfunding performance (Maehle et al., 2021). In particular, my finding shows the opposite moderating effects of two linguistic styles. I provide insights about the role of emotional cues versus logical messages in crowdfunding proposal (Patel et al., 2021). Overall, my study demonstrates that specific linguistic styles can either enhance or undermine the framing effectiveness, implying the underlying mechanisms that shape crowdfunding success.

Moving on, I acknowledge that my study has a few limitations, which meanwhile provide potential avenues for future research. First, I analyze social threat framing in crowdfunding proposal at a given point in time. However, the salience of a social framing is likely to change over time because attention to different issues may change (Defazio et al., 2021; Litrico & David, 2017). For example, environmental issues like climate change or global warming have received increasing attention from public recently (Maehle et al., 2021). In this regard, social threat framing in my study does not consider different categories of social issues. Some issues might be more appealing or legitimate than others. So, future research may employ a longitudinal data to measure how the impact of social threat framing on crowdfunding performance would change over time. Likewise, the research may also consider distinct social threat framings in relation to specific social issues.

Second, I only study a single framing strategy – social threat framing. Thus, I am unable to compare the effects of different framing practices on crowdfunding performance. This is

especially important since social threat framing may not resonate equally with all potential investors. Framing effectiveness depends on what matters to individuals (Nisbet & Mooney, 2007). Investors from different backgrounds, cultures, or geographic locations may exhibit varying levels of interests in understanding societal threats, leading to varied responses. This also somewhat explains why the relationship between social threat framing and number of investors is marginally significant in my study. Therefore, future research may incorporate a few different framing practices, such as threat versus opportunity framing, in crowdfunding. In addition, future research may look into the characteristics of investors to examine which investor segments are more likely to resonate with social threat framing.

Third, the measurement of family involvement in my study may be questioned. As mentioned, I follow previous studies to check whether there are at least two members in the top management team with the same family name (Cumming et al., 2019; Kotlar et al., 2018). Nevertheless, it is quite possible that two top managers are not related, but still have the same family name. This would lead to an inaccurate sample size for family involvement, which, in turn, compromise the validity of my results. The study of family business in crowdfunding is still at its infant stage. In this regard, future research may verify whether the members with same family name are related by searching for the background information of members online.

The final limitation Is related to the concerns of generalizability for the findings. Equity-based crowdfunding only represents one key segment of the broad crowdfunding landscape. The characteristics, motivations, and behaviours of investors may differ across crowdfunding platforms. Therefore, caution should be exercised when extending the results in my study to other crowdfunding platforms. Future research may delve into social threat framing in different crowdfunding platforms to provide a more comprehensive understanding about its impact on

fundraising performance. Additionally, future research may explore other contexts outside of crowdfunding, such as traditional venture capital funding, to further enhance the generalizability of the findings and discuss a broad implication of this social threat framing.

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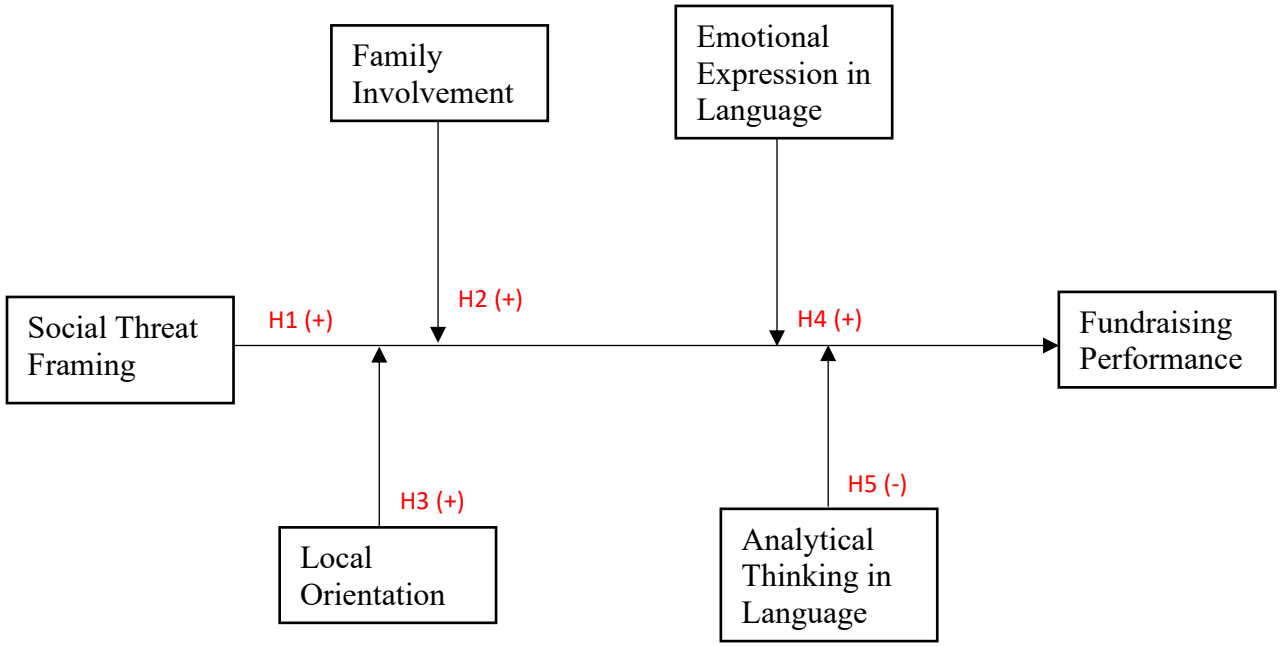
1.8 TABLE 1 – Exemplary Data of Social Threat Framing in Crowdfunding Proposal

Company Name	Industries	Exemplary Social Threat Framings	URL
Kationx Corp.	Biotechnology	"there is a global sewage crisis. … There are up to 240,000 main breaks per year, dumping billions of gallons of untreated, toxic raw sewage into our local surface waters. … Additionally, around 80% of all wastewater is discharged into the world's waterways creating health, environmental & climate-related hazards …"	https://www.startengine.com/kationx
TomBot Inc.	Consumer electronics	"97% of seniors with dementia suffer from debilitating symptoms including loneliness, frustration, delirium, hallucinations, and violent anger. … over 80% of seniors in nursing homes experience chronic pain …"	https://www.startengine.com/tombot
REMUV Technologies Inc.	Wholesale Trade	"infectious diseases account for three of the top ten causes of death worldwide, … 2.2 billion people worldwide are currently surviving on water sources contaminated with feces that can transmit diseases such as cholera, typhoid, and polio. Every year, contaminated drinking water is estimated to cause 485,000 diarrheal deaths alone …"	https://www.startengine.com/remuv
FuelGems Inc.	Manufacturing	"fuel is hazardous and inefficient. Hazardous energy only serves to ruin our environment, our planet, and countless lives … contaminated air and toxic emissions from dirty fuels cause over 5 million people to die annually … we need solutions to reduce dangerous and deadly pollution today – or else we may not be able to turn back in 50 years …"	https://www.startengine.com/fuelgems
Knightscope Inc.	Consumer electronics	"a violent crime is committed every 26.2 seconds. A property crime is committed every 4.4 seconds … the negative economic impact of crime is now over $2 trillion dollars annually … it is clear, there are currently not enough resources to keep everyone safe …"	https://www.startengine.com/knightscope
SanMelix Laboratories Inc.	Biotechnology	"many healthcare associated infections are caused by the most urgent and serious antibiotic-resistant bacteria and may lead to sepsis or death. Up to one-third of the half billion people with diabetes worldwide will develop a diabetic foot ulcer. Of these, 17% will require an amputation. There are few effective therapies for radiotherapy, laser therapy and minor thermal burns …"	https://www.startengine.com/sanmelix

Flash Scientific Technology Inc.	Software service	"lighting is responsible for thousands of fatalities per year, as well as major economic losses. Over 2,000 people die per year due to lighting in 24 countries, and in 2019, more than $900 million in lighting claims were paid out to nearly 77,000 policyholders. Lighting losses for the US economy are approaching $6-7 billion per year, affecting thirty percent of US businesses …"	https://www.startengine.com/flash
Ryca International Inc.	Manufacturing	"90% of Americans have cavities and 2 in 3 older Americans suffer from gum disease … poor oral care can affect major organs and contribute to health problems including heart disease, stroke, and diabetes, and even contribute to oral cancer, which now takes more lives annually than cervical or skin cancer …"	https://www.startengine.com/ryca-regcf

……

1.9 FIGURE 1 – Explaining the Crowdfunding Performance



1.10 TABLE 2 – Descriptive Statistics (Original Values)

Variables	Mean	S.D.	Minimum	Median	Maximum
Number of Investors	871.17	1528.84	0.00	294	13160
Amount Raised	936230.2	2581737	0.00	204281.4	22966008
Social Threat Framing [a]	0.31	0.46	0.00	0.00	1.00
Family Involvement [a]	0.34	0.48	0.00	0.00	1.00
Local Orientation [a]	0.11	0.32	0.00	0.00	1.00
Emotional Expression in Language	72.83	17.25	13.53	76.09	99.00
Analytical Thinking in Language	91.63	4.21	75.84	92.51	98.26
Firm Age	6.30	5.42	1.00	5.00	33.00
Firm Size	55.96	330.53	10.00	10.00	5000
Firm Revenue	844011.8	2359774	0.00	43840	20917315
Prior Funding Experience [a]	0.46	0.50	0.00	0.00	1.00
Funding Target	12410.27	32932.37	0.00	10000	500000
Offering Percentage	0.12	0.11	0.00	0.09	0.73
CEO Race [a]	0.86	0.35	0.00	1.00	1.00
CEO Gender [a]	0.90	0.30	0.00	1.00	1.00
Team Race	0.72	1.32	0.00	0.00	10.00

Note: [a] Binary variable.

1.10.1 TABLE 2.1 - Descriptive Statistics (Transformed Values)

Variables	Mean	S.D.	Minimum	Median	Maximum
Number of Investors [b]	5.79	1.48	2.20	5.78	9.48
Amount Raised [b]	12.45	1.57	9.24	12.30	16.91
Social Threat Framing [a]	0.31	0.46	0.00	0.00	1.00
Family Involvement [a]	0.34	0.48	0.00	0.00	1.00
Local Orientation [a]	0.11	0.32	0.00	0.00	1.00
Emotional Expression in Language [c]	0.00	17.25	-59.30	3.26	26.17
Analytical Thinking in Language [c]	0.00	4.21	-15.79	0.88	6.63
Firm Age	6.30	5.42	1.00	5.00	33.00
Firm Size	1.42	0.57	1.00	1.00	3.00
Firm Revenue [b]	7.79	6.18	0.00	10.69	16.50
Prior Funding Experience [a]	0.46	0.50	0.00	0.00	1.00
Funding Target [b]	9.01	1.03	0.00	9.21	11.51
Offering Percentage	0.12	0.11	0.00	0.09	0.73
CEO Race [a]	0.86	0.35	0.00	1.00	1.00
CEO Gender [a]	0.90	0.30	0.00	1.00	1.00
Team Race	0.72	1.32	0.00	0.00	10.00

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered

1.11 TABLE 3 - Correlations

	1	2	3	4	5	6	7	8	9
1. Number of investors [b]	1.00								
2. Amount raised [b]	0.95 ***	1.00							
3. Social threat framing [a]	0.12 †	0.14 *	1.00						
4. Family involvement [a]	-0.02	-0.01	-0.03	1.00					
5. Local orientation [a]	0.15 *	0.15 *	-0.07	0.06	1.00				
6. Emotional expression in language [c]	-0.13 *	-0.14 *	-0.30 ***	-0.05	0.11	1.00			
7. Analytical thinking in language [c]	0.03	0.03	-0.00	-0.02	0.01	-0.13 *	1.00		
8. Firm age	0.16 *	0.18 **	-0.00	0.12 †	0.07	0.05	0.04	1.00	
9. Firm size	0.26 ***	0.26 ***	-0.00	0.00	0.13 *	-0.02	0.00	0.37 ***	1.00
10. Prior funding experience [a]	0.29 ***	0.29 ***	0.15 *	-0.13 *	-0.14 *	-0.10	0.03	0.13 †	0.10
11. Offering percentage	0.18 **	0.21 ***	0.04	0.05	0.00	-0.05	-0.10	0.02	0.02
12. CEO race [a]	-0.03	-0.01	-0.01	0.07	0.11	-0.02	0.05	0.18 **	0.09
13. CEO gender [a]	0.08	0.08	-0.01	-0.07	0.03	-0.12 †	0.17 **	0.01	0.09
14. Team race	-0.06	-0.08	-0.04	0.02	-0.01	-0.01	-0.02	-0.15 *	0.11 †
15. Funding target [b]	-0.25 ***	-0.30 ***	0.06	0.08	0.07	0.04	0.05	-0.08	-0.23 ***
16. Firm revenue [b]	0.18 **	0.23 ***	-0.05	0.02	0.27 ***	0.19 **	-0.01	0.34 ***	0.27 ***

1.11 TABLE 3 – Correlations (Continued)

10	11	12	13	14	15	16
1.00						
0.10	1.00					
0.04	0.03	1.00				
0.03	0.02	0.06	1.00			
0.01	-0.08	-0.58***	0.03	1.00		
-0.14*	-0.34***	0.05	-0.06	0.02	1.00	
0.06	-0.05	0.06	-0.03	-0.07	0.02	1.00

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered
† $p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

1.12 TABLE 4 - Hypotheses Testing using "Number of Investors" as the DV

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Social Threat Framing [a]	0.30 (0.19)	0.06 (0.22)	0.08 (0.23)	-1.81 * (0.81)	6.95 † (3.97)
Family Involvement [a]		0.04 (0.22)	0.06 (0.22)	0.00 (0.22)	0.04 (0.22)
Social Threat Framing [a] * Family Involvement [a]		0.75 † (0.39)	0.75 † (0.38)	0.81 * (0.38)	0.85 * (0.38)
Local Orientation [a]			0.52 (0.33)	0.61 † (0.32)	0.60 † (0.32)
Social Threat Framing [a] * Local Orientation [a]			0.00 (0.60)	-0.09 (0.59)	-0.12 (0.59)
Emotional Expression in Language [c]				-0.02 ** (0.01)	-0.02 ** (0.01)
Social Threat Framing[a] * Emotional Expression in Language [c]				0.03 * (0.01)	0.02 * (0.01)
Analytical Thinking in Language [c]					0.03 (0.02)
Social Threat Framing[a] * Analytical Thinking in Language [c]					-0.09 * (0.04)
Firm Age	-0.00 (0.02)	-0.01 (0.02)	-0.00 (0.02)	-0.00 (0.02)	0.01 (0.02)
Firm Size	0.60 ** (0.18)	0.65 *** (0.18)	0.62 ** (0.18)	0.59 ** (0.18)	0.59 ** (0.18)
Firm Revenue [b]	0.00 (0.02)	0.00 (0.02)	-0.00 (0.02)	0.00 (0.02)	0.00 (0.02)
Prior Funding [a]	0.44 * (0.18)	0.48 ** (0.18)	0.52 ** (0.18)	0.49 ** (0.18)	0.49 ** (0.18)
Funding Target [b]	-0.29 * (0.12)	-0.33 ** (0.12)	-0.34 ** (0.12)	-0.33 ** (0.12)	-0.34 ** (0.12)
Offering Percentage	0.48 (0.82)	0.34 (0.82)	0.28 (0.81)	0.33 (0.80)	0.48 (0.80)
CEO Race [a]	-0.52 † (0.30)	-0.55 † (0.30)	-0.63 * (0.31)	-0.64 * (0.30)	-0.61 * (0.30)
CEO Gender [a]	0.46 † (0.28)	0.48 † (0.27)	0.43 (0.28)	0.40 (0.27)	0.43 (0.28)
Team Race	-0.16 † (0.09)	-0.15 † (0.09)	-0.17 † (0.09)	-0.20 * (0.09)	-0.19 * (0.09)
Industry Dummies	Included	Included	Included	Included	Included
Year Dummies	Included	Included	Included	Included	Included
Constant	7.14 *** (1.51)	7.36 *** (1.50)	7.61 *** (1.50)	8.28 *** (1.49)	5.61 ** (1.90)
R-squared	0.38 ***	0.40 ***	0.41 ***	0.44 ***	0.45 ***

Change in R-squared		0.02 *	0.01	0.03 **	0.01 †
F-statistics	6.08	5.90	5.58	5.73	5.60
Observations	217	217	217	217	217

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

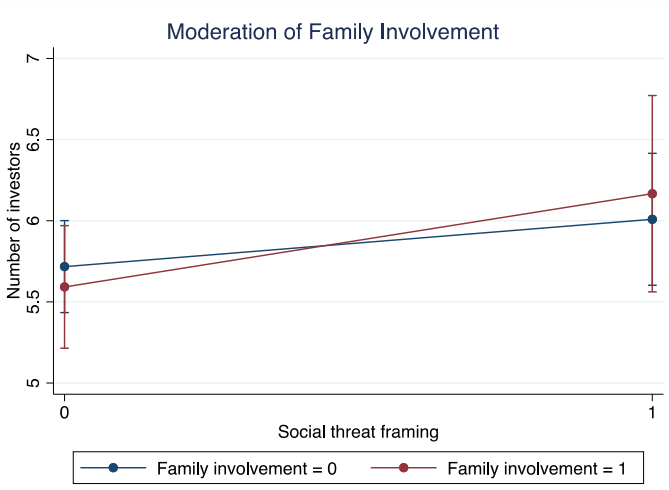
1.13 TABLE 5 - Hypotheses Testing using "Amount Raised" as the DV

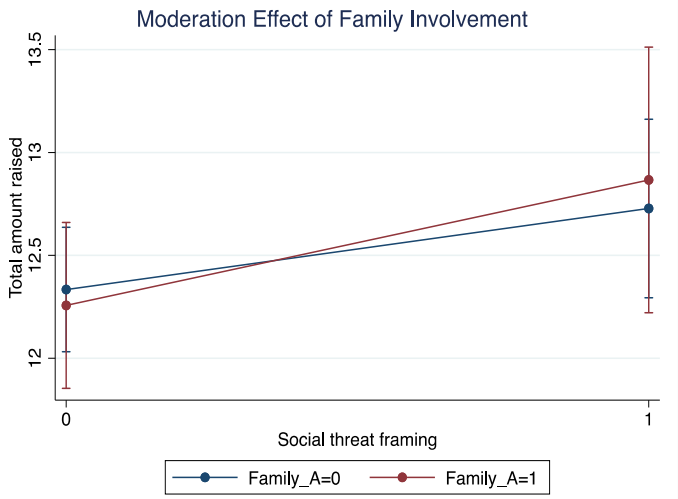
Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Social Threat Framing [a]	0.42 * (0.19)	0.19 (0.23)	0.16 (0.24)	-1.93 * (0.83)	9.18 * (4.06)
Family Involvement [a]		0.03 (0.23)	0.04 (0.23)	-0.02 (0.23)	0.02 (0.22)
Social Threat Framing [a] * Family Involvement [a]		0.72 † (0.40)	0.74 † (0.40)	0.80 * (0.39)	0.87 * (0.39)
Local Orientation [a]			0.26 (0.34)	0.36 (0.33)	0.35 (0.33)
Social Threat Framing [a] * Local Orientation [a]			0.41 (0.63)	0.30 (0.61)	0.27 (0.61)
Emotional Expression in Language [c]				-0.02 ** (0.01)	-0.02 ** (0.01)
Social Threat Framing [a] * Emotional Expression in Language [c]				0.03 * (0.01)	0.03 * (0.01)
Analytical Thinking in Language [c]					0.03 (0.02)
Social Threat Framing [a] * Analytical Thinking in Language [c]					-0.12 ** (0.04)
Firm Age	0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	0.00 (0.02)	-0.00 (0.02)
Firm Size	0.55 ** (0.18)	0.59 ** (0.18)	0.58 ** (0.19)	0.55 ** (0.18)	0.55 ** (0.18)
Firm Revenue [b]	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)
Prior Funding [a]	0.46 * (0.18)	0.50 ** (0.18)	0.53 ** (0.19)	0.50 ** (0.18)	0.50 ** (0.18)
Funding Target [b]	-0.38 ** (0.13)	-0.41 ** (0.13)	-0.42 ** (0.13)	-0.41 ** (0.13)	-0.43 ** (0.12)
Offering Percentage	0.91 (0.84)	0.78 (0.84)	0.75 (0.84)	0.82 (0.83)	1.00 (0.82)
CEO Race [a]	-0.51 (0.31)	-0.53 † (0.31)	-0.58 † (0.32)	-0.59 † (0.31)	-0.55 † (0.30)
CEO Gender [a]	0.51 † (0.28)	0.52 † (0.28)	0.48 † (0.28)	0.45 (0.28)	0.50 † (0.28)
Team Race	-0.16 † (0.09)	-0.15 † (0.09)	-0.07 † (0.09)	-0.20 * (0.09)	-0.20 * (0.09)
Industry Dummies	Included	Included	Included	Included	Included
Year Dummies	Included	Included	Included	Included	Included
Constant	14.57 *** (1.55)	14.78 *** (1.54)	14.93 *** (1.55)	15.66 *** (1.54)	12.30 *** (1.94)
R-squared	0.41	0.42	0.43	0.46	0.48

Change in R-squared		0.01 †	0.01	0.03 **	0.02 *
F-statistics	6.77	6.48	6.02	6.23	6.25
Observations	217	217	217	217	217

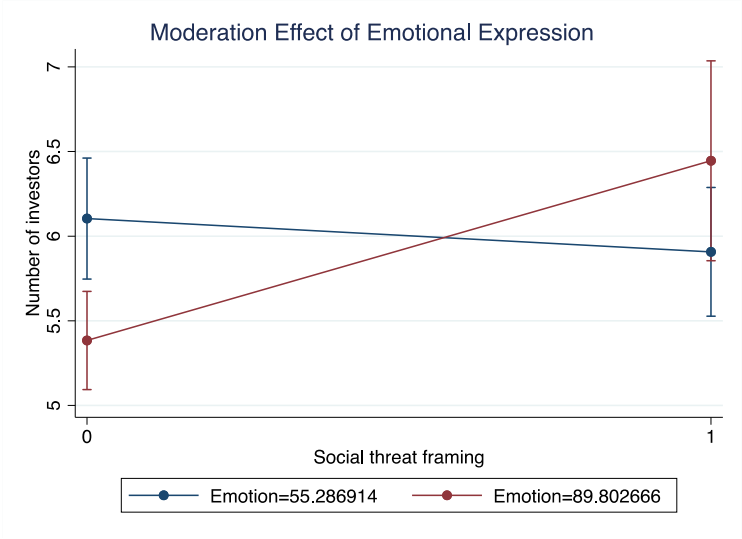
Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered
Unstandardized coefficients are reported, with standard errors in parentheses.
† $p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

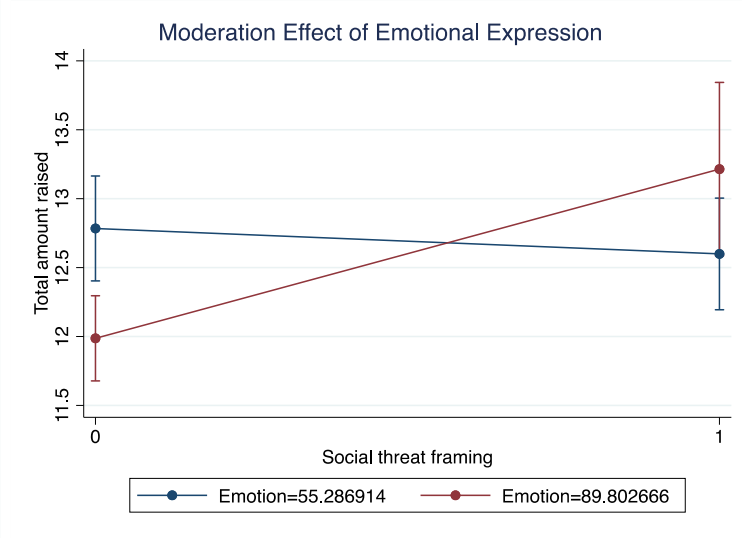
1.14 FIGURE 2: Moderation Effect of Family Involvement



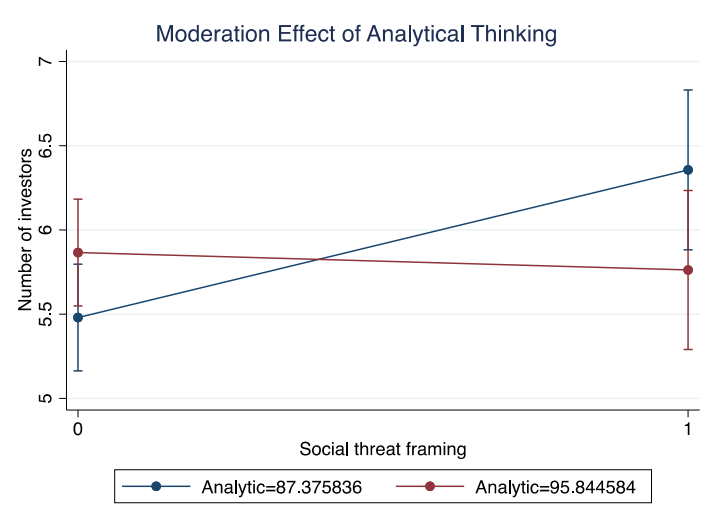


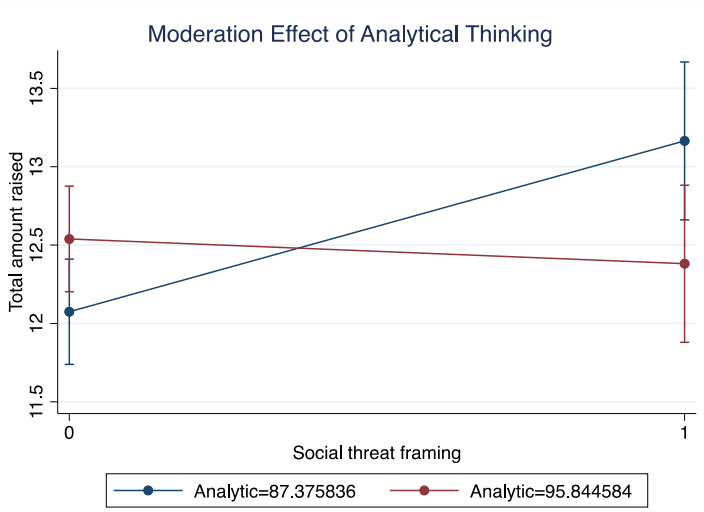
1.15 FIGURE 3: Moderation Effect of Emotional Expression in Language





1.16 FIGURE 4: Moderation Effect of Analytical Thinking in Language





Essay 2: The Impact of Corporate Diversity Commitment: Reputational Risk, Environmental Performance, and Financial Performance

ABSTRACT

In this study, I intend to investigate the impact of corporate diversity commitment. Specifically, I examine how corporate diversity commitment influence firm's reputational risk, environmental performance, and firm performance. By using the sample of firms from S&P 1500 between 2010 and 2021, I find that corporate diversity commitment decreases a firm's reputational risk. However, the impacts of corporate diversity commitment on environmental performance and financial performance exhibit mixed results. Moreover, I examine how the impacts of diversity commitment on three outcomes vary across a few organizational contexts. The findings hold important implications for both theory and business practices, shedding light on the potential benefits and complexities of fostering a diversity commitment within firms.

Keywords:

Corporate diversity commitment, reputational risks, environmental performance, financial performance, board industry experience, performance pressure, CEO duality

2.1 INTRODUCTION

Diversity commitment has been an important agenda for firms (Buchter, 2021; Havrylyshyn et al., 2022). It refers to the firm practice to enhance the representation of individuals with diverse demographic backgrounds, such as gender, race, or cultural backgrounds (Rao & Tile, 2016). As part of EDI (Equity, Diversity, and Inclusion) initiative, diversity has received increasing attentions from both scholars and business practitioners (Hellerstedt et al., 2023). Notably, gender diversity has made significant strides, with nearly 47% of new S&P 500 board directors being female in 2020 (Stuart, 2020). Additionally, the representation of minorities on Fortune 500 board has increased from 34% in 2018 to 38% in 2020, according to Alliance for Board Diversity (2021). Meanwhile, firms have also been improving diversity commitment among their workforces (Leigh & Melwani, 2022).

Previous studies have focused on various aspects of diversity commitment (Corritore et al., 2019; Havrylyshyn et al., 2022). However, two important gaps have emerged. First, most studies have investigated the relationship between diversity commitment and firm financial performance, yet yielding inconsistent findings (Nishii et al., 2018). Some studies find that diversity commitment improves firm performance (Liu et al., 2020), while others find contrasting results (Frijns et al., 2016). The inconsistent findings motivate me to examine different types of diversity commitment, namely board cultural diversity, board gender diversity, and workforce diversity, to better understand their influence on financial performance.

Second, we have less understanding regarding the impact of diversity commitment beyond financial performance (Liu, 2018; Rao & Tilt, 2016). In this regard, an important aspect that intrigues me is the impact of diversity commitment on both reputational risk and environmental performance. Reputational risk arises when a firm's controversies or scandals

lead to negative change in stakeholders perceptions (Zhang & Wong, 2022). Diversity commitment may mitigate the likelihood of controversies by enhancing a firm's monitoring effectiveness (Cumming et al, 2015; Jain & Zaman, 2022). Moreover, a firm's efforts in diversity commitment may engender a broad sense to responsibility. That is, there might be a positive spillover of diversity commitment to other CSR activities, such as environmental performance.

Furthermore, the impact of diversity commitment is likely to vary across conditions (Nishii et al., 2018). Therefore, I will look at a few contextual factors that may affect the relationship between diversity commitment and organizational outcomes. Specifically, I look at three firm-level factors, including board industry experience, performance pressure, and CEO duality. I believe these factors will influence the impact of a firm's diversity commitment on organizational outcomes.

Overall, my study makes three contributions. First, I contribute to literatures on corporate diversity commitment by examining its multifaceted impact (Sharma et al., 2020). Second, I provide better understanding regarding different dimensions of diversity commitment (Harjoto et al., 2015). Finally, I highlight important organizational contexts to understand the impact of diversity commitment.

2.2 THEORETICAL BACKGROUND

2.2.1 Diversity Commitment and Firm performance

Existing studies on corporate diversity commitment have primarily focused on examining the influence of different diversity commitments on firm performance (e.g., Frijns et al., 2016; Havrylyshyn et al., 2022; Miller & Triana, 2009). Nevertheless, the findings are inconsistent,

leading to a lack of clarity in understanding the relationship between diversity commitment and firm performance (Nishii et al., 2018).

For instance, prior studies have investigated the impact of board diversity. Miller and Triana (2009) find the positive impact of board racial diversity on firm performance. They further reveal that this positive impact is partially mediated by both firm reputation and innovation. In contrast, Frijns et al. (2016) find a negative relationship between national cultural diversity in board and firm performance. This negative relationship is attenuated when firm exhibits higher complexity, or has larger foreign sales. Frijns et al. (2016) suggest that future studies need to further explore the contextual factors that may moderate the impact of board diversity and firm performance. Moreover, Havrylyshyn et al. (2022) show that a board gender diversity is modestly related to firm performance with heterogeneity among findings. Also drawing on board gender diversity, Liu et al. (2020) conclude that a gender diversified board increases firm performance through its positive effect on CSR performance.

In addition, some other studies have examined the effect of workforce diversity. For example, Zhang (2020) concludes that gender diversity in workforce increases firm's market valuation and revenue when gender diversify is normatively accepted in a country or an industry. Further, Nadarajah et al. (2021) show that firms in high individualistic states are less likely to promote workforce diversity, which subsequently hampers firm performance. Both studies have emphasized the institutional environment when examining the impact of diversity commitment. Moreover, Han et al. (2020) examine firms who apply for the "100 Best Companies to Work For", and find that racial diversity among employees leads to better financial performance. Conversely, Julian and Ofori-Dankwa (2017) draw on Fortune's "Best Companies to Work For", and show that workforce racial diversity negatively affects firm's performance. Similarly,

Corritore et al. (2019) find that interpersonal cultural difference in workforce decreases firm profitability, because such difference compromises employees' coordination within a firm.

Despite the efforts, the inconsistent findings across these studies underscore the need for further understanding of complex relationship between diversity commitment and firm performance. Diversity commitment may generate both positive and negative effects on firm performance (Frijns et al., 2016; Miller & Triana, 2009). The findings highlight the importance of considering contextual factors and different dimensions of diversity commitment in affecting firm performance. Meanwhile, Pandey et al. (2022) argue that the inconsistent findings may be attributed to the fact that diversity has been often studied in isolation from other board and firm characteristics. This motivates me to examine the impact of diversity commitment by incorporating a few relevant board and firm characteristics as contextual factors.

2.2.2 Diversity Commitment and CSR-related Performance

Several studies have explored how diversity commitment may affect CSR-related outcomes in addition to financial performance. These studies shed light on how the representation of minority directors or employees can drive firm's overall CSR performance. However, it is important to note that existing literature on diversity commitment and CSR relationship is still limited (Liu, 2018; Rao & Tilt, 2016).

For example, Harjoto et al. (2015) find that board gender, tenure, and expertise diversity significantly enhance CSR performance among firms producing consumer-oriented goods and operating in more competitive environments. Similarly, Katmon et al. (2019) examine the impacts of different types of board diversity on CSR disclosure. They show that that while educational and tenure diversities have a positive effect on the quality of CSR disclosure, age

diversity has a negative effect. Furthermore, Jain and Zaman (2020) find that high representation of female board directors with frequent director activities are likely to decrease firm's socially irresponsible conducts. Gaio and Goncalves (2022) find a positive relationship between board gender diversity and the level of CSR practices. Additionally, Sharma et al. (2020) find that diversity commitment has an inverted U-shaped with a firm's social performance. Meanwhile, they also show a U-shaped relationship between diversity commitment and environmental performance.

2.3 HYPOTHESES DEVELOPMENT

In this section, I will propose hypotheses about the impacts of corporate diversity commitment on reputational risk, environmental performance, and firm performance. I will explain the moderating effects of board industry experience, performance pressure, and CEO duality. The model is presented in figure 1 below.

Insert Figure 1 about here

2.3.1 Corporate Diversity Commitment and Reputational Risk

Reputational risk refers to negative change in stakeholders' perceptions on a firm (Hogarth et al., 2018) resulting from undesirable exposure of firm's environmental, social, and governance (ESG) controversial activities (Zhou & Wang, 2020). Stakeholders view firm as violating social norms or standards when firm's activities cause ESG controversies that harm stakeholder's wellbeing (Hogarth et al., 2018). If reputation runs into risk, firm's performance is likely to be damaged, because stakeholders will withdraw from supporting firm's business (Hogarth et al., 2018). For instance, Zhang and Wong (2022) find that reputational risk negative impacts firm's stock performance, and such negative impact is mitigated when firm has a ESG

monitoring committee. Reputational risk is considered a threat to firm's business, but it is not properly managed or prevented in many firms (Suomi & Jarvinen, 2013).

I propose that firm's diversity commitment will decrease the level of reputational risk. First, board diversity increases board's ability to monitor firm's management to regulate managers' behaviours and firm activities (Jain & Zaman, 2022). It helps prevent firm from engaging in socially irresponsible or controversial activities (e.g., Cumming et al., 2015; Liu, 2018). Firm are thus less likely to face reputational risks when incidents of ESG controversies are reduced (Zhang & Wong, 2022). For example, in terms of board gender diversity, Cumming et al. (2015) find that representation of female directors reduces both frequency and severity of securities fraud incidents. Similarly, Wahid (2019) shows that firms with gender-diverse boards commit fewer financial misconducts, such as misleading investors or announcing false financial reports, than firms with male-dominated boards. Moreover, Liu (2018) concludes that board gender diversity decreases the likelihood of corporate environmental violations. Jain and Zaman (2022) find that board gender diversity is negatively associated with a firm's overall socially irresponsible activities.

These studies conclude the role of board diversity in decreasing or preventing firm's controversial activities. Board diversity increases board monitoring effectiveness on firm activities (Jain & Zaman, 2022). Further, female directors are more sensitive on firm's ethical conducts than male directors (Cumming et al., 2015). A gender diversified board is less likely to compromised stakeholders' interests in favor of firm's profitability (Jain & Zaman, 2020). With a high representation of female directors, the board tends to impose a strong monitoring on managers to prevent unethical practices (Cumming et al., 2015). Therefore, firms are less likely to face reputational risks.

Second, reputational risk represents a problem facing a firm due to threats from stakeholders (Zhang & Wong, 2022). Board diversity is argued to increase firm's ability to solve problems (Nielsen & Huse, 2010). So, it may also help firm manage threats from stakeholders, and decrease potential reputation risks. Literatures suggest that board directors provide valuable advice and insights to help managers in decision-making (Kor & Misangyi, 2008). For example, a culturally diversified board may utilize expertise and experiences from directors with different backgrounds to advice managers in problem-solving (Frijn et al., 2016). Similarly, Corritore et al. (2020) also argue that cultural diversity promotes firm's ability to create solutions to problems by drawing on unique ideas from individuals. Especially, reputational risk may be associated with different ESG issues. Board diversity may enable board to evaluate reputational risk from different aspects. As such, board may become more competent on advising managers to manage reputational risk issues.

Third, a workforce diversity commitment helps manage reputational risks associated with employee-related controversies, which may attract negative media coverage and severely tarnish a firm's reputation (Dadanlar & Abebe, 2020). Workforce diversity commitment may help firm effectively tackle issues, such as discrimination and inequality, faced by their employees (Anderson et al., 2019; De Leon & Rosettte, 2022). Furthermore, employees may hesitate to draw attention to controversial practices within a firm (e.g., Chou & Chang, 2020; Knoll & Dick, 2013). The fear of potential backlash often leads to employees who have experienced discrimination or unfair treatment to remain silent, believing that speaking up could have adverse consequences (Knoll & Dick, 2013). Consequently, firm may remain unaware of controversial practices affecting their employees. However, by fostering a workforce diversity commitment, firm may provide minority employees with a platform to voice their concerns regarding

workplace issues (Syed, 2020). By actively listening to voices from all employees, firm can identify and address issues facing employees promptly, thus mitigating reputational risks.

Therefore, firms can address issues, and mitigate reputational risk.

Therefore, I propose the following hypothesis:

H1: Diversity commitment decreases reputational risk.

2.3.2 Corporate Diversity Commitment and Environmental Performance

In this section, I will delve into the impact of diversity commitment on environmental performance. Environmental performance is part of a firm's sustainable practices. However, previous research has paid relatively less attention to how diversity commitment influences a firm's environmental performance (Liu, 2018).

I propose that diversity commitment will positively affect environmental performance. First, there might be a positive spillover effect of diversity commitment to CSR. That is, a firm's efforts in promoting its diversity commitment may lead to a broad sense of social responsibility. Firm may extend beyond diversity commitment itself, and encompass other CSR aspects, such as environmental initiatives (Rao & Tilt, 2016). More specifically, board gender diversity contributes to the formulation of environmental policies, and support for environmental standards (Nadeem et al., 2017). For example, Post et al. (2011) find that three or more female board directors have a positive impact on firm's environmental responsibility. Female directors are more likely to prioritize environmental concerns and advocate for proactive initiatives than male directors (Post et al., 2011). Likewise, Post et al. (2015) show that the representation of female directors on board increases the likelihood that a firm initiates a renewable energy

alliance. Diversity improves a firm's overall awareness of different societal demands, including environmental concerns.

Second, diversity commitment enhances a firm's environmental management. Diverse insights and perspectives may generate more effective problem-solving and innovation solutions to environmental issues. For instance, Beji et al. (2020) find the representation of foreign board directors has a positive effect on firm's environmental performance and community involvement. Foreign directors contribute to firm's environmental management, and use superior technologies to produce less wastes or pollutions (Beji et al., 2020). Similarly, Hafsi and Turgut (2013) show that foreign board directors bring new perspectives on improving environmental performance through reducing pollution, increasing biodiversity, and so on. Furthermore, board cultural diversity may help foster a comprehensive assessment of the environmental impact of a firm's operations across different regions or contexts. Especially, for multinational enterprises who are doing business in multiple countries, they need to evaluate environmental challenges across different areas (Christmann, 2004). Board cultural diversity may help firm to develop tailored environmental strategies that address local and global environmental concerns.

Third, workforce diversity may serve as a driving force for firms to promote environmental performance. Minorities are considered more vulnerable to the negative impacts of environmental issues, such as climate change (Shonkoff et al., 2011). For example, Shonkoff et al. (2011) highlight the disproportionate burden of climate change on minorities and other marginalized groups, suggesting that minorities may be more attentive to local environmental concerns. Within the business context, an increase in the representation of minorities in workforce may push firm to address a board range of environmental concerns, particularly those that directly affect the local community (Sharma et al., 2020). Ciocirlan and Pettersson (2012)

suggest that workforce diversity, encompassing gender and race, is associated with heightened concerns for climate change among Fortune 500 companies. Consequently, workforce diversity will drive a firm's environmental performance.

Therefore, I propose the following hypothesis:

H2: Diversity commitment increases environmental performance.

2.3.3 Corporate Diversity Commitment and Financial Performance

I propose that diversity commitment positively influences a firm's financial performance. First, diversity commitment enhances firm creativity and innovation (Schubert & Tavassoli, 2020). As mentioned earlier, diversity enables a firm to access to diverse perspectives and experiences from board members or employees. Diversity may help lead to the effective idea exchange, driving development of innovative products or services (e.g., Galia & Zenou, 2012). That is, diversity may foster an environment that encourages open discussions and constructive debates, potentially generating innovative business activities (Frijn et al., 2016). Likewise, a board that comprises diverse knowledge may serve as valuable resources to reduce uncertainty and stimulate innovation (Makkonen, 2022). For example, Galia and Zenou (2012) find that board gender diversity increases a firm's innovations in new product development and marketing activities. Further, both Miller and Triana (2009) and Makkonen (2022) find that board diversity leads to superior financial performance through its impact on firm innovation capability.

Second, diversity commitment helps attract and retain competent employees (Bocquet et al., 2019), which may improve financial performance. Diversity fosters an inclusive working environment that may create a sense of belonging for all employees (Havrylyshyn et al., 2022). Such workplace tends to make a firm more attractive to potential employees (Bocquet et al.,

2019). As such, firm may attract competent employees, leading to a more capable workforce to strengthen firm performance. Moreover, diversity may help foster a great sense of loyalty and commitment among employees (Jauhari & Singh, 2013). When employees feel valued and respected, they are more likely to be engaged and motivated to contribute to firm's success. Meanwhile, diversity leads to high employee satisfaction, which results in low employee turnover rates (Fasbender & Drury, 2022). This helps reduce recruitment and training costs, which improve overall workforce stability. As a result, firm may harness the benefits of a diverse workforce to attract and retain competent employees, ultimately driving financial performance.

Therefore, I propose the following hypothesis:

H3: Diversity commitment increases firm financial performance.

Moderation Effects of Board Industry Experience

Board industry experience refers to professional experience or expertise of board directors within the industry in which the firm operates. Prior studies find that board director's industry experience improves firm performance (Chen et al., 2017; Louca et al., 2020). For example, Chen et al. (2017) show that board director's intra-industry managerial experience improves firm's post-entry performance. Board directors' industry experience enable them to provide valuable insights and advice to managers, enhancing the overall firm performance. In addition, Louca et al. (2020) show that a higher proportion of board directors with industry expertise increases the likelihood of CEO dismissal in the event of poor performance. Wang et al. (2015) find that the level of board industry experience reduces excessive CEO compensation.

In this study, I am interested to see how board industry experience will moderate the impacts of diversity commitment on three outcomes.

First, I propose that board industry experience weakens the negative relationship between diversity commitment and reputational risk. Reputational risk may arise from various ESG aspects (Zhou & Wang, 2020). A diversified board, representing and empowering diverse voices, helps monitor firm activities and prevent controversies (Wahid, 2019). However, board industry experience may make certain board directors overconfident, which may discourage participation (Jain & Zaman, 2022). So, board might be less likely to incorporate diverse opinions. The board's monitoring effectiveness on ESG aspects may be thus weakened. Further, board industry experience potentially narrows the board's focus. Less attention may be given to areas outside directors' industry experience, despite the diverse opinions. So, the board's motivation to monitor firm activities concerning different stakeholder groups might be reduced. The negative impact of diversity commitment on reputational risk will thus be weakened.

Second, I propose that board industry strengthens the positive relationship between diversity commitment and environmental performance. Board industry experience leads to experience of industry CSR, which may be better equipped with diversity. When board directors have professional industry experience, they may possess valuable insights into areas and causes of these environmental concerns (Heras-Saizarbitoria et al., 2015). The board's ability to identify and address industry-specific environmental concerns is reinforced by the inclusion of directors with profound industry experience. This would strengthen a positive relationship between diversity commitment and environmental performance. Board directors tend to be more capable of offering advice to managers on improving environmental performance, aligning with concerns expressed by minority directors or employees.

Third, I propose that board industry experience strengthens the positive impact of diversity commitment on financial performance. By drawing on industry expertise, board may facilitate effective communication among directors. Board directors could bridge gaps in different viewpoints toward a common goal, thereby minimizing conflicts that may arise due to diverse backgrounds (Frijns et al., 2016). Moreover, board industry experience enables directors to possess more knowledge regarding the competition and major competitors in a given industry (Dencker & Gruber, 2015). Similarly, Wang et al. (2015) argue that directors' industry experience allows board to better recognize a firm's opportunities and challenges, leading to more effective discussions between board and management team. Also, industry experience enhances board ability to identify and address underperforming CEOs, leading to more effective governance (Louca et al., 2020).

Therefore, I propose the following hypotheses:

H4a: Board industry experience weakens the relationship between firms' diversity commitment and reputational risk, such that firm's diversity commitment will have weaker negative effect on reputational risk when board industry experience is high.

H4b: Board industry experience strengthens the relationship between firms' diversity commitment and environmental performance, such that firm's diversity commitment will have stronger positive effect on environmental performance when board industry experience is high.

H4c: Board industry experience strengthens the relationship between firms' diversity commitment and firm performance, such that firm's diversity commitment will have stronger positive effect on firm performance when board industry experience is high.

Moderation Effects of Performance Pressure

Performance pressure refers to when a firm's performance declines as compared with its performance in previous year. Prior studies suggest that performance pressure, or a negative performance feedback, influences how people perceive a firm's diversity commitment (Solal & Snellman, 2019). Shareholders, for example, will criticize board diversity when the firm performs poorly (Solal & Snellman, 2019). They tend to attribute the decline in performance to the firm's emphasis on promoting diversity instead of profitability. Moreover, Jung et al. (2022) argues that firm prioritizes restoring performance over its commitment to diversity when confronting with negative performance feedback. Understanding the varying impact of diversity commitment becomes important in the context of performance pressure. So, this motivates me to investigate further about the moderating role of performance pressure.

First, I propose that performance pressure weakens the negative impact of firm's diversity commitment on reputational risk. Declining performance leads to an immediate need to restore profitability and financial stability. A firm tends to shift their focus towards improving firm performance, and promptly addressing the issues raised by negative performance feedback (Gaba & Joseph, 2013). Under such performance pressure, firm may reduce its attention and resources towards promoting its diversity commitment. For example, Jung et al. (2022) find that a firm's underperformance decreases its board ascriptive diversity, such as gender, race or ethnicity. Firm's diversity commitment might be less appreciated when firm is experiencing performance issues. Likewise, because firm's primary concern is now on restoring performance, firm may decrease its emphasis on actively managing different stakeholders' demands. Firm may allocate fewer efforts to monitor and prevent potential controversies. As a result, the effectiveness of diversity commitment in mitigating reputational risks may be diminished.

Second, I propose that performance pressure is to weaken the positive impact of diversity commitment on environmental performance. Board diversity brings forth diverse interests and perspectives, including a focus on developing environmental goals. However, it is often perceived that board diversity prioritizes diversity over shareholder values, leading to the belief that firm may have a weak commitment to shareholder values (Solal & Snellman, 2019). When firm's performance declines, firms with more minority directors are likely to face penalties and skepticism from shareholders (Solal & Snellman, 2019). Meanwhile, this skepticism may also arise from the perception that minority directors may be less capable of driving firm performance (Dobbin & Jung, 2011). Minority directors need to enhance their reputation within the firm as capable contributors to firm performance. So, in this context, board may, to some extent, divert attention away from fulfilling environmental objectives. The positive effect of firms' diversity commitment on the environmental performance will thereafter be weakened.

Therefore, I propose the following hypotheses:

H5a: Performance pressure weakens the relationship between firms' diversity commitment and reputational risk, such that firm's diversity commitment will have weaker negative effect on reputational risk when performance pressure is high.

H5b: Performance pressure weakens the relationship between firms' diversity commitment and environmental performance, such that firm's diversity commitment will have weaker positive effect on environmental performance when performance pressure is high.

Moderation Effects of CEO Duality

CEO duality refers to the situation where a CEO also serves as a chairman in firm's board (Krause et al., 2014). Prior studies suggest that CEO duality increases CEO power over a board,

potentially reducing board's effective monitoring and regulation of CEO's behaviours (Duru et al., 2016). This may have implications for the impact of diversity commitment within the board. In addition, an increased CEO power is likely to increase CEO's risk-taking behaviours (Li & Tang, 2010), which may lead to firm's controversial practices. I aim to gain insights into how the power dynamics and risk-taking behaviours associated with CEO duality influence the impact of diversity commitment.

First, I propose that CEO duality weakens the negative relationship between diversity commitment and reputational risk. CEO duality increases CEO power, which may lead to a less effective board monitoring (Duru et al., 2016). Meanwhile, CEO would have more influence in decision-making than board directors (Lewellyn & Fainshmidt, 2017). In this context, CEO duality may result in a diminished consideration of diverse voices from minority directors or employees during the decision-making process. So, diversity commitment may receive less attention from the CEO. Furthermore, the weakened board monitoring reduces directors' abilities to oversee CEO's actions, and prevent controversial practices. Especially, research suggest that CEO power is likely to foster risk-taking behaviours (Li & Tang, 2010). Risk-taking behaviours may subsequently lead to controversial activities (Chiu & Sharfman, 2018), thereby elevating a firm's reputational risks. Consequently, diversity commitment may become less effective in managing reputational risk under the presence of CEO duality.

Second, I propose that CEO duality weakens the positive relationship between diversity commitment and environmental performance. CEO duality may lead to CEO overconfidence as a result of increased CEO power (Su & Sauerwald, 2018). Su and Sauerwald (2018) find that CEO overconfidence is associated with CSR decoupling in a sample of S&P 500 firms. Their finding suggest that overconfident CEOs tend to possess biased perception of their influence

over the firm's CSR activities. For example, CEOs may communicate CSR activities overly optimistic in comparison to the actual CSR performance (Su & Sauerwald, 2018). In this context, the evaluation and implementation of CSR activities are likely to be compromised. As for environmental performance, CEO duality may disrupt the alignment between environmental goal proposed by minority directors or employees and the actual implementation. Consequently, CEO duality may decrease the positive impact of diversity commitment on environmental performance.

Third, I propose that CEO duality weakens the positive relationship between diversity commitment and firm performance. As mentioned, diversity commitment may lead to ineffective coordination and communication, thus negatively impacting firm performance (Frijns et al., 2016). However, CEO duality is argued to promote unity of command and expedite decision-making within the firm (Krause et al., 2014). For instance, according to stewardship theory, CEOs are motivated to improve firm performance by leveraging the unity of command to manage the firm's resources (Duru et al., 2016). Therefore, the challenges associated with diversity, such as coordination difficulties, may be mitigated. Moreover, with a presence of CEO duality, diverse agendas represented by minority directors or employees may receive less attention from CEO due to increased CEO power (Lewellyn & Fainshmidt, 2017). The firm's focus is less likely on addressing potential conflicts arising from diverse perspectives. As a result, CEO duality tends to decrease the negative impact of diversity commitment on firm performance.

Therefore, I propose the following hypotheses:

H6a: CEO duality weakens the relationship between firms' diversity commitment and reputational risk, such that firm's diversity commitment will have weaker negative effect on reputational risk with CEO duality.

H6b: CEO duality weakens the relationship between firms' diversity commitment and environmental performance, such that firm's diversity commitment will have weaker positive effect on environmental performance with CEO duality.

H6c: CEO duality weakens the relationship between firms' diversity commitment and financial performance, such that firm's diversity commitment will have a weaker positive effect on financial performance with CEO duality.

2.4 METHODOLOGY

2.4.1 Data and Sample

I test the hypotheses using a panel dataset of firm-year observations. The sample consists of the public firms that have been listed on Standard & Poor's (S&P) Composite 1500 Index between 2010 to 2021, and had December 31 fiscal year-ends. I search for these firms from ISS – Institutional Shareholder Services database, which covers a universe of all S&P 1500 firms across years. Overall, the data sources include Sustainalytics ESG, RepRisk AG, Thomson Reuters (ASSETS4), BoardEx, and Compustat Annual Fundamental databases. Not all the firms included provide the information to the key variables. After merging these databases and removing observations that were missing values, I yield an unbalanced panel data of 911 firms and 6,352 firm-year observations.

2.4.2 Measures

Dependent Variables

Reputational risk. To measure the level of a firm's reputational risk, I follow the prior study (Zhang & Wong, 2022) to collect the data from the RepRisk. I use the value of the firm's Current RepRisk Index (RRI) in each year. According to RepRisk, the Current RRI captures and quantifies a firm's exposure to reputational risk related to ESG. It indicates the level of different media and stakeholder coverages of a firm in relation to various ESG issues. The data is initially exhibited on a monthly basis. I take the average value of each firm's Current RRI in a given year to obtain the annual data. The RRI value ranges from 0 to 100. The higher the value, the higher the reputational risk facing a firm will be.

Environmental performance. I collect the data of environmental score from ASSETS4 to measure a firm's environmental performance. Environmental score is calculated based on three main categories including emission, environmental innovation, and resource use scores. Environmental score is exhibited as a percentage value ranging from 0 to 1, and it is annually based. The higher the value, the better a firm's relative environmental performance and the higher degree of transparency will be.

Financial performance. Following prior studies (Chang et al., 2014; Frijns et al., 2016), I use Tobin's Q to measure a firm's performance. I calculate Tobin's Q as (the book value of total assets – the book value of equity + the market value of equity) / the book value of total assets (Frijns et al., 2016). I collect the data from the Compustat database.

Independent Variable

Corporate diversity commitment. I employ three different measures. Two measures are associated with the firm's board diversity, namely board cultural diversity and board gender diversity. The third measure focus on the firm-level diversity commitment towards its employees, which was workforce diversity.

Board cultural diversity. I collect the data from ASSETS4 (the section of Refinitiv ESG Board Member Data) to measure the level of a board's cultural diversity. Assets4 provides information that indicates whether the cultural background of a board member is different from the local cultural where the corporate headquarters is located. Board cultural diversity is initially a binary variable, where the value of 1 indicates the board director has a different cultural background, and 0 otherwise. ASSETS4 provides the information of cultural background for all the directors currently sitting on a firm's board in a given year. I operationalize the variable by calculating the percentage of the directors with different cultural backgrounds to the total number of board directors for each firm-year observation. In this way, I observe the level of culturally diversified members' representation on a firm's board. The higher the value, the more culturally diversified a board will be.

Board gender diversity. I collect the data for board gender diversity from BoardEx (the section of Organizational Summary – Analytics). BoardEx provides the data exhibiting the gender ratio (the percentage of male directors) of a firm's board composition. I calculate the ratio of female directors by using 1 to minus the gender ratio of male directors. So, the higher the value, the more gender diversified a board will be.

Workforce diversity. I collect the data for workforce diversity from the Sustainalytics database. Sustainalytics provides the data on a firm's performance towards its employees. To measure workforce diversity, I combine two variables in the Employee Category. The first

variable is "*Programmes to Increase Workforce Diversity*". This variable assesses whether the firm has taken commitment to increase diversity in its workforce. The second variable is "*Formal Policy on the Elimination of Discrimination*". This variable assesses the quality of a firm's policy to eliminate discrimination, including the discrimination in access to employment, training and working conditions, race, sex, religion, political opinions, and so on. For both variables, the higher the value, the stronger the firm's programmes or policies will be. I operationalize workforce diversity by averaging the values of two variables for each firm-year observation. These three measures of corporate diversity commitment are mean-centered to take account of potential multicollinearity (Raffaelli & Glynn, 2014).

Moderators

Board industry experience. I collect the data for board industry experience from ASSETS4 (the section of Refinitiv ESG Board Member Data). ASSETS4 provides information regarding whether a given board directors hold the professional experience in the same industry where the firm is currently operating. The value of 1 indicates the board director has the professional experience in the same industry, and 0 otherwise. I operationalize the variable by calculating the percentage of the directors who hold the professional experience in the same industry to the total number of directors for each firm-year observation. The higher the value, the higher the level of a board's industry experience will be.

Performance pressure. I collect the data for performance pressure from the Compustat. I compared the firm's performance in relation to its historical aspirations to measure performance pressure (Krishnan & Kozhikode, 2015; Mishina et al., 2010). I calculate the difference between each firm's current ROA and its ROA in one prior year. Firms are facing performance pressure when the firm's ROA in current year is below its ROA in the previous year

(aspirations). Performance pressure equals aspirations minus ROA if firm's ROA is below aspirations, and equals 0 if firm's ROA is greater than or equal to aspirations (Mishina et al., 2010).

CEO duality. I collect the data for CEO duality from BoardEx (the section of Organization – Composition of Officers, Directors and Senior Managers). BoardEx describes the roles that can help to identify whether a firm's CEO is simultaneously serving as the chairman of the board. Following the prior literatures (Duru et al., 2016; Su & Sauerwald, 2018), I operationalize CEO duality as a binary variable, which took the value "1" if the CEO is also the board's chairman, and "0" otherwise.

To construct the interaction terms proposed in hypotheses, the moderators board industry experience and performance pressure are mean-centered. The mean-centering aids in the interpretation of the moderating effect (Nalick et al., 2019). I set the baseline reference point at the mean value of the moderator.

Control Variables

I include several control variables that are expected to influence the dependent variables in the study. I include ***firm size*** (measured by total assets) and ***employees***, because large firms might receive more media coverages related to the firm's ESG controversies (Kolbel et al., 2017). Large firms also tend to have high visibility to multiple stakeholders, which can drive the firm's CSR performance (Chiu & Sharfman, 2011). I control for the firm's ***slack resources***, which could provide the extra liquidity in the firm's CSR activities (Tashman et al., 2019). Slack resource is measured as the ratio of current assets to current liabilities (Tashman et al., 2019). I also control for ***firm leverage***, which is calculated as dividing the total debts by the total

assets. Firm leverage is significantly correlated with the firm performance (Mishra & Modi, 2013). Moreover, I control for ***globalization***, which measures the ratio of a firm's foreign sales to its total sales (Frijns et al., 2016).

Additionally, I include the variables related to a firm's board and top management team. I control for ***board independence***, which is calculated as the ratio of independent directors to the total directors on board (Gull et al., 2022). Independent directors are argued to be highly important to influence a firm's CSR activities (Godos-Diez et al., 2018). I control for ***board size***, which is the total number of directors sitting on a firm's board (Mishina et al., 2010). Finally, I control for ***female managers***, which is the ratio of female managers to the total number of managers. The female representation in a firm's top management team is found to positively affect the firm performance (Dezso & Ross, 2012), and CSR performance (Lu et al., 2020). Finally, I include industry dummies as control variables because different industry characteristics are likely to influence the three outcomes in this study.

2.4.3 Model Specification

In this study, I use Stata as statistical analysis package. I first run fixed effect regression to test the proposed hypotheses. Additionally, I run mixed-effects regression for the robustness check. Fixed effect model controls for firm-specific characteristics that are unobserved and remain constant over time (Cameron & Trivedi, 2005; Kobel et al., 2017). For example, in my study, firms may exhibit distinct organizational cultures or corporate policies in relation to diversity commitment. These unique firm characteristics are unobservable, and likely to remain relatively consistent over time. By employing a fixed effect model, I mitigate concerns that the findings are driven by the unobservable firm-specific characteristics (Negro & Olzak, 2019). To further illustrate, the equation of fixed-effect regression is shown below:

$$\gamma_{ij} = \beta_0 + \beta_1 \text{Diversity commitment}_{ij} + \beta_2 \text{Moderators}_{ij} + \beta_3 \text{Diversity commitment}_{ij} \times \text{Moderators}_{ij} + \beta_4 \text{Controls}_i + \alpha_i + \varepsilon_{ij}$$

In this equation, γ_{ij} represents the dependent variable, including reputational risk, environmental performance, and financial performance, for the firm $_i$ at time $_j$. β_0 is the intercept. β_1 is the coefficient for the main effect of independent variable, including board cultural diversity, board gender diversity, and workforce diversity, on dependent variables, respectively. β_2 is the coefficient for the effects of moderators, including board industry experience, performance pressure, and CEO duality. β_3 is the coefficient for the interaction effect, capturing the how the relationship between diversity commitment and dependent variable varies with moderator. β_4 is the coefficient for control variables. α_i represents the firm-specific fixed effect for the firm$_i$. Finally, ε_{ij} is the error term for the firm $_i$ at time $_j$, which captures the unobserved factors affecting dependent variable beyond the included variables.

In addition to fixed effect model, I employ mixed effects model as the robustness check. Mixed effects model tests the hypotheses by considering both within-firm and between firms impacts on dependent variables, which is a limitation of fixed effect model (within-firm) (Certo et al., 2017; Havrylyshyn et al., 2022). Specifically, in mixed effects model, the random effect is incorporated to allow the intercept to vary across firms (Bliese et al., 2020; Certo et al., 2017). In my study, this accounts for the concerns that the baseline value of dependent variable like environmental or financial performance may differ across firms. Furthermore, following prior studies, I mitigate potential autocorrelation of dependent variables by including lagged dependent variables that are three-year prior to the focal year of measurement as control

variables (Cheng et al., 2014). To further illustrate, the equation of mixed-effects regression is shown below:

$$\gamma_{ij} = \beta_0 + \beta_1 \text{Diversity commitment}_{ij} + \beta_2 \text{Moderators}_{ij} + \beta_3 \text{Diversity commitment}_{ij} \times \text{Moderators}_{ij} + \beta_4 \text{Controls}_i + b_{0j} + b_{1j} \text{Diversity commitment}_{ij} + \varepsilon_{ij}$$

In the equation of mixed effects model, b_{0j} is the random intercept that captures the firm-specific deviation from the overall population intercept. Next, b_{1j} is the random slope that captures the firm-specific deviation of the effect of diversity commitment on dependent variable. Finally, ε_{ij} is the residual error term that captures the unexplained variation in dependent variable.

2.5 RESULTS

Table 1 provides the descriptive statistics for the original values of variables in this study. Table 1.1 provides the descriptive statistics for the variables' transformed values that are used in regression analysis. In table 1, on average, there are around 18% of board directors with different cultural backgrounds, and 22% of female directors across firms. Meanwhile, workforce diversity has a mean value of 0.44. These statistics suggest a relatively moderate level of diversity commitment in my study. It is also worth noting that the distribution of diversity commitment varies across industries.

Insert Table 1 and Table 1.1 about here

For example, firms in the real estate industry have the highest average board cultural diversity, which is around 0.21. Conversely, firms in the health care, the information technology, and the communication services exhibit relatively lower board cultural diversity,

which is about 0.15. Furthermore, firms in the communication services have the highest value of board gender diversity, which is around 0.24. On the other hand, firms in the energy industry have the lowest value, which is about 0.17. Finally, firms in the financial industry have the highest level of workforce diversity, which is about 0.75. In contrast, firms within the utilities industry display the lowest level of workforce diversity, with an average score of about 0.27. Overall, these variations suggest that firms in different industries are at varied stages of pursuing diversity commitment.

Moreover, the distribution of diversity commitment varies across years in the sample, as shown in Figure 2. Overall, the three dimensions of diversity commitment demonstrate an upward trend from 2010 to 2021. Specifically, the mean board cultural diversity increases from approximately 0.16 in 2010 to 0.22 in 2021. Board gender diversity grows from 0.15 in 2010 to 0.29 in 2021. Also, workforce diversity grows from around 0.43 in 2010 to 0.49 in 2021. This evident trend indicates an increasing effort by firms to enhance their diversity commitment over years. Especially, board gender diversity shows the most pronounced increase in my sample.

Insert Figure 2 about here

Table 2 provides the correlations of the variables. Three measures of diversity commitment exhibit distinct correlations with three dependent variables. For example, board cultural and gender diversities negatively correlate with reputational risk, while workforce diversity shows a positive correlation. Also, whereas board cultural diversity negatively correlates with financial performance, board gender diversity and workforce diversity show a positive correlation. These statistics may imply the potential varied impacts of three diversity commitment measures on organizational outcomes.

Regarding moderators, first, board industry experience negatively correlates with both reputational risk and environmental performance. Second, performance pressure positively correlates with reputational risk, while negatively correlates with environmental performance. Third, CEO duality positively correlates with both reputational risk and environmental performance, but negatively correlates with financial performance. Furthermore, each moderator also exhibits different correlations with three diversity commitment measures. Overall, these correlations may imply that the included moderators would provide important organizational contexts to further investigate the impacts of diversity commitment.

Insert Table 2 about here

Table 3 provides the results of hypotheses testing for the relationship between diversity commitment and reputational risk, including three moderation effects and all control variables. As shown in model 1, I find that board cultural diversity decreases reputational risk (b = -9.97, p < 0.01). Next, in model 2, I find that board gender diversity also decreases reputational risk (b = -20.71, p < 0.001). Finally, in model 3, I find that workforce diversity significantly decreases reputational risk (b = -2.45, p < 0.01). Overall, the results support the hypothesis 1, which proposes that diversity commitment decreases reputational risk.

Insert Table 3 about here

Table 4 provides the results of hypotheses testing for the relationship between diversity commitment and environmental performance, including three moderation effects and all control variables. As shown in model 1, I show that board cultural diversity increases environmental performance (b = 0.35, p < 0.001). Next, in model 2, I show that board gender diversity

increases environmental performance (b = 0.48, p < 0.001). Nevertheless, I do not find any significant relationship between workforce diversity and environmental performance (b = -0.00, p > 0.10). Overall, the results provide the partial support for hypothesis 2. Only board cultural and gender diversities increase environmental performance.

Insert Table 4 about here

Table 5 provides the results of hypotheses testing for the relationship between diversity commitment and financial performance, including two moderation effects and all control variables. As shown in model 1, I do not find any significant relationship between board cultural diversity and financial performance (b = -0.24, p > 0.10). However, in model 2, I find that board gender diversity increases financial performance (b = 1.88, p < 0.001). Further, in model 3, I find that workforce diversity increases financial performance (b = 0.25, p < 0.001). In sum, the results provide the partial support for hypothesis 3. Board gender diversity and workforce diversity increase financial performance.

Insert Table 5 about here

Moderation effect of board industry experience: first, I do not find that board industry experience weakens the negative impact of board gender diversity on reputational risk (board industry experience * board gender diversity: b = 4.49, p > 0.10; model 2 in table 3). Further, I find that board industry experience weakens the negative impacts of board cultural diversity and workforce diversity on reputational risk (board industry experience * board cultural diversity: b = 31.33, p < 0.10, model 1 in table 3; board industry experience * workforce diversity: b = 6.62,

$p < 0.10$, model 3 in table 3). However, these two interaction effects are marginally significant. Overall, I provide partial support for hypothesis 4a.

Second, I find that board industry experience significantly strengthens the positive relationship between board cultural diversity and environmental performance ($b = 0.98$, $p < 0.001$; model 1 in table 4). Board industry experience also significantly strengthens the positive relationship between board gender diversity and environmental performance ($b = 0.89$, $p < 0.001$; model 2 in table 4). Moreover, I find board industry experience strengthens the positive relationship between workforce diversity and environmental performance ($b = 0.11$, $p < 0.05$; model 3 in table 4). In sum, the results support hypothesis 4b.

Third, I do not find board industry experience moderates the relationship between three measures of diversity commitment and financial performance. So, hypothesis 4c is not supported. In figure 2, I provide the graphs showing the significant interaction slopes between diversity commitment and board industry experience.

Insert Figure 2 about here

Moderation effect of performance pressure: I find that performance pressure weakens the negative relationship between board cultural diversity and reputational risk ($b = 88.03$, $p < 0.05$; model 1 in table 3). Performance pressure also weakens the negative impact of board gender diversity on reputational risk ($b = 94.31$, $p < 0.05$; model 2 in table 3). Further, I show that performance pressure weakens the negative relationship between workforce diversity and reputational risk ($b = 23.71$, $p < 0.05$; model 3 in table 3). Therefore, the results provide support for hypothesis 5a.

Second, I find performance pressure significantly weakens the positive relationship between board cultural diversity and environmental performance (b = -1.27, p < 0.05; model 1 in table 4). However, I do not find any significant moderating effect of performance pressure on the relationship between either board gender diversity or workforce diversity and environmental performance. So, hypothesis 5b is partially supported. In figure 3, I provide the graphs showing the significant interaction slopes between diversity commitment and performance pressure.

Insert Figure 3 about here

Moderation effect of CEO duality: first, I do not find that CEO duality significantly moderate the negative relationship between three measures of diversity commitment and reputational risks. So, hypothesis 6a is not supported.

Second, I find CEO duality weakens the impact of board cultural diversity on environmental performance (b = -0.18, p < 0.01; model 1 in table 4). However, I do not find a significant moderating effect of CEO duality on the relationship between board gender diversity and environmental performance (b = -0.03, p > 0.10; model 2 in table 4). Further, I find the joint effect of CEO duality and workforce diversity increases environmental performance (b = 0.03, p < 0.01; model 3 in table 4). Overall, the results partially support hypothesis 6b.

Third, I do not find CEO duality significantly moderates the relationship between board cultural diversity and financial performance (b = 0.28, p > 0.10; model 1 in table 5). Further, CEO duality decreases the positive impact of board gender diversity on financial performance (b = -0.98, p > 0.01; model 2 in table 5). Finally, I show that CEO duality strengthens the positive impact of workforce diversity on financial performance (b = 0.15, p < 0.05; model 3 in table 5).

In sum, the results partially support hypothesis 6c. In figure 4, I provide the graphs showing the significant interaction slopes between diversity commitment and CEO duality.

Insert Figure 4 about here

Moreover, the results from mixed effects model are in general consistent with those from fixed effect model, although some differences are captured within the distinct measures of diversity commitment. First, for the main relationship, hypotheses 1 and 2 are consistent between both fixed effect and mixed effects models. However, in hypothesis 3, the impact of board cultural diversity on financial performance becomes significant and negative (b = -0.55, p < 0.05; model 1 in table 8) in mixed effects model.

Insert Tables 6, 7 and 8 about here

Second, in hypothesis 4a, board industry experience weakens the negative relationship between workforce diversity and reputational risk (b = 11.11, p < 0.01; model 3 in table 6). The results of hypothesis 4b are consistent. However, in hypothesis 4c, the moderating effect of board industry experience on the positive relationship between board gender diversity and financial performance becomes significant (b = 2.77, p < 0.05; model 2 in table 8).

Third, in hypothesis 5a and 5b regarding the moderating effect of performance pressure, the results are consistent between two models. Finally, the results of hypothesis 6a are consistent. However, in hypothesis 6b, the moderating effects of CEO duality on the impacts of both board cultural diversity and workforce diversity on environmental performance become nonsignificant in mixed effects model. Finally, in hypothesis 6c, the moderating effect of CEO

duality on the relationship between board gender diversity and financial performance becomes marginally significant (b = -0.70, p < 0.10; model 2 in table 8).

2.6 DISCUSSIONS

For the main relationships, first, I find that corporate diversity commitment decreases reputational risk. The results align with previous research indicating that firm's board diversity helps reduce ESG controversies (Liu, 2018; Jain & Zaman, 2019). A diverse board enhances monitoring effectiveness, ensuring responsible management practices towards various stakeholders and preventing socially irresponsible behavior (Harjoto et al., 2014; Jain & Zaman, 2019). Additionally, the findings are consistent with Liu's (2018) study, which finds a negative relationship between board gender diversity and the number of environmental violations by firms. Furthermore, this study goes beyond board and highlights the role of workforce diversity in mitigating reputational risk.

Second, I find both board cultural and gender diversities increase environmental performance. The results are consistent with existing literature that highlights the positive impact of board diversity on CSR performance (Katmon et al., 2019; Rao & Tilt, 2016). A diverse board helps enhance overall environmental management through formulating environmental policies and standards, leading to improved environmental performance (Liu, 2018). However, the study did not find any significant relationship between workforce diversity and environmental performance. This could be attributed to the fact that environmental performance often requires strong commitments and decision-making from the firm's board or top management team (Harjoto et al., 2015). A diverse workforce may be unable to directly

contribute to CSR policies or allocate resources to drive environmental performance. As a result, the study underscores the important role of board diversity in driving positive CSR outcomes.

Third, I find board gender diversity and workforce diversity increase financial performance. The results are in line with prior studies suggesting that board gender diversity may exhibit a strong corporate governance practice, which enhance firm transparency and financial performance (Fukukawa et al., 2007). Also, female directors often place a great emphasis on stakeholder interests and relationship (Post et al., 2014), leading to enhanced reputation and firm performance. Moreover, the results highlight that workforce diversity enhances employee commitment and job satisfaction, thereby contributing to firm success (Fasbender & Drury, 2022).

Nevertheless, I do not find a significant relationship between board cultural diversity and financial performance. This result contradicts previous literatures on either positive or negative impacts of board diversity on financial performance (e.g., Miller & Triana, 2009; Zhang, 2020). Unlike board gender diversity, board cultural diversity may more likely lead to conflict or incompatible opinions due to diverse cultural backgrounds (Frijns et al., 2016). Meanwhile, benefits and costs of diversity commitment may offset each other's effects on financial performance (Carter et al., 2010). Meanwhile, benefits and costs of diversity commitment may offset each other's effects on firm performance (Carter et al., 2010).

In terms of moderation effects, the mixed findings indicate that dimensions of diversity commitment have varied implications under different organizational contexts. First, I find board industry experience enhances the impact of diversity commitment on environmental performance. This implies that industry experience makes directors more capable of advising managers to promote CSR. Firms are better equipped to leverage their diverse commitment

toward improved environmental performance when more board members have experience and understanding of an industry.

Moreover, I do not find board industry experience significantly moderate the relationship between diversity commitment and financial performance. Put differently, the positive impacts of board gender and workforce diversity on financial performance become non-significant when board industry experience is high. My study is unable to specify which board directors hold industry experience. It is quite possible that such experience is concentrated among minority directors who may show more interests in fulfilling CSR rather than promoting financial performance (Solal & Snellman, 2019). This may also explain that board industry experience increases the impact of board diversity on environmental performance.

Second, I find performance pressure weakens the negative relationship between diversity commitment and reputational risk. Further, I find performance pressure only weakens the positive impact of board cultural diversity on environmental performance. However, I do not find performance pressure moderates the impacts of board gender diversity and workforce diversity on environmental performance. This relates to studies suggesting that firms promoting diversity commitment might be motivated by the belief that doing so benefits firm performance (Kaplan, 2020). However, when firm performance declines, managers may less appreciate diversity commitment, and be hesitant to further invest resources in improving diversity.

Finally, I find that CEO duality weakens board cultural diversity's positive impact on environmental performance, while strengthens workforce diversity's positive impact on environmental performance. In addition, CEO duality weakens board gender diversity's positive impact on financial performance, but strengthens workforce diversity's positive impact. My findings suggest that the negative implication of CEO duality, such as increased CEO power

(Duru et al., 2016; Pandey et al., 2022), is prominent in affecting board level factors. CEO may be less likely to listen to board's opinions. However, CEO duality could be beneficial when it interacts with workforce diversity in promoting positive organizational outcomes. CEO duality may help align authority and workforce diversity. Likewise, the CEO's heightened involvement may generate more understanding of the workforce's needs and challenges, promoting the effectiveness and implementation of workforce diversity.

This study makes three contributions. First, my study contributes to literatures on corporate diversity commitment by examining its multifaceted impact – reputational risk, environmental performance, and financial performance. Previous research often focuses on individual aspect of diversity commitment, or limits the analysis to financial performance alone (Frijns et al., 2016; Makkonen, 2022). My study uncovers the impact of diversity commitment on other key aspects of firm operation. Doing so, I enrich the understanding about the impact of diversity commitment. Specifically, by studying reputational risk, my study suggests that diversity commitment may play important role in a firm's overall risk management (Zhang & Wong, 2022; Benlemlih et al., 2016). Further, by studying environmental performance, I indicate that diversity commitment may shape a firm's commitment to other CSR activities (Katmon et al., 2019).

Second, my study helps better understand different dimensions of diversity commitment (Harjoto et al., 2015). I add nuanced perspective by specifying unique influences that each dimension can exhibit on organizational outcomes. Many existing studies look at various board diversity commitments (Beji et al., 2020; Frijns et al., 2016). The impact of workforce diversity, especially on CSR-related outcomes, has received less attentions (Sharma et al., 2020). Workforce diversity and diversity in board or top management team have important distinctions

(Zhang, 2020). My study goes beyond this and incorporate workforce diversity to highlight a diverse employee base in driving organizational outcomes. Employees are key stakeholders who influence firm success. Diversity among employees may also bring broad implication to a firm, such as improving equal opportunities in the workplace (Sharma et al., 2020).

Finally, I highlight important organizational contexts to understand diversity commitment (Pandey et al., 2022). In particular, I look at contexts that represent the characteristics of a firm's board, performance, as well as governance. Doing so, I shed light on the dynamics of diversity commitment within the corporate landscape. For instance, prior studies have paid less attention on how board may interact with diversity commitment to influence organizational outcomes. I suggest that board industry experience may play an important role in helping to manage the influence of diversity commitment (Green et al., 2018). Moreover, my finding is in line with existing literatures suggesting that when a firm is not performing well, its diversity commitment may face criticisms (Solal & Snellman, 2019). Similarly, I bring corporate governance in the context of diversity commitment. I suggest that increased CEO power resulting from CEO duality would influence the impact of diversity commitment on organizational outcomes.

My study has several limitations. First, from the perspective of diversity commitment, I only consider three dimensions, thereby potentially overlooking other forms of diversity, such as board age or racial ethnicity (e.g., Harjoto et al., 2015; Rao & Tilt, 2016). Some firms may prioritize board racial diversity, which is not accounted for in my study. Moreover, diversity commitment may also take place at other levels within a firm, such as top or middle management teams. In this regard, Sharma et al. (2020) indicate that different level of diversity commitment may affect a firm's CSR differently. Therefore, future research may explore other types of

diversity commitment within the board or workforce, and investigate how diversity at different levels affects organizational outcomes.

Second, I argue for a positive spillover effect of diversity commitment on CSR by only focusing on environmental performance. However, my study leaves an unanswered question regarding the influence of diversity commitment on other dimensions of CSR. Notably, Sharma et al. (2020) find that diversity has different effects on a firm's social and environmental performance. So, diversity commitment may not uniformly affect all CSR dimensions. Future research may explore whether the spillover effect of diversity commitment also extends to other CSR dimensions beyond environmental performance.

Thirdly, unlike board diversity, the measurement of workforce diversity is based on the value of corporate policies and programmes. This may not indicate whether a firm truly engages in diversity among employees. Previous studies have raised concerns about CSR decoupling, which refers to situation in which firm adopt CSR initiatives for symbolic reasons without integrating these practices into their core operation (Tashman et al., 2019). Regarding diversity commitment, firm may adopt diversity-related policies merely to create a positive image without substantially promoting a diverse workplace (Mun & Jung, 2018). Therefore, it is important for future research to delve deeper into the actual implementation of diversity commitment, and study its impact.

Lastly, my study has concerns for the generalizability of my findings. My sample only consists of U.S. public firms from S&P 1500. These companies are likely to face more stakeholder pressure or scrutiny on their overall CSR due to high organizational visibility than other private firms (Chiu & Sharfman, 2011). Further, by only looking at U.S. context, my study is unable to show the role of cross-cultural difference or country-specific characteristics in

relation to diversity commitment. Firms from developing and developed countries would experience diversity's impact differently (Sharma et al., 2020). As a result, future research may consider expanding the sample by, for instance, including firms from different countries or private firms.

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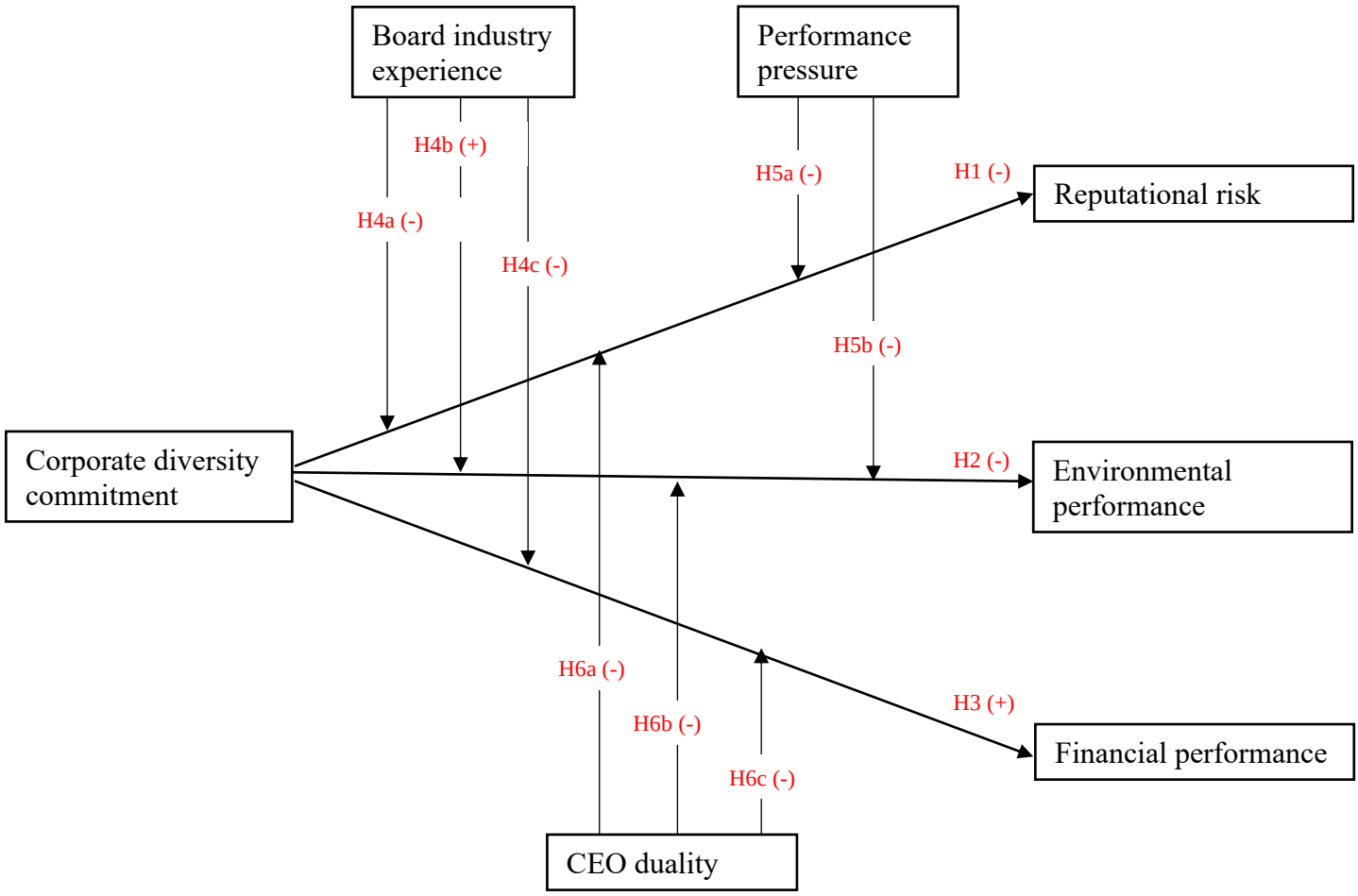
2.8 FIGURE 1: The Impact of Corporate Diversity Commitment



2.9 TABLE 1: Descriptive Statistics (Original Values)

Variables:	Mean	S.D.	Min.	Median	Max.
Reputational risks	23.92	17.38	0.00	26	87.00
Environmental performance	0.67	0.27	0.03	0.75	0.99
Financial performance	2.09	1.60	0.46	1.59	23.56
Board cultural diversity	0.18	0.10	0.00	0.17	0.69
Board gender diversity	0.22	0.11	0.00	0.21	0.80
Workforce diversity	0.44	0.47	0.00	0.32	4.23
Board industry experience	0.19	0.12	0.00	0.17	0.76
Performance pressure	0.02	0.05	0.00	0.00	0.80
CEO duality [a]	0.42	0.49	0.00	0.00	1.00
Globalization	0.25	0.21	0.00	0.24	0.69
Size	40955.14	170465.7	0.00	7679.58	3743567
Employees	369.6	1063.68	0.00	110.00	23000
Slack resource	1.60	2.05	0.00	1.39	90.46
Board independence	0.42	0.16	0.00	0.45	0.78
Female managers	0.09	0.16	0.00	0.00	0.89
Leverage	2.64	3.40	-19.11	2.01	20.45
Board size	10.34	2.32	1.00	10.00	35.00

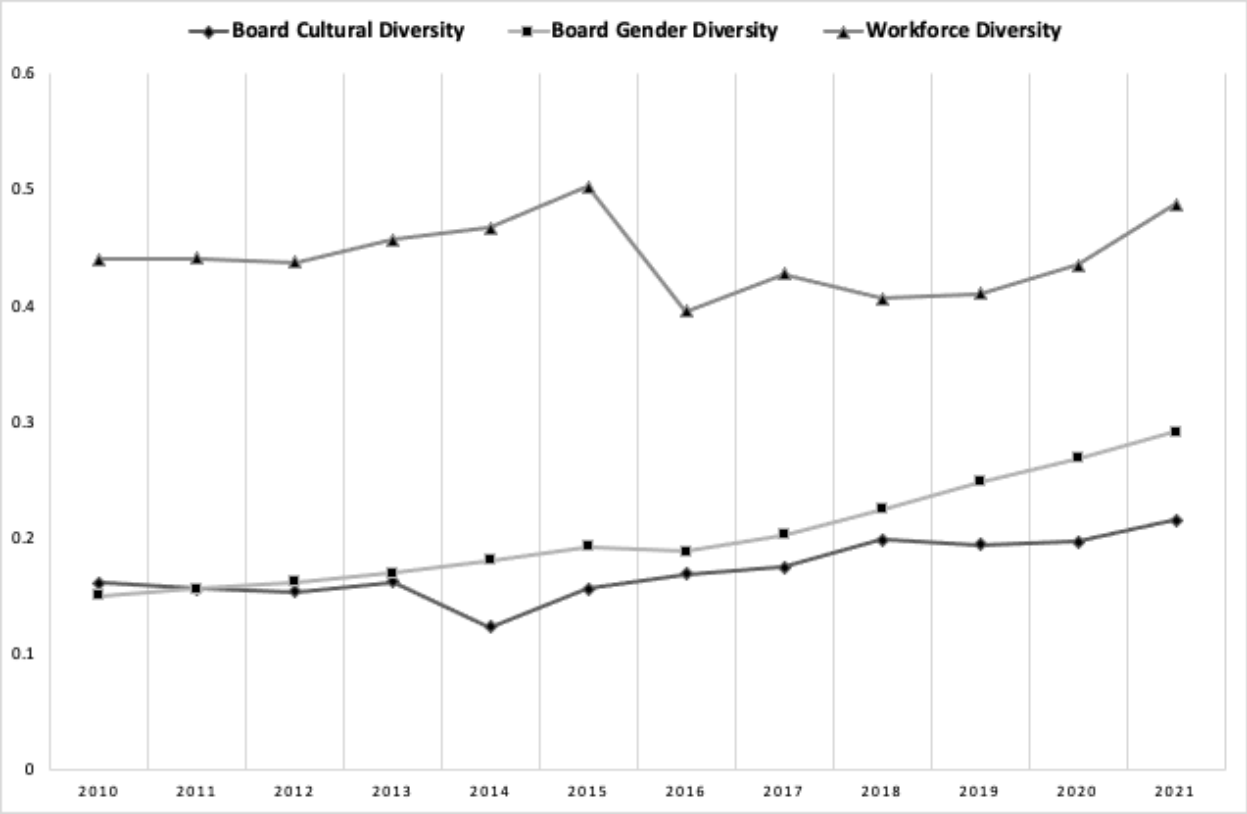
Note: [a] Binary variable.

2.9.1 TABLE 1.1: Descriptive Statistics (Transformed Values)

Variables:	Mean	S.D.	Min.	Median	Max.
Reputational risks	23.92	17.38	0.00	26	87.00
Environmental performance	0.67	0.27	0.03	0.75	0.99
Financial performance	2.09	1.60	0.46	1.59	23.56
Board cultural diversity [c]	0.00	0.10	-0.18	-0.01	0.51
Board gender diversity [c]	0.00	0.11	-0.22	-0.00	0.58
Workforce diversity [c]	0.00	0.47	-0.44	-0.12	3.79
Board industry experience [c]	0.00	0.12	-0.19	-0.02	0.58
Performance pressure [c]	0.00	0.05	-0.02	-0.02	0.78
CEO duality [a]	0.42	0.49	0.00	0.00	1.00
Globalization	0.25	0.21	0.00	0.24	0.69
Size [b]	8.99	1.84	0.00	8.95	15.14
Employees [b]	2.61	1.36	0.00	2.48	7.74
Slack resource	1.60	2.04	0.00	1.39	90.46
Board independence	0.42	0.16	0.00	0.45	0.78
Female managers	0.09	0.16	0.00	0.00	0.89
Leverage	2.64	3.40	-19.11	2.01	20.45
Board size [b]	2.98	0.30	0.00	3.00	4.01

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.

2.10 FIGURE 2: Trend of Diversity Commitment by Years



2.11 TABLE 2: Correlations

	1	2	3	4	5	6	7	8	9
1. Reputational risks	1.00								
2. Environmental performance	0.23 ***	1.00							
3. Financial performance	-0.04 ***	-0.03 *	1.00						
4. Board cultural diversity [c]	-0.11 ***	0.00	-0.07 ***	1.00					
5. Board gender diversity [c]	-0.00	0.28 ***	0.06 ***	0.06 ***	1.00				
6. Workforce diversity [c]	0.14 ***	0.27 ***	0.04 ***	-0.02 *	0.18 ***	1.00			
7. Board industry experience [c]	-0.10 ***	-0.20 ***	0.02	0.24 ***	-0.18 ***	-0.06 ***	1.00		
8. Performance press. [c]	0.02 *	-0.07 ***	-0.01	-0.00	0.01	-0.06 ***	0.04 ***	1.00	
9. CEO duality [a]	0.12 ***	0.10 ***	-0.03 **	-0.05 ***	0.03 **	0.04 ***	-0.13 ***	-0.06 ***	1.00
10. Globalization	0.09 ***	0.27 ***	0.12 ***	-0.05 ***	-0.03 *	0.06 ***	-0.01	0.06 ***	-0.01
11. Size [b]	0.38 ***	0.41 ***	-0.24 ***	-0.04 ***	0.15 ***	0.41 ***	-0.15 ***	-0.12 ***	0.17 ***
12. Employees [b]	0.41 ***	0.40 ***	-0.02	-0.12 ***	0.14 ***	0.29 ***	-0.23 ***	-0.07 ***	0.13 ***
13. Slack resource	-0.09 ***	-0.10 ***	0.21 ***	-0.03 **	-0.07 ***	-0.14 ***	0.05 ***	0.07 ***	-0.06 ***
14. Board independence	0.11 ***	-0.03 *	-0.01	0.41 ***	-0.03 **	-0.03 **	0.26 ***	-0.00	0.02
15. Female managers	0.15 ***	0.37 ***	0.04 ***	0.02	0.30 ***	0.30 ***	-0.12 ***	0.00	0.03 ***
16. Leverage	0.03 *	0.02 *	-0.20 ***	0.04 ***	0.04 ***	0.03 ***	-0.01	0.00	0.02 *
17. Board size [b]	0.32 ***	0.38 ***	-0.08 ***	-0.24 ***	0.13 ***	0.28 ***	-0.30 ***	-0.05 ***	0.10 ***

2.11 TABLE 2: Correlations (Continued)

10	11	12	13	14	15	16	17
1.00							
0.02	1.00						
0.20 ***	0.56 ***	1.00					
0.19 ***	-0.27 ***	-0.13 ***	1.00				
-0.01	0.06 ***	-0.00	0.01	1.00			
0.05 ***	0.31 ***	0.25 ***	-0.08 ***	0.01	1.00		
-0.13 ***	0.15 ***	-0.00	-0.10 ***	-0.00	0.08 ***	1.00	
0.09 ***	0.48 ***	0.41 ***	-0.20 ***	-0.30	0.20 ***	0.03 **	1.00

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
† $p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

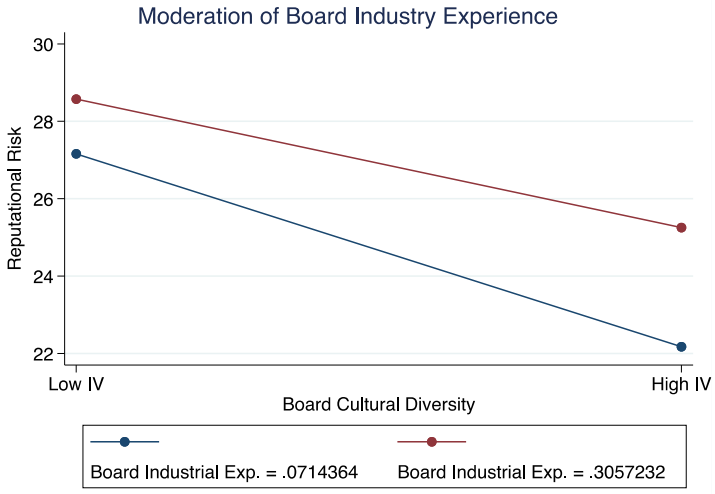
2.12 TABLE 3: Fixed Effect - Diversity Commitment and Reputational Risk

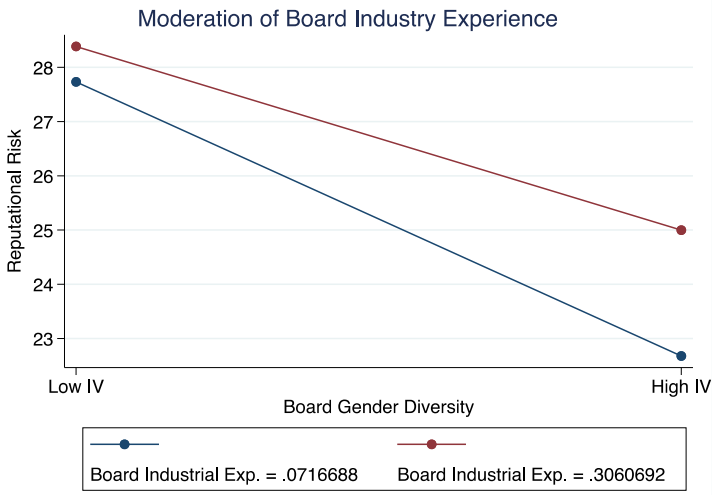
Fixed Effect Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	-9.97 **		
	(3.46)		
Board gender diversity [c]		-20.71 ***	
		(3.24)	
Workforce diversity [c]			-2.45 **
			(0.77)
Board industry experience [c]	7.67 **	4.26 †	5.73 *
	(2.42)	(2.43)	(2.38)
Board cultural diversity [c] * Board industry experience [c]	31.33 †		
	(18.07)		
Board gender diversity [c] * Board industry experience [c]		4.94	
		(16.35)	
Workforce diversity [c] * Board industry experience [c]			6.62 †
			(3.59)
Performance pressure [c]	22.22 ***	22.25 ***	22.74 ***
	(4.16)	(4.15)	(4.17)
Board cultural diversity [c] * Performance pressure [c]	88.03 *		
	(44.25)		
Board gender diversity [c] * Performance pressure [c]		94.31 *	
		(43.88)	
Workforce diversity [c] * Performance pressure [c]			23.71 *
			(6.92)
CEO duality [a]	-0.62	-0.45	-0.56
	(0.56)	(0.56)	(0.56)
Board cultural diversity [c] * CEO duality [a]	-2.45		
	(4.35)		
Board gender diversity [c] * CEO duality [a]		5.17	
		(4.20)	
Workforce diversity [c] * CEO duality [a]			-0.35
			(0.94)
Size [b]	-6.42 ***	-5.02 ***	-6.36 ***
	(0.81)	(0.84)	(0.82)
Employees [b]	10.19 ***	9.28 ***	10.30 ***
	(1.06)	(1.07)	(1.06)
Slack resource	0.42 †	0.30	0.36
	(0.24)	(0.24)	(0.24)
Board independence	-8.57 ***	-11.04 ***	-13.32 ***
	(2.37)	(2.03)	(2.00)
Female managers	-10.67 ***	-9.42 ***	-9.66 ***
	(1.50)	(1.51)	(1.51)
Leverage	0.07	0.10	0.08
	(0.07)	(0.07)	(0.07)
Board size [b]	5.27 ***	5.55 ***	5.32 ***
	(1.45)	(1.44)	(1.43)
Globalization	2.30	0.99	2.31
	(4.06)	(4.07)	(4.06)

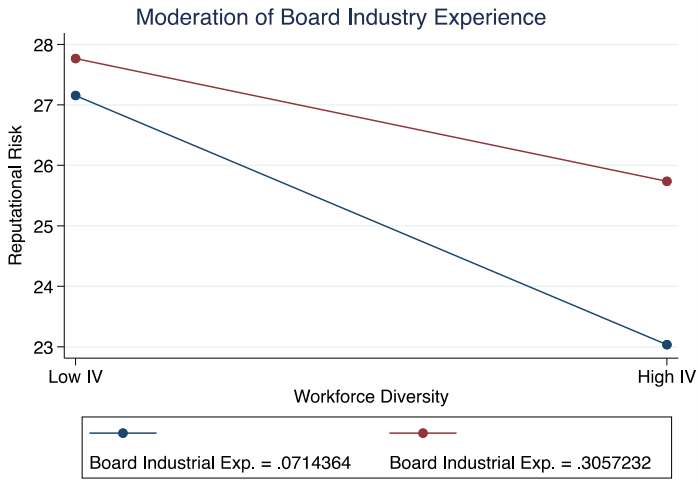
Industry dummies	Included	Included	Included
Constant	45.44 *** (7.13)	35.69 *** (7.30)	46.69 *** (7.08)
F-statistics	22.51	24.84	22.70
Observations	5,663	5,604	5,663

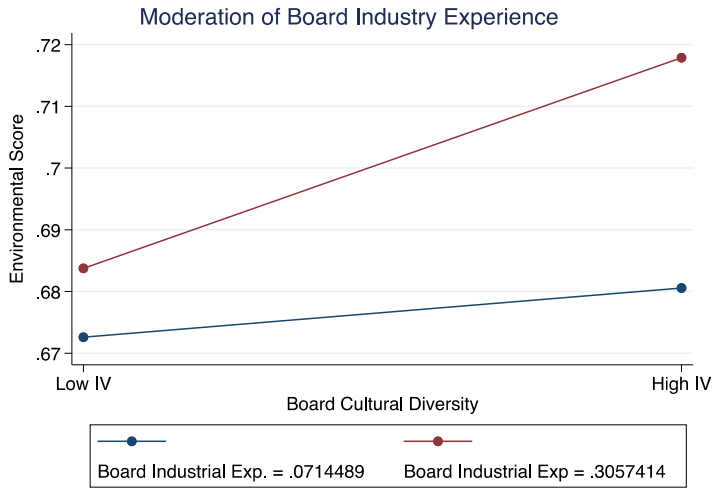
Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

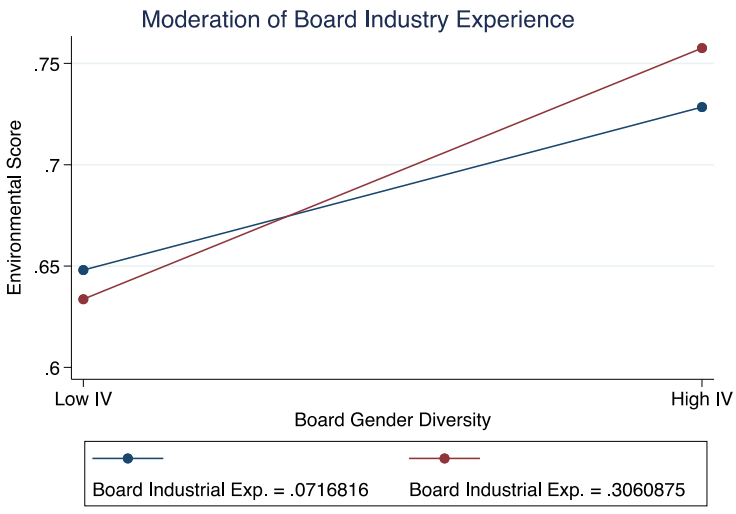
2.13 FIGURE 2: Moderation Effects of Board Industry Experience

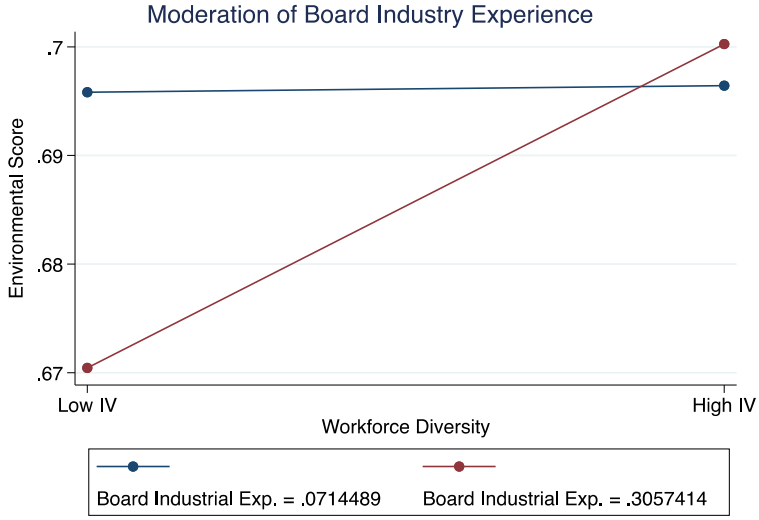












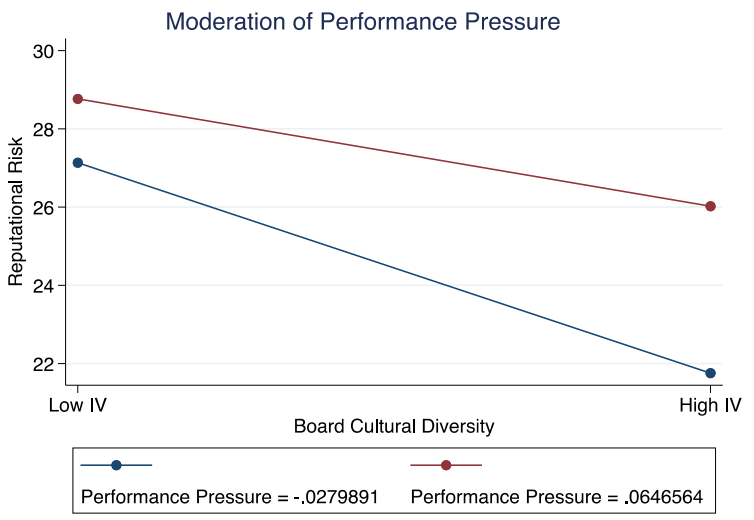
2.14 TABLE 4: Fixed Effect - Diversity Commitment and Environmental Performance

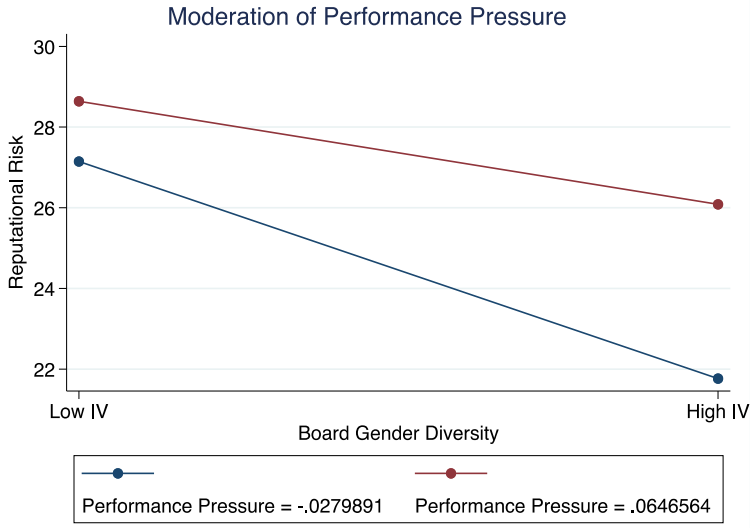
Fixed Effect Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	0.35 ***		
	(0.04)		
Board gender diversity [c]		0.48 ***	
		(0.04)	
Workforce diversity [c]			-0.00
			(0.01)
Board industry experience [c]	-0.07 *	0.05 †	-0.03
	(0.03)	(0.03)	(0.03)
Board cultural diversity [c] * Board industry experience [c]	0.98 ***		
	(0.22)		
Board gender diversity [c] * Board industry experience [c]		0.89 ***	
		(0.19)	
Workforce diversity [c] * Board industry experience [c]			0.11 *
			(0.04)
Performance pressure [c]	-0.16 **	-0.16 **	-0.15 **
	(0.05)	(0.05)	(0.05)
Board cultural diversity [c] * Performance pressure [c]	-1.27 *		
	(0.53)		
Board gender diversity [c] * Performance pressure [c]		-0.47	
		(0.52)	
Workforce diversity [c] * Performance pressure [c]			-0.13
			(0.12)
CEO duality [a]	-0.02 **	-0.02 **	-0.03 ***
	(0.00)	(0.01)	(0.01)
Board cultural diversity [c] * CEO duality [a]	-0.18 **		
	(0.05)		
Board gender diversity [c] * CEO duality [a]		-0.03	
		(0.05)	
Workforce diversity [c] * CEO duality [a]			0.03 **
			(0.01)
Size [b]	0.14 ***	0.10 ***	0.15 ***
	(0.01)	(0.01)	(0.01)
Employees [b]	-0.03 *	-0.01	-0.04 **
	(0.01)	(0.01)	(0.01)
Slack resource	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Board independence	0.05 †	0.02	0.09 ***
	(0.03)	(0.02)	(0.02)
Female managers	0.19 ***	0.16 ***	0.20 ***
	(0.02)	(0.02)	(0.02)
Leverage	0.00 *	0.00 †	0.00 *
	(0.00)	(0.00)	(0.00)
Board size [b]	-0.02	-0.05 **	-0.04 *
	(0.02)	(0.02)	(0.02)
Globalization	-0.06	-0.02	-0.08
	(0.05)	(0.05)	(0.05)
Industry dummies	Included	Included	Included

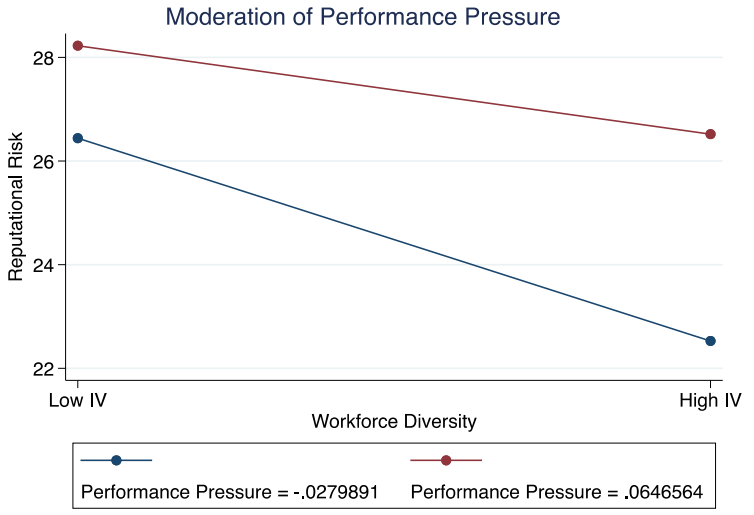
Constant	-0.43 *** (0.09)	-0.10 (0.09)	-0.45 *** (0.09)
F-statistics	55.73	66.57	48.96
Observations	5,663	5,604	5,663

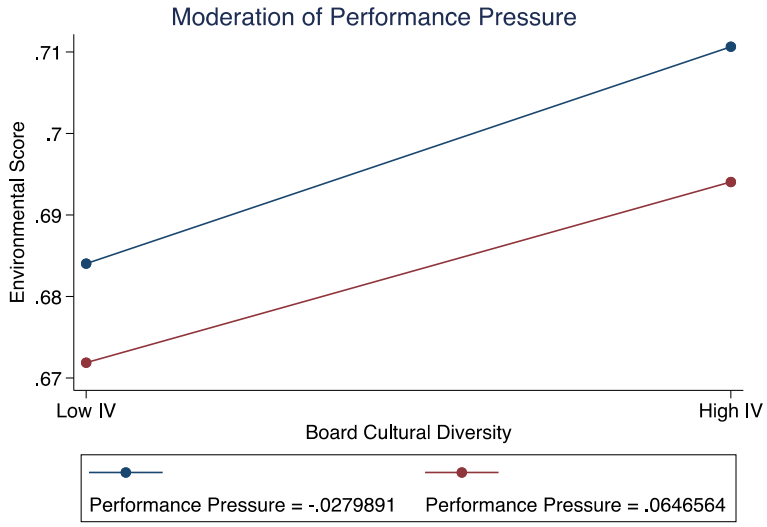
Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

2.15 FIGURE 3: Moderation Effects of Performance Pressure







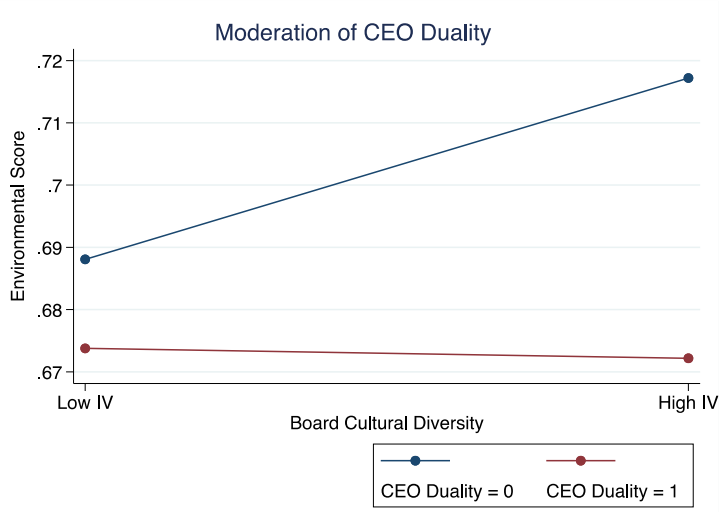


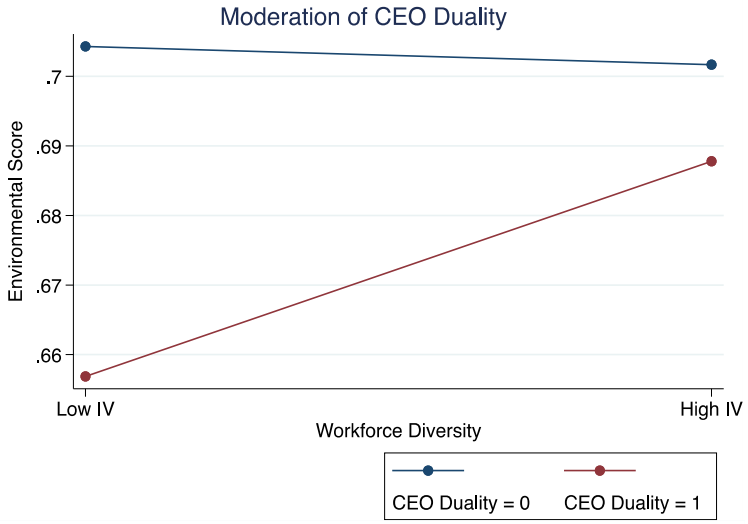
2.16 TABLE 5: Fixed Effect - Diversity Commitment and Financial Performance

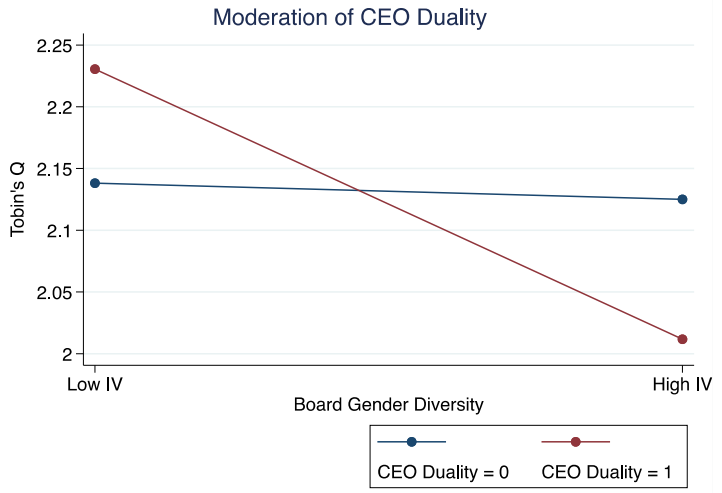
Fixed Effect Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	-0.24 (0.24)		
Board gender diversity [c]		1.88 *** (0.23)	
Workforce diversity [c]			0.25 *** (0.06)
Board industry experience [c]	-0.39 * (0.16)	-0.25 (0.17)	-0.41 * (0.16)
Board cultural diversity [c] * Board industry experience [c]	0.01 (1.21)		
Board gender diversity [c] * Board industry experience [c]		0.28 (1.14)	
Workforce diversity [c] * Board industry experience [c]			-0.25 (0.27)
CEO duality [a]	-0.02 (0.04)	-0.02 (0.04)	-0.03 (0.04)
Board cultural diversity [c] * CEO duality [a]	0.28 (0.30)		
Board gender diversity [c] * CEO duality [a]		-0.98 ** (0.29)	
Workforce diversity [c] * CEO duality [a]			0.15 * (0.07)
Size [b]	-0.11 † (0.06)	-0.26 *** (0.06)	-0.16 ** (0.06)
Employees [b]	0.23 ** (0.08)	0.31 *** (0.08)	0.23 ** (0.08)
Slack resource	-0.01 (0.02)	-0.00 (0.02)	-0.01 (0.02)
Board independence	0.38 * (0.16)	0.15 (0.14)	0.34 * (0.14)
Female managers	0.43 *** (0.11)	0.30 ** (0.11)	0.30 ** (0.11)
Leverage	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Board size [b]	-0.19 † (0.10)	-0.22 * (0.10)	-0.19 † (0.10)
Globalization	-0.67 * (0.27)	-0.52 † (0.27)	-0.62 * (0.27)
Industry dummies	Included	Included	Included
Constant	3.06 *** (0.48)	4.34 *** (0.50)	3.51 *** (0.48)
F-statistics	3.72	9.23	7.24
Observations	5,645	5,584	5,645

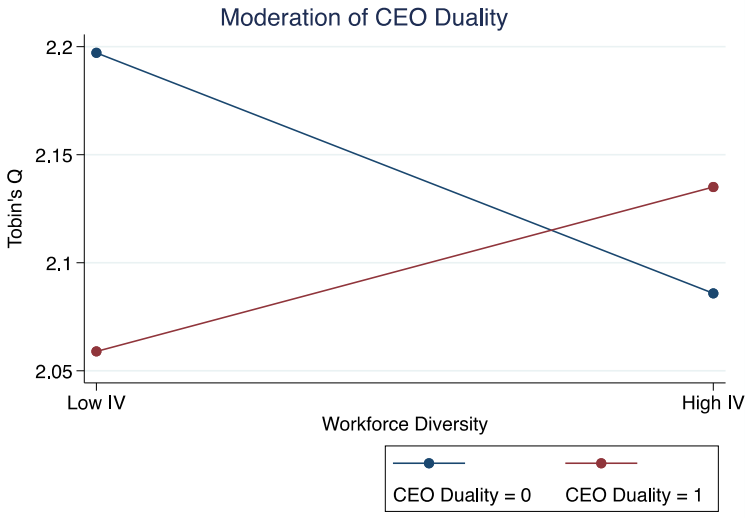
Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

2.17 FIGURE 4: Moderation Effects of CEO Duality









2.18 TABLE 6: Mixed Effects - Diversity Commitment and Reputational Risk

Mixed Effects Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	-14.49 *** (3.54)		
Board gender diversity [c]		-23.04 *** (3.31)	
Workforce diversity [c]			-1.99 ** (0.71)
Board industry experience [c]	9.02 *** (2.51)	4.71 † (2.51)	6.71 ** (2.50)
Board cultural diversity [c] * Board industry experience [c]	14.31 (20.05)		
Board gender diversity [c] * Board industry experience [c]		18.29 (19.47)	
Workforce diversity [c] * Board industry experience [c]			11.11 ** (3.80)
Performance pressure [c]	27.03 *** (4.87)	25.63 *** (4.86)	26.84 *** (4.87)
Board cultural diversity [c] * Performance pressure [c]	110.27 * (49.20)		
Board gender diversity [c] * Performance pressure [c]		157.24 ** (53.85)	
Workforce diversity [c] * Performance pressure [c]			24.46 * (11.40)
CEO duality [a]	1.04 † (0.55)	1.41 * (0.56)	1.14 * (0.56)
Board cultural diversity [c] * CEO duality [a]	-3.89 (4.81)		
Board gender diversity [c] * CEO duality [a]		-1.27 (4.76)	
Workforce diversity [c] * CEO duality [a]			-0.54 (0.96)
Size [b]	3.13 *** (0.38)	3.12 *** (0.39)	3.29 *** (0.39)
Employees [b]	3.81 *** (0.42)	3.90 *** (0.43)	4.01 *** (0.43)
Slack resource	0.65 ** (0.20)	0.62 ** (0.20)	0.67 ** (0.20)
Board independence	-5.03 * (2.49)	-8.03 *** (2.16)	-11.15 *** (2.14)
Female managers	-10.93 *** (1.52)	-8.93 *** (1.56)	-10.39 *** (1.54)
Leverage	-0.02 (0.08)	0.00 (0.08)	-0.02 (0.08)
Board size [b]	4.97 *** (1.29)	5.78 *** (1.29)	5.74 *** (1.28)
Globalization	5.69 ** (1.89)	5.45 ** (1.95)	6.27 ** (1.91)

Lagged reputational risk	0.04 * (0.02)	0.04 † (0.02)	0.04 † (0.02)
Industry dummies	Included	Included	Included
Constant	-24.80 *** (4.71)	-25.86 *** (4.73)	-26.05 *** (4.72)
Log-likelihood	-16206.17	-15976.10	-16212.20
Wald Chi-squared	1044.72 ***	1044.73 ***	1009.00 ***
Observations	4,064	4,013	4,064

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

2.19 TABLE 7: Mixed Effects - Diversity Commitment and Environmental Performance

Mixed Effects Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	0.21 ***		
	(0.04)		
Board gender diversity [c]		0.15 ***	
		(0.04)	
Workforce diversity [c]			-0.01
			(0.01)
Board industry experience [c]	0.03	0.07 **	0.06 *
	(0.03)	(0.03)	(0.03)
Board cultural diversity [c] * Board industry experience [c]	0.75 ***		
	(0.21)		
Board gender diversity [c] * Board industry experience [c]		0.80 ***	
		(0.20)	
Workforce diversity [c] * Board industry experience [c]			0.08 *
			(0.04)
Performance pressure [c]	-0.24 ***	-0.22 ***	-0.22 ***
	(0.05)	(0.05)	(0.05)
Board cultural diversity [c] * Performance pressure [c]	-1.38 **		
	(0.49)		
Board gender diversity [c] * Performance pressure [c]		-1.06 †	
		(0.55)	
Workforce diversity [c] * Performance pressure [c]			0.05
			(0.11)
CEO duality [a]	0.01	0.00	0.00
	(0.01)	(0.01)	(0.01)
Board cultural diversity [c] * CEO duality [a]	-0.08		
	(0.05)		
Board gender diversity [c] * CEO duality [a]		0.01	
		(0.05)	
Workforce diversity [c] * CEO duality [a]			0.02 †
			(0.01)
Size [b]	0.02 **	0.02 ***	0.02 **
	(0.00)	(0.00)	(0.01)
Employees [b]	0.01 †	0.01 †	0.01 †
	(0.01)	(0.01)	(0.01)
Slack resource	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Board independence	-0.07 **	-0.08 ***	-0.06 **
	(0.03)	(0.02)	(0.02)
Female managers	0.10 ***	0.09 ***	0.11 ***
	(0.02)	(0.02)	(0.02)
Leverage	0.00 *	0.00 †	0.00 *
	(0.00)	(0.00)	(0.00)
Board size [b]	0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
Globalization	0.15 ***	0.15 ***	0.14 ***
	(0.02)	(0.02)	(0.02)

Lagged environmental performance	0.30 *** (0.01)	0.30 *** (0.02)	0.31 *** (0.01)
Industry dummies	Included	Included	Included
Constant	0.31 *** (0.06)	0.37 *** (0.06)	0.35 *** (0.06)
Log-likelihood	2360.32	2322.37	2337.42
Wald Chi-squared	1462.17 ***	1473.59 ***	1419.79 ***
Observations	4,034	3,989	4,034

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† $p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

2.20 TABLE 8: Mixed Effects - Diversity Commitment and Financial Performance

Mixed Effects Model	Model 1	Model 2	Model 3
Board cultural diversity [c]	-0.55 *		
	(0.27)		
Board gender diversity [c]		1.47 ***	
		(0.26)	
Workforce diversity [c]			0.21 ***
			(0.06)
Board industry experience [c]	-0.41 *	-0.35 †	-0.49 **
	(0.19)	(0.19)	(0.19)
Board cultural diversity [c] * Board industry experience [c]	0.08		
	(1.44)		
Board gender diversity [c] * Board industry experience [c]		2.77 *	
		(1.41)	
Workforce diversity [c] * Board industry experience [c]			0.16
			(0.30)
CEO duality [a]	0.01	0.02	-0.00
	(0.04)	(0.04)	(0.04)
Board cultural diversity [c] * CEO duality [a]	0.32		
	(0.34)		
Board gender diversity [c] * CEO duality [a]		-0.70 †	
		(0.36)	
Workforce diversity [c] * CEO duality [a]			0.16 *
			(0.07)
Size [b]	-0.08 *	-0.10 *	-0.11 **
	(0.04)	(0.04)	(0.04)
Employees [b]	0.03	0.04	0.01
	(0.04)	(0.04)	(0.04)
Slack resource	-0.03 *	-0.03 †	-0.03 *
	(0.02)	(0.02)	(0.02)
Board independence	0.52 **	0.25	0.39 **
	(0.18)	(0.15)	(0.15)
Female managers	0.46 ***	0.33 **	0.35 **
	(0.12)	(0.12)	(0.12)
Leverage	-0.02 ***	-0.02 ***	-0.02 ***
	(0.01)	(0.01)	(0.01)
Board size [b]	-0.20 †	-0.19 †	-0.18 †
	(0.10)	(0.10)	(0.10)
Globalization	0.55 **	0.66 **	0.57 **
	(0.19)	(0.19)	(0.19)
Lagged financial performance	0.49 ***	0.48 ***	0.48 ***
	(0.02)	(0.02)	(0.02)
Industry dummies	Included	Included	Included
Constant	1.57 ***	1.88 ***	1.91 ***
	(0.44)	(0.44)	(0.43)

Log-likelihood	-4242.69	-4183.33	-4229.03
Wald Chi-squared	1036.40 ***	1064.03 ***	1068.87 ***
Observations	3,308	3,264	3,308

Note: [a] Binary variable. [b] Variables that are natural-logged. [c] Variables that are mean-centered.
Unstandardized coefficients are reported, with standard errors in parentheses.
† p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Essay 3: Corporate Responsibility Devolvement: What it is and How it has been Sustained

ABSTRACT

In this study, I focus on an important yet overlooked phenomenon: firms have devolved some of their product- or service-related responsibilities to consumers, while they could have managed that part of responsibilities more efficiently. Such responsibility devolvement often turns consumers into offenders of accidents or failures who are seen as failed to manage the risks in using a product or service. Firms can thereby prevent loss in their legitimacy during the crises and questions. I aim to understand the phenomenon of responsibility devolvement. I also explore potential mechanisms that sustain responsibility devolvement considering stakeholder challenges about these practices. I first define the phenomenon of responsibility devolvement. I then develop a model. I explore four mechanisms, including ease of market segmentation, aids for responsibility taking, attribution of governmental responsibility, and preferred sense of control by customers.

Keywords:

Responsibility devolvement, stakeholder challenges, ease of market segmentation, aids for responsibility taking, attribution of government responsibility, preferred sense of control by customers.

3.1 INTRODUCTION

Have you ever wondered about why car manufacturers do not limit the vehicle speed to 120k/h so that you never need to worry about speeding on highway? Doing so helps prevent speeding and reduce traffic accidents, lowering the costs associated with traffic causalities and insurance claims. Unfortunately, the way it works now is that drivers are held accountable for all accidents, rather than automobile firms, unless manufacturing defects are involved in few cases. Similarly, the consumption of junk food has raised health concerns, such as obesity. Instead of reducing or stopping producing junk food or high-sugar drinks, food and beverage firms offer organic alternatives and diet beverages (Pinkse et al., 2019). So, this becomes the responsibility of customers to live a healthy lifestyle and contribute to a sustainable society (Song & Kim, 2018; Yu et la., 2021). Likewise, when people listen to music or watch TV shows, it is up to them to manage the volume and content appropriateness for their preferences.

The examples mentioned above illustrate the phenomenon of devolving the responsibility of managing risks associated with a product or service to customers, albeit to varying extents. I refer to such phenomenon as corporate responsibility devolvement. However, corporate responsibility devolvement encounters challenges as customers may suffer harm. For example, customers may not always effectively take on this devolved responsibility, as evident in the case of managing vehicle speed. Speeding remains a persistent and lethal issue, contributing to nearly a third of all traffic fatalities in the U.S. over the years (National Safety Council, 2020). In many instances, customers may misuse a product in ways unintended by manufacturers, leading to harm to customers. Customers may be blamed for accidents resulting from not exercising caution or following instruction properly (Reich et al., 2020). Furthermore, devolving responsibility to customers generates unnecessary social costs associated with customer self-

regulation. So, challenges to the practice of responsibility devolvement are likely to arise from stakeholders, particularly customers.

Therefore, the present study seeks to understand how corporate responsibility devolvement has been sustained overtime considering stakeholder challenges towards such practice. Firm often needs to transfer certain responsibilities to customers to manage product risks. From a legitimacy perspective (Suddaby et al., 2017), devolving responsibility may help firm avoid legitimacy loss during negative events. By devolving responsibility to customers, firm can avoid being solely blamed for product accidents. This may be particularly relevant in cases where accidents pose significant threats to safety or result in substantial economic losses. Responsibility devolvement helps firm safeguard their legitimacy at the onset of a product-related crisis. Additionally, from an engineering ethics standpoint (Fleddermann & Sanadhya, 1999), manufacturers are not morally obligated to eliminate all inherent risks in a product, as it is practically impossible to create a risk-free product. Even a safe product can lead to accidents if used inappropriately. As end-users, customers need to share the responsibility of managing risks in product usage (Martin & Schinzinger, 1996).

I make three main contributions to the existing literatures. First, I define a significant but yet overlooked phenomenon of organizational responsibility devolvement. To my best knowledge, no scholars have explicitly examined this phenomenon of organizational responsibility devolvement to customers. Second, I discover a few mechanisms that are believed to sustain responsibility devolvement. Finally, my study contributes to the ongoing discussion on responsibility attribution for negative outcomes of a product, which has been a topic of debate over time (e.g., Herrick, 2009; Lenzen et al., 2007).

3.2 THEORETICAL BACKGROUNDS

3.2.1 What is Corporate Responsibility Devolvement?

I define corporate responsibility devolvement as an industry's practice by which the responsibility for controlling risks of using a product or service, while it could be better managed by firms offering the product or service, has been transferred to the hands of the customers. The risks involved may vary depending on the industry or product in question. For example, in the food and beverage industry, risk often revolves around food health and safety concerns. In the industries like banking or e-commerce, risk may manifest as financial or economic losses experienced by customers. Moreover, in the consumer electronics industry, risk may pertain to environmental damage caused by waste and pollution.

Meanwhile, it is important to distinguish between two aspects of risk in product usage. One aspect is related to product failure, involves accidents resulting from defective or inferior products (Liu et al., 2022). In such cases, customers can hold manufacturers or firms legally accountable for any negative outcomes. However, my study focuses on the product risk associated with customer's inappropriate use or consumption of a product or service, such as speeding, overconsuming junk food, and so on. In these situations, the responsibility for managing product risks is devolved to customers themselves. This is a set of responsibilities that would be subsumed to the framework of corporate social responsibility (CSR) (Carroll, 1979), only that it does not include many of the discretionary responsibilities in the framework like philanthropy and poverty alleviations because these are larger social challenges beyond direct organizational influence.

Specifically, I conceptualize corporate responsibility devolvement as encompassing three dimensions. First, it involves a socially acknowledged responsibility to prevent negative

outcomes associated with using a product or service. For example, it is widely acknowledged the responsibility of adhering to speed limit and promoting road safety. Likewise, there is a responsibility to ensure food safety and mitigate health-related issues. Second, customers feel a sense of guilt when accidents occur. Customers feel guilty as they believe they have failed to fulfill responsibility in preventing avoidable accidents. Lastly, there is a backward attribute on of responsibility from customer to the firm offering the product or service. These three dimensions together form the concept of corporate responsibility devolvement.

Customer's feeling of guilt implies that responsibility devolvement has taken place. Customers somewhat consider themselves the ones to be blamed for the negative outcomes. For instance, drivers may express emotions like guilt, sadness, and remorse following speeding accidents. Similarly, patients suffering from hearing damages may feel guilty and regretful about their habit of listening to loud music, which gradually contributed to their hearing problems (Hunter, 2018). Likewise, people may feel guilty about their obesity, and blame themselves for indulgent eating habits, such as overconsuming foods high in sugar or calories (Wansink & Chandon, 2006). Moreover, studies also suggest that moral norms make customers feel guilty about their waste behaviours, such as food wastes (Stancu et al., 2016; Stefan et al., 2013) or e-wastes. Feeling of guilt may arise in various contexts like incurring overdraft fees. Such guilty emotion stems from the belief that negative outcomes could have been avoided if customers had appropriately managed product usage or regulated their behaviours.

In certain examples, a responsibility might be shared between firms and customers (Lenzen et al., 2006; Schlaile et al., 2018), although customers often bear a greater portion of this responsibility. For example, when consumption contributes to negative environmental externalities, such as greenhouse gas emissions, both producers and customers share the

responsibility (Lenzen et al., 2006). Similarly, Welch et al. (2021) argue for a shared responsibilities between customers and retailers in addressing food waste issues. In the e-commerce industry, customers are tasked with avoiding counterfeit or low-quality products, even though some product information and customer reviews are provided. Hamelin et al. (2013) also propose that tackling counterfeit goods issues online requires a shared responsibility among various actors, including customers, businesses, and governments. A summary of some prominent cases of corporate responsibility devolvement is provided in Table 1.

Insert Table 1 about here

To my best knowledge, no scholars have yet explicitly examined this phenomenon of corporate responsibility devolvement to customers. However, there are a few scholars who discuss responsibility devolvement at the societal level, focusing on the issue of institutional decentralization. For instance, Higgins et al. (2016) examine how biosecurity governance has shifted from the central government to a broader range of social actors, including farmers and private organizations. Further, Konefal and Mascarenhas (2005) argue that the responsibility for promoting food safety has shifted from the state to many private actors in the retail sector, such as supermarket chains, who bear increasing responsibility for ensuring food safety and quality. In the realm of workplace health and safety, Gray (2009) discusses the movement of "responsibilization" or "equal partnership", which has made individual employees, instead of employers, offenders of safety regulations. While these studies touch on shift or transfer of responsibility in different contexts, the phenomenon of corporate responsibility devolvement to customers remains an area that warrants further exploration.

3.2.2 The Challenges of Responsibility Devolvement

Corporate responsibility devolvement leaves some risks in the product to let customers manage. Accident resulting from product usage is very likely to evoke customer anger and disappointment. For example, customers expect product to be function safely as intended. Product accident signifies a failure in meeting customer expectation, leading to a sense of disappointment (Hai-Salem & Chebat, 2014). As mentioned earlier, product accident may cause harm, injury or economic loss to customers, which might result in frustration and other negative emotions.

Therefore, customers are likely to challenge the practice of responsibility devolvement. Customers may question why the burden of managing risks is primarily placed on them rather than manufacturers or service providers. Especially, firms are expected to hold more knowledge or expertise than customers regarding the potential risks associated with a product or service. In addition, customers may think that responsibility devolvement is a sort of tactic to absolve firms of accountability and shift the blame to customers during a negative event. In a study of firm's response to obesity issue, Pinkse et al. (2019) argue that food company shifts the responsibility away from its core business to customers by pointing at the importance of food choice, healthy lifestyle, and physical exercise. Overall, product accident triggers customer's negative emotions, coupled with concerns regarding fairness or effectiveness of responsibility devolvement, may contribute to different forms of challenges.

For example, customers who have had negative experiences with a firm's product or service may intentionally harm the firm by posting negative reviews on social media platforms (Obeidat et al., 2017; Tripp & Gregoire, 2011). Since online reviews are often available to the public, such negative feedback may significantly damage a firm's legitimacy (Obeidat et al.,

2017). These online complaints may target the product itself, criticizing its design and suggesting that it could have been better to avoid accidents. In some cases, customers may direct their complaints towards a large firm, holding it as a role model within its industry. A large firm typically has a greater influence and market presence than other small or medium firms in an industry. Customers may expect prominent players in an industry to set higher standards for product safety and quality. To illustrate, I have provided a few examples of customer complaints sourced from social media in table 2. These quotes exhibit the challenges that firm faces as a result of customer dissatisfaction and public criticism.

Insert Table 2 about here

In addition, major firms in various industries may face lawsuit due to product accident. Such lawsuit also challenges the practice of responsibility devolvement. For example, in 2006, Apple Inc. received its first lawsuit when a customer claimed to have suffered hearing problems due to the high-volume levels of iPods (Childers, 2008). Moreover, in 2019, the U.S. Court of Appeals made a significant decision in the case "Oberdorf vs. Amazon.com", allowing a customer to proceed with a strict products liability claim against e-commerce platform regarding an allegedly unsafe product (Sharkey, 2020). Furthermore, in 2021, TD banks agreed to pay $41.5 million to settle a class-action lawsuit alleging the unlawful charging of overdraft fees to clients. In the same year, Bank of America settled a case by paying $75 million to account holders who claimed the bank had overcharged them in overdraft fees (Ennis, 2021). Additionally, Kellogg Inc. has also faced lawsuits regarding its junk food advertisements targeting children, as concerns for obesity epidemic in the U.S. continue to grow (Levin & Levin, 2010).

In summary, major firms in different industries have encountered legal challenges through lawsuits filed by customers. Customers seek accountability for accidents or negative consequences associated with the use of firm's products or services. These examples of lawsuit further underscore the potential challenges or liabilities that firms may face when responsibility devolvement is questioned or disputed.

3.3 DATA FOR RESPONSIBILITY DEVOLVEMENT

To explore potential mechanisms that help mitigate stakeholder challenges, and sustain responsibility devolvement, I read and observe from the textual data. In particular, I focus on textual data from the five leading newspapers in both the U.S. and Canada. A total of 814 newspapers are obtained from 2000 to 2021. The three U.S. newspapers include The Wall Street Journal, The New York Times, and The Washington Post. Scholars use these U.S. newspapers to study corporate events and activities considering their national impact and importance to business field (e.g., Flammer, 2013; Noack et al., 2019; Taeuscher et al., 2021). I also search data from two premier Canadian newspapers: Toronto Star and The Globe and Mail, which have a great converge of corporate news (Shipilov et al., 2019). All five newspapers in my study are holding the high popularity and influence in their respective countries.

To collect this data, I use the keywords to search for articles. The keywords remain unchanged during the search of one responsibility example in all five newspapers categories. They are adjusted to accommodate other different cases. Following the previous studies (Carlos & Lewis, 2018; Flammer, 2013), my search string combines three parts: ("responsibility" OR "responsible" OR "blame" OR "liable") plus (indicators of an event/issue) plus (the product of focus) within the same paragraph. Specifically, the first part is fixed and applies to searching for

all responsibility examples. The other two parts are adjusted to accommodate each individual case. To clarify, for the responsibility to manage vehicle speed: (indicators of an event/issue) could be "speeding"; (the product of focus) could be "vehicle". I also consider basic variations during the searching (e.g., for "speeding", I also search for "overspeed", "race", "speed limit" and "speed").

In addition, I focus on social media data from Twitter. A total of 2,191 tweets are obtained from 2010 to 2021. Twitter was available to public in July 2006. The first major growth milestone of Twitter's users was in 2010 after which the number of users has been growing over years (Deen & Pan, 2022). Also, people discuss freely and might frame the messages differently in terms of words and phrases on social media platform. To deal with the flexibility in the texts (Etter et al., 2017), I also follow previous scholars' strategy to include hashtags along with some keywords to obtain the Twitter data (Barbera-Tomas et al., 2019). Adding a hashtag in search allows to locate a group of conversations of interest regardless of how people frame texts, such as "#speeding". Table 3 provides a few exemplary data from both newspapers and Twitter to illustrate some responsibility devolvement cases.

Insert Table 3 about here

3.4 MECHANISMS IN SUSTAINING RESPONSIBILITY DEVOLVEMENT

In this section, I will discuss the mechanisms that contribute to sustaining corporate responsibility devolvement. I will also incorporate few original quotes from the data. As depicted in figure 1, two mechanisms are associated with corporate practice, including ease of market segmentation and aids for responsibility taking. In addition, two mechanisms from the

perspective of government and customers, which are attribution of governmental responsibility and preferred sense of control by customers. I believe these mechanisms help mitigate the challenges towards responsibility devolvement and sustain such practice.

Insert Figure 1 about here

3.4.1 Ease of Market Segmentation

Market segmentation involves a firm's strategy to categorize customers into different groups based on their characteristics or preferences (Wiedmann et al., 2009). Ease of market segmentation refers to the degree of ease to offer new product in market segments. Firm offers a new product with a social cause embedded, specifically targeted at a particular segment, while maintaining their conventional product lines to serve other segments (Balderjahn et al., 2018; Dangelico & Pontrandolfo, 2010).

Market segmentation not only allows firm to tap into a new market and expand its customer base (Haydu & Skotnicki, 2016), but also mitigate the challenges to the firm's traditional business. The existence of identifiable market segments enable firm to tailor its offerings more effectively. For example, in the food and beverage industry, firm offers organic food products and zero-sugar beverages to customers alongside traditional counterparts to serve different segments. Also, aligning products with the preferences of specific customer groups enables firm to encourage customer's responsible consumption behaviours.

First, responsibility devolvement can be sustained because firm highlights customer responsibility in managing consumption behaviours by offering diverse product choices. Customers can support social causes by choosing products embedded with a social cause

(Hensen et al., 2016; Onel et al., 2018). For example, in response to environmental concerns, certain industries, like automobiles and food, have been criticized for their negative environmental footprints. As a remedy, firms now provide eco-friendly alternatives such as electric vehicles and organic foods alongside traditional options. This shifts responsibility to customers to make environmentally conscious choices. In this regard, the concept of "Consumer Environmental Stewardship" encourages customers to take responsibility for the environment by changing their consumption behaviours. If customers are concerned about the traditional product's negative environmental impact, they bear responsibility for choosing eco-friendly alternatives (Hustvedt & Dickson, 2009; Luchs et al., 2015). Customers are free to make choices. So, it would be less reasonable for customers to solely blame firms for negative outcomes resulting from a traditional product.

The texts below suggest that firms in the food industry segment customers by offering a healthier alternative in addition to traditional foods. Responsibility is devolved to customers to prevent negative outcomes associated with traditional foods by changing their consumption behaviours:

> "According to Lyons, whose parent company owns organic packaged food brand Seeds of Change, the company's products are designed to introduce consumers to organic ingredients. A key part of that strategy is making sure their flavoured and plain rice packets are in the packaged foods aisle of the supermarket, rather than in a separate health food or organic section. The company recognizes that Canadians want more organic foods - and strives to make them easier to find". (n.d., 2020, The Globe and Mail).

> "General Mills' gluten-free Bisquick pancake and baking mix has fewer calories and sodium than the original version but contains 3 grams of sugar versus the original version's 1 gram. … A General Mills spokeswoman said that while wheat flour is typically enriched with vitamins and minerals, many of the specialty flours used in gluten-free products aren't. 'Following a gluten-free diet is advised for the percentage of the population with celiac disease,' the spokeswoman said. 'I leave the ultimate choice with the consumer.'" (Jargon, J., 2014, Wall Street Journal).

> "… food companies including Nestlé SA, Unilever PLC and Brazilian meatpacking conglomerate JBS SA also aim to use their test kitchens and distribution networks to make meat imitations. Those efforts will hasten meat alternatives' move into the mainstream, said Bruce Friedrich, executive director of the Good Food Institute, a Washington-based group that promotes plant versions of meat and dairy products. 'It messages to meat eaters, this is a product for you,' Mr. Friedrich said." (Bunge, J., 2019, Wall Street Journal).

Second, ease of market segmentation enables firms to identify customer segments that may be more likely to pose challenges to traditional business lines. Paul and Rana (2012) show that the customers' health concerns and education level positively affect their favorable attitudes towards organic foods. Likewise, Yadav (2016) suggests that customers driven by their self- or social identities as eco-friendly customers are likely to demand organic foods. These customer segments are likely to challenge or attack a firm's traditional food business (Pinkse et al., 2019). However, simply stopping or reducing traditional foods sales may harm a firm's profitability. Firms need to balance between addressing customers concerns for obesity and promoting their core business, which many rely on foods with high sugar or fat (Pinkse et al., 2019). By introducing healthier alternatives, firm demonstrates its responsiveness to customer demands, reducing the likelihood of further intensified challenges.

Finally, firms can safeguard their traditional business lines by highlighting customer segments that are less inclined to purchase eco-friendly product alternatives (Park & Lin, 2020). Despite the availability of green alternatives, traditional products like gasoline-powered vehicles still dominate the marketplace (White et al., 2019). The overall market demanding green products remains small (Gulzari et al., 2022). For example, electric vehicle sales accounted for less than 5% of total passenger vehicles sold in the U.S. in 2021 (International Energy Agency, 2022). This may be attributed to the green attitude-behavioural gap in which customers' pro-social attitudes do not always translate into actual consumption (Dhir et al., 2021). Several

factors, such as premium pricing or customer unfamiliarity, hinder customers from purchasing green products, including organic foods (Danner & Menapace, 2020; Sana, 2020). In this regard, firms may mitigate the challenges towards traditional business lines by underscoring the demand from certain customer segments. So, responsibility devolvement can be sustained in a way that firms can keep both product types available and let customers to make a choice.

3.4.2 Aids for Responsibility Taking

Aids for responsibility taking refers to firm's strategy aimed at assisting customers to effectively take devolved responsibilities. This involves helping customers manage risks in product usage and prevent negative outcomes. Aids for responsibility taking could take place through various means, such as providing information about possible risks, enhancing product attributes, or collaborating with customers to address specific issues.

First, firm provides aids for responsibility taking through upgrading product design or using technology to prevent negative incidents. For example, many automobile firms have used cruise control systems in certain vehicle brands, enabling drivers to manage speed more effectively. Schleicher and Gelau (2011) confirm the effectiveness of such technology in reducing speed limit violations. Similarly, Apple Inc. introduces the IOS 13 operating system in its device to alert users when the sound volume is too loud (CNBC, 2020). This is to respond to concerns of hearing damage that could result from loud volume. The decision to limit the volume still remains with customers. Likewise, in the banking industry, many banks have introduced overdraft protection plans to assist clients in avoiding overdraft situations. In these examples, firm aids customers to manage product risk. Without these aids, negative incidents would have likely increased. So, the likelihood of the firm being blamed for such incidents is also reduced, thus reducing the challenges towards responsibility devolvement.

The texts below indicate that firms in different industries use technologies or upgrade their product design to help customers manage product risks. For example, in the automobile industry, firms upgrade their vehicle design to assist drivers to manage vehicle speed:

> "Ford Motor calls its new safety technology for teenage drivers "MyKey." … MyKey allows parents to limit teen drivers to a top speed of 80 miles per hour, or just under 130 kilometers per hour, cap the volume on the car stereo, demand seat belt use and encourage other safe-driving habits." (Bunkley, N., 2018, New York Times).

> "Tesla went above & beyond what any car manufacturer has ever done. They even dedicated the subsequent Speed Limit Mode to the driver (undeserved). The kid had previously also been speeding at 112 mph. Responsibility lies with parents/driver." (2019-Christian).

Moreover, in the consumer electronics industry, firms incorporate noise cancellation features into their products to reduce the likelihood of customers using devices at high sound volumes. This design assists customers to promote responsible usage of the products to protect their hearing. In this regard, customers are responsible to take care of their well-being while using the devices:

> "Earbuds that offer active noise cancellation are expensive but even safer, audiologists say. Apple's AirPods Pro, Amazon's Echo Buds and Samsung's Galaxy Buds all have technology that blocks outside noise. … the AirPods Pro and the Echo Buds did the best job of drowning out the sound of a hair dryer. Limit the volume on the devices themselves." (Jargon, J., 2021, Wall Street Journal).

Further, in the e-commerce industry, firms utilize advanced technologies to track and identify counterfeit goods being sold on their websites. Doing so, firms assist customers to verify the authenticity of the products they intend to purchase. Customers thus can be more effective in exercising vigilance to avoid buying counterfeit items:

> "Amazon, which has been under pressure from shoppers, brands and lawmakers to crack down on counterfeits on its site, said Monday that it blocked more than 10 billion suspected phoney listings last year before any of their offerings could be sold. The numbers were released in Amazon's first report on its anti-counterfeiting efforts since it announced new tools and

> technologies in 2019. The number of blocked phoney listings last year was up about 67 per cent from the year before." (n.d., 2021, Toronto Star).

Second, aids for responsibility may take the form of increasing customer awareness regarding product risks through providing relevant information. Firms enhance customer understanding and promote proper usage of a product or service. For example, tobacco companies display health warning messages on product package to inform customers about the risk of smoking. Similarly, to prevent screen addictions, Apple Inc. has enabled their devices to display the weekly screen time report. Further, e-commerce firms have made the customer rating and reviews available on their platforms. Customers can use the information to evaluate the product's quality. Avoiding fake and inferior products is growingly relying on customers' own diligences and judgements in online shopping (Buiten et al., 2020). Likewise, organic food logos have been made straightforward, and are evidently labelled in the food package alongside other nutrition facts to help customers compare the food products.

For example, the texts below indicate that firms in some industries make information related to potential product risks available to customers. Customers may rely on such information to better manage product risks, and take the devolved responsibilities. In the consumer electronics industry, firms provide notifications to remind customers to adjust sound volume with their devices:

> Twitter-11-2019-Mile: "If you have an iPhone and have updated your phone to iOS 13, check out the hearing section in the Health app! Thanks @Apple for bringing awareness to hearing loss and the importance of hearing healthcare!".
>
> Twitter-01-2021-Meme: "you have to see it from apples perspective, if they didn't notify you and you suffered hearing loss it could result in lawsuits, whereas if they tell you and you choose to ignore it they can't be held responsible.".

Further, in the banking industry, banks provide information to alert clients regarding the overdraft fees. Banks ensure clients are able to make decisions with a pre-understanding on overdraft services:

> "Consumers who try to exceed their balance when making an A.T.M. withdrawal are already being notified that they will be charged a $35 overdraft fee if they choose to proceed." (Martin, A., 2010, New York Times).
>
> "A Wells Fargo spokeswoman said the bank has adhered to a 2010 regulation that requires customers to opt into overdraft protection. She added that procedures "all clearly demonstrate" to customers that 'this is an optional service that requires specific customer consent prior to enrollment'." (Andriotis, A., 2016, Wall Street Journal).

Moreover, in the media and entertainment industry, firms provide information to viewers regarding the nature of the content in TV shows or movies. This information serves as a notice, helping viewers make informed decisions about whether the content is suitable for their preferences and sensitivities. In this regard, viewers are encouraged to use this provided information to make choices that align with their personal tastes and value:

> "Netflix said it already had a guidance system in place, including a feature that can prevent children from viewing certain content. "The service includes ratings guides and episode synopses to help people make informed choices about what is right for them and their families. …" a company spokeswoman said." (Resty Woro, Y., 2016, Wall Street Journal).
>
> "… Netflix created a warning video that will run before each season. The video, which features the show's actors out of character, explains that the series deals with issues including sexual assault, substance abuse and suicide. It suggests that if a viewer is struggling with these issues, he or she may want to avoid the show or watch it with a trusted adult …" (Libbey, P., 2018, New York Times).

Overall, in these examples, firm aids customers' responsibility taking by reducing information asymmetry between the business and the customers. Information asymmetry refers to the imbalanced knowledge or expertise between two parties to evaluate a situation (Johnsen & Ford, 2008). A decreased information asymmetry reduces the dependence of customers on a firm for achieving the goals (Chen et al., 2013). Conversely, when customers lack awareness of

product-related risks, they are more likely to encounter these risks (Burton & Creyer, 2004). Aids for responsibility taking empowers customers in the decision-making. So, customers are more capable of making the beneficial decisions regarding using or buying a product. That is, customers become more capable of taking on a devolved responsibility for prevent negative incidents themselves. Therefore, responsibility devolvement practices could be sustained.

Finally, aided responsibility-taking fosters a notion of shared responsibility between businesses and customers, although customers typically bear a heavier burden (Lenzen et al., 2006; Schlaile et al., 2018). Firms reduce the challenges of responsibility devolvement, as certain responsibilities belong jointly to both businesses and customers to prevent negative outcomes. This notion of shared responsibility is particularly prominent concerning environmental issues, such as product waste (Lenzen et al., 2006). For instance, Apple Inc. established a trade-in program to recycle its devices that would otherwise end up in landfills. H&M Inc. introduced a garment collection program, enabling consumers to donate their clothing at any local store worldwide. In 2020, this initiative collected 18,800 tons of unwanted clothes, equivalent to 94 million T-shirts (H&M website, 2022). By offering such programs, firms aid customers in taking responsibility and create opportunities or platforms for them to do so. However, the effectiveness of firms' recycling programs depends on customer cooperation. If customers choose not to participate, the efforts to address product waste issues may not yield the desired outcomes.

The texts below highlight that firms in consumer electronics industry provide opportunities and platforms to assist customers in waste management. Both firms and customers share the responsibility, working together to reduce e-wastes and promote sustainable practices:

> "HP expanded its product return program with the introduction of a new rechargeable-battery recycling program in Canada and the U.S. This enables customers to drop off their batteries at any of its 32,000 retail locations for free. The program covers rechargeable batteries found in most laptops and handhelds, as Ill as some cameras and printers." (Lima, P., 2007, The Globe and Mail).

> "Once it's time to get rid of that old computer, there are options for consumers to dispose of it responsibly. Most computer manufacturers have recycling programs. Dell recycles any of its products free. Consumers who buy a Dell PC can have their old computer recycled regardless of the manufacturer, too. Lenovo charges consumers $30 (U.S.), including shipping, to recycle a computer made by any manufacturer. In exchange, consumers get a $50 rebate to buy Lenovo products." (De Avila, J., 2008, The Globe and Mail).

3.4.3 Attribution of Government Responsibility

Attribution of government responsibility refers to the scenario in which incidents can be conveniently attributed to government. So, firms may somehow escape from being blamed for negative outcomes, since public attention is not on them. Responsibility devolvement can thus be maintained.

First, when an issue poses significant and visible threats to the general public, people often call for government intervention. Protecting citizens from dangers and ensuring public safety is one of most fundamental responsibilities of a government. Since the government collects taxes from society, it is obligated to allocate resources to promote public safety (Lederman, 2007). Consequently, if negative accidents occur, blame may be directed at the government instead of firms for perceived failures in preventing these issues. For instance, the long-standing danger of speeding has posed a severe threat to public safety. In response, governments are urged to not only regulate drivers' behavior, but also impose safety responsibilities on system designers, including road administrations, vehicle manufacturers, and other transport professionals (McAndrews, 2013). Meanwhile, people often look to the government for societal-level solutions to reduce speeding incidents, such as installing speeding

cameras, deploying police forces, and imposing strict fines and penalties. These actions are believed to be more effectively implemented by the government due to its superior role in enforcing regulations (Jing et al., 2022).

The following texts indicate that the public shifts its focus from blaming firms to questioning the effectiveness of governmental policy in addressing speeding-related accidents. As a result, firms are now less likely to be held solely responsible for such incidents:

> "The repeal of the national 55-mile-per-hour speed limit has made American highways a much deadlier place. … The "failed policy of increased speed limits," researchers write, was to blame for an estimated 12,500 deaths over a 10-year period. Their report appears in The American Journal of Public Health." (Nagourney, E., 2009, New York Times).
>
> "Safety advocates say the government has failed to keep up with the trend. … federal regulators ignore speed safety in favor of promoting seat belts and discouraging drunken driving. … 'We feel that's because drivers are driving more aggressively, including speeding. Speeding is a big problem and something we need some national leadership on'." (Schneider, C., 2004, Washington Post).

Second, for issues with potential large-scale impacts on society, such as climate change, people expect the government to find solutions (Kulin & Seva, 2019). In my examples, product waste problems, like electronic, food, or apparel waste, are often linked to climate change concerns. In the U.S., solid waste generation reached approximately 292.4 million tons in 2018, or 4.9 pounds per person per day, directly contributing to greenhouse gas emissions and climate change (EPA, 2022). Similarly, conventional farming practices and gasoline-powered vehicles are also accused of exacerbating climate change. In this regard, according to a 2020 survey by Pew Research Center, about two-thirds of Americans expressed dissatisfaction with the federal government's efforts to address climate change issues (Tyson & Kennedy, 2020). Moreover, addressing issues like climate change requires collaborative efforts from multiple actors in society (Howard-Grenville et al., 2014). Government may enforce laws and policies, coordinate

various stakeholders, and facilitate collective action on environmental issues (Kulin & Seva, 2019). As a result, stakeholders are more likely to shift blame towards the government rather than firms regarding climate change-related matters.

The following texts suggest that the public holds the government accountable for not providing adequate solutions to address waste issues in the consumer electronics industry. As a result, firms are less likely to bear the sole responsibility for these environmental concerns:

> "In the absence of U.S. legislation, the TakeBack coalition is working to persuade manufacturers to accept returns of their products for free and recycle them voluntarily. Several computer companies have agreed to do so; but so far, Sony is the only television manufacturer to adopt such a policy." (Gies, E., 2008, New York Times).

> "There is no national legislation for recycling electronics - this is a provincial matter, and nearly impossible to coordinate nationally. Last year, the Information Technology Association of Canada and Electro-Federation Canada banded together a number of companies to create Electronics Product Stewardship Canada (EPS Canada), a not-for-profit organization that deals intelligently with e-waste." (Kapica, J., 2004, The Globe and Mail).

Finally, the issue may involve multiple firms in the industry, stakeholders look towards the government for more impactful solutions. This may cause perceptions of government policies being failed or less effective, thus leading to blames. Obesity in the U.S. has affected approximately 14.7 million adolescents and children from 2017 to 2020, raising national concern (Centers for Disease Control and Prevention, 2022). While high sugar and calorie ingredients in food products contribute to the issue, blaming a single company is unrealistic since the entire food industry operates similarly. Consequently, people may attribute responsibility for resolving these issues to a powerful entity like the government who is capable of influencing the entire industry. However, the government often faces challenges in setting and enforcing regulations to prompt substantial changes in food product attributes. Firms may lobby against proposed governmental policies aimed at addressing obesity, particularly if it affects their core business

(Pinkse et al., 2019). When negative incidents occur, people may blame the government for not taking sufficient responsibility to solve the problem. As a result, firms can, to some extent, evade scrutiny from stakeholders and continue their responsibility devolvement practices.

For example, the following texts indicate public calls government to take responsibility to address food health issues affecting the society:

> Twitter-11-2018-David: "Food choices ingrained, marketing small but important part, it's food companies responsibility how food over years has become more unhealthy, their job to make it less unhealthy but government too weak to enforce rules on them as they rely on their party funding".
>
> Twitter-01-2020-Bradley: "If the government really wants to do something about the obesity epidemic then maybe they should, I don't know, regulate the sugar industry? Or work to make healthier food more affordable? But I suppose it's easier for them to just blame fat people".

3.4.4 Preferred Sense of Control by Customers

Preferred sense of control refers to the scenario in which customers desire some control in enjoying a product or service. In such case, firms are less likely to face challenges, because customers are willing to take devolved responsibilities.

First, customers may be more willing to accept risk in order to gain convenience and joy of using a product. For instance, despite high interest fees, overdraft services provide the convenience of accessing extra funds when bank accounts are insufficient. Young drivers' risky behaviors, such as speeding, might be motivated by their sensation-seeking tendencies (Dahlen et al., 2005), as they seek varied, novel, complex, and intense experiences (Leary & Hoyle, 2009). Similarly, people may listen to loud music to enhance their feeling of excitement, find happiness in consuming junk food, and experience relaxation through smoking cigarettes. In all these examples, customers willingly manage risks because they perceive benefits in doing so. If firms were to exert full control over how a product should be used, certain benefits would undoubtedly

be lost. Therefore, preferred sense of control allows firms to encounter less resistance in sustaining responsibility devolvement to customers.

For example, the following texts indicate that customers willingly accept the risks of potential hearing problems to enhance their enjoyment while using a product:

> Twitter-06-2019-Steve: "Apple, I don't want you measuring my hearing health. I listen to death metal, my hearing is already shot. If anything I need for you to crank up the volume on your products so I can further damage it. Max volume is still too quiet".
>
> Twitter-12-2020-jzhzdz: "Apple turning music volume down has ruined my car journeys. Let me damage my hearing in peace man".

Second, customers may exhibit a great sense of personal responsibility to prevent negative incidents themselves, such as speeding accidents (Fleiter et al., 2010). For instance, drivers feel personally responsible for preventing speeding accidents since they have control over managing vehicle speed. This sense of responsibility motivates drivers to prioritize traffic safety and prevent accidents related to speeding. Further, customers feel responsible for buying counterfeit or fake goods online because customers fail to exercise enough caution. Moreover, sense of personal responsibility may make customers more caring for broad social and environmental aspects, leading them to manage their consumption behaviours (Aslihan Nasir & Karakaya, 2014; Yadav; 2016). When customers feel a strong personal responsibility, they are less likely to shift blames on to others, including firms, for negative outcomes. This is because they recognize their role in ensuring the responsible use of products and acknowledge the impact of their decisions or actions. Therefore, responsibility devolvement could be sustained.

The following texts highlight that customers demonstrate a sense of responsibility to avoid purchasing counterfeit goods online by exercising caution:

> Twitter-01-2013-Justin: “Ugh I paid for a fake Q Scrabble mug on ebay & its my fault because I didn't read closely and I'm going to be annoyed everytime I look at it”.
>
> Twitter-03-2018-Emma: “I bought a DS game of Ebay. One that I have been after for a long time. I got it and found it was fake. It was my own fault though, I wasn't thinking”.

Similarly, drivers bear the responsibility of preventing speeding accidents as they have the capability to manage their vehicle speed. They tend to feel a sense of duty to promote traffic safety and prevent accidents:

> Twitter-07-2020-Ayera: “If I got caught speeding, I wouldn’t blame the car manufacturer for making a fast car. When will people take responsibility for their actions rather than finding others to blame”.
>
> Twitter-06-2020-Annette: “I wish people were as cautious with their cars as they w guns. Cars can be used as weapons. Driving JUST over 40 mph can kill someone. Speeding is not smart. Pay attention. Be mindful that you are responsible for those around you when you’re driving”.

In conclusion, there are four key mechanisms that help mitigate stakeholder challenges, and sustain the practice of responsibility devolvement. Table 4 provides additional data examples for each mechanism.

Insert Table 4 about here

3.5 DISCUSSIONS

My study makes three main contributions. First, I define a significant yet overlooked phenomenon of corporate responsibility devolvement. This is a novel aspect of CSR in which firms shift the burden of responsibility onto customers. Doing so, my research highlights the relationship between firms and customers, adding depth to existing studies on stakeholder management (Barney & Harrison, 2020; Dmytriyev et al., 2021). While existing literature emphasizes firm’s responsibility to promote customers' wellbeing and prevent product accidents

(Dmytriyev et al., 2021), my study reveals an alternative perspective. It uncovers instances where customers are blamed for product accidents, turning them into offenders rather than recognizing their role as victims. There are also significant social costs associated with customer self-regulations to manage the risks in using a product.

Second, I discover mechanisms that sustain responsibility devolvement practices. Two of these mechanisms relate to corporate practices: the ease of market segmentation and aids for responsibility taking. I advance the perspective corporate crisis management perspective (Hampel & Tracey, 2017; Godfrey et al., 2009) by discussing how firms can manage negative incidents associated with responsibility devolvement. These firm practices reinforce the perspectives of customer free choice and customer capability in preventing negative outcomes. Equally important, attribution of government responsibility highlights the scenario in which stakeholders may direct the blame to the government, thereby reducing the scrutiny on firms. Further, customer's preferred sense of control looks at customer perspective. Customers are willing to accept risks in exchange for joy or convenience, thus enabling responsibility devolvement to be sustained.

Third, my study enriches discussion regarding the responsibility attribution and who should be held accountable for negative outcomes of a product, a topic that has been debated over time (Hay & Spier, 2005; Herrick, 2009). Notably, the Extended Producer Responsibility (EPR) framework argues that firms need to bear more responsibilities in reducing the negative impacts of their products (Hickle, 2014; Lenzen et al., 2007). On the other hand, other studies emphasize consumer stewardship and stress customers' responsibilities, particularly concerning sustainability (Hensen et al., 2016). In this regard, my study offers fresh perspectives on the

dynamics of responsibility attribution by uncovering the shift of responsibility from the firm to customers. This also indicates new challenges in the context of corporate social responsibility.

My study also has several limitations. First, my study does not explore how such phenomenon of responsibility devolvement may change overtime. As awareness of product-related risks evolve, firms may reassess their responsibility devolvement. Customers increasingly demand for safer products and sustainable practices, which could influence firms to adjust the extent to which they devolve responsibilities. For example, Volvo announced that starting in 2020, the company will impose a top speed limit at 180k/h on their cars (CBC, 2019). The firm takes a step to take responsibilities to manage their vehicle speed and prevent accidents. Likewise, in 2022, Nestle Inc. reduced sugar in beverages under some of its brand by 25% (Nestle Health Science, 2022). So, future research may adopt longitudinal approach to identify potential patterns or trends that represent how responsibility devolvement, such as its degree and range, may change overtime.

Another limitation of my study is the lack of focus on industry-specific characteristics associated with responsibility devolvement. Although I explore several cases across industries, I do not address whether firms in certain industries might be more inclined to devolve responsibilities in managing product risk than others. Additionally, the severity and legitimacy of the focal issues in each case may differ in the eyes of stakeholders (Sonenshein, 2006). For example, increasing attention to environmental issues could have implications for the automobile and food industries concerning their product risks. Future research should consider industry-specific factors when exploring responsibility devolvement. Researchers may gain a more comprehensive understanding of the dynamics of responsibility devolvement and identify potential variations in practices across sectors. This will contribute to a more nuanced and

practical understanding of how firms can effectively sustain responsibility devolvement strategies in specific industries.

The final limitation of my study is that the mechanisms identified are based on my reading and observation of data from newspapers and social media, without empirical analysis. This aligns with my goal of discovering the phenomenon of responsibility devolvement, while also identifying potential mechanisms that sustain these practices. In future research, a more robust approach could involve utilizing large-scale datasets to empirically examine the dynamics of responsibility devolvement and identify additional mechanisms.

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3.7 TABLE 1: Examples of Responsibility Devolvement

The Industries:	Responsibility at Focus	Devolve or Share
Automobile industry	Responsibility to manage vehicle speed and prevent speeding.	Consumer/driver
	Responsibility to promote green consumptions (e.g., purchase electric vs. traditional vehicles).	Consumer
Consumer electronics industry	Responsibility to manage the device (e.g., iPod) sound volume.	Consumer
	Responsibility to manage screen time / prevent screen addictions.	Consumer
	Responsibility to reduce the consumer electronics waste.	Shared, asking more from consumer
E-commerce industry	Responsibility to avoid buying fake or inferior products online.	Shared, but more to consumer
Banking industry	Responsibility to avoid bank account overdraft	Consumer
Entertainment and mass media industry	Responsibility to manage the appropriateness of content (e.g., viewer discretion).	Consumer
Food and beverage industry	Responsibility to reduce the unhealthy/junk food consumption.	Consumer
	Responsibility to promote food products of social causes (e.g., organic food).	Consumer
Retail industry	Responsibility to reduce the grocery waste (including the food waste).	Shared, asking more from consumer
Apparel industry	Responsibility to reduce the apparel/clothing waste.	Shared, asking more from consumer
Tobacco industry	Responsibility to prevent tobacco-induced health issues.	Consumer

3.8 TABLE 2: Exemplary Complaints from Social Media

Responsibility to manage vehicle speed.	**Twitter-12-2014-Idnesdayspice**: "If I'm not alloId 2 drive 140 mph [wh]y the **** does my car even go 140 mph!!! don't blame me 4 speeding blame whoever makes cars!!!"
	Twitter-02-2014-Amanda: "I blame all my speeding tickets on my car. It's nearly impossible not to speed in it."
Responsibility to manage the device sound volume.	**Twitter-07-2018-Cadie**: "I blame the majority of my hearing loss from vibing too hard on my iPod Nano back in the day."
	Twitter-08-2010-Britney: "MP3s 'to blame' for hearing loss: MP3 players may be to blame for hearing loss in six and a half million teenagers!!!"
Responsibility to avoid counterfeit products on e-commerce.	**Twitter-12-2021-Dawne**: "Am I the only one bothered by the fact that the CDC tells us to check to ensure I're not buying counterfeit stuff on Amazon because Amazon apparently takes no responsibility for scammers selling fake stuff ON THEIR OWN PLATFORM???"
	Twitter-10-2020-Sbai48: "AMAZON needs to take some responsibility for marketing counterfeit products! When the average consumer starts to feel an aversion to using Amazon for this reason there's a problem."
Responsibility to reduce the consumer electronics waste.	**Twitter-04-2021-roja**: "If phones are practically vital nowadays then companies should learn how to reduce electronic waste, you really can't blame the consumer."
	Twitter-09-2018-YoWhoNo: "Every phone and computer. Every consumer electronics company should be responsible for the waste their product creates."
Responsibility to reduce the unhealthy food consumptions.	**Twitter-04-2021-Lucy**: "Obesity is the number one cause of a bad outcome for health conditions. Your company causes obesity. Your company is partly responsible for the death of MILLIONS! I need to dismantle highly addictive, zero-nutrition food products also!"
	Twitter-03-2017-Blod: "The food companies are largely responsible for our sugar addiction and so they must take responsibility for fixing it."
Responsibility to manage account balance and avoid overdraft fees.	**Twitter-02-2021-Jazz**: "... overdraft fees are criminal. Banks made over 8 billion dollars in overdraft fees. That's insane."
	Twitter-12-2020-Angelica: "I'll truly never understand the logic behind charging bank fees, overdraft fees, late fees, etc. It's positioned as a 'responsibility' thing but it seems like it's to charge people who have less more so they can't get ahead."

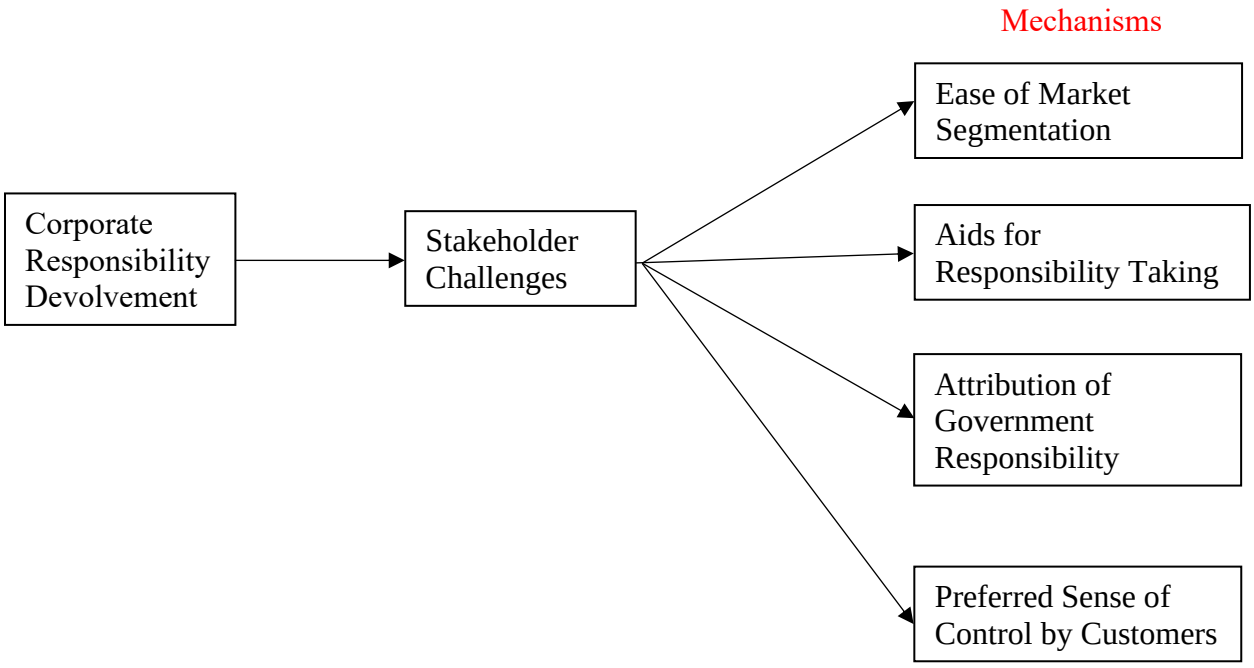
Responsibility to manage screen time/ prevent screen addiction.	**Twitter-10-2021-Arsen**: "Dear Tim Cook, the responsibility of Apple as maker of screen devices is enormous. I personally believe that screen time and internet addiction is number 1 cause of mental issues at the moment. I'm not here to blame anybody, but something needs to be done. I'm addicted too."
	Twitter-01-2018-Zoe: "After shareholders raised concerns about smartphone addiction among children, now Apple investors are voicing worries. Screen addiction is a real issue for parents who want their kids to be both connected and safe & developers need to be responsible."
Responsibility to reduce the grocery waste (including food waste).	**Twitter-08-2019-Patel**: "The burden of reducing food waste responsibility does not solely fall on the shoulders of the consumer. Food retailers should also be working toward a more sustainable future."
	Twitter-09-2018-Bridgethorne: "More than nine in 10 shoppers believe it is supermarkets' responsibility to play a larger role in reducing food waste, according to new research."
Responsibility to reduce apparel/clothing waste.	**Twitter-07-2020-Amber**: "Fast fashion retailers should take responsibility for their own clothing waste ... Cheap clothes are being thrown away faster than ever before."
	Twitter-07-2019-NRRIC: "60,000 tonnes of donation waste going to landfill. Clothing manufacturers & retailers need to step up & take responsibility for garments they put on the market."

3.9 TABLE 3: Exemplary Data for Each Responsibility Devolvement Practice

	Newspapers (selected paragraphs from the news):	Twitter (tweets):
Responsibility to manage vehicle speed.	"Ultimately, **it may not be the responsibility of Chevrolet, but rather of owners**, not to violate state laws. With a top speed of 178 miles per hour, it's easy for the car to exceed posted limits, but Chevrolet is not responsible for owners who choose to speed. 'I think speeding is a great analogy", professor Wasserman said. "**The liability would rest with the driver**. What's unlawful is how I used the device'." (Quain, J., 10-12-2014, New York Times).	"admitting responsibility. And next time I get a speeding ticket I'm asking my car manufacturer to pay for it. I'm not the one that made it go this fast, they did. Sames goes if I get a DUI. They should have made a car that wouldn't allow that". (Twitter-02-2021-Chris).
Responsibility to control the device sound volume.	"Headphone manufacturers aren't interested in the health of your child's ears, they are interested in selling products, and some of them are not good for you. '**It may be premature to blame music players**', Dr. Portnuff said. Still, he added, '**we know that a substantial segment of the population choose hearing levels that put them at risk for hearing loss**'." (Louis, C., 12-06-2016, New York Times).	"This boy's life has been severely altered because Apple did not provide a warning about the volume levels of its AirPods, leading to his permanent hearing loss, said the family's attorney. Do you think Apple is to blame for the child's hearing loss?" (Twitter-05-2021-Antonio).
Responsibility to reduce the consumer electronics waste.	"The E.P.A. in partnership with many retailers, manufacturers and service providers, will **introduce a public education campaign aimed at getting consumers to recycle those phones**. E.P.A. is providing **a standardized message to consumers**, 'our key role is to get the message out, that recycling cellphones is easy and convenient'." (Deutsch, C., 01-08-2008, New York Times).	"Not only plastic, we have electronic waste which has caused a lot of damage not only to the environment but also people's lives, all electronic companies should take responsibility to control E-waste Microsoft Sony ToshibaUSA IBM SamsungMobileUS Apple." (Twitter-10-2021-Ian).
Responsibility to avoid buying fake or inferior goods on E-commerce.	"Hani Durzy, an eBay spokesman, said **eBay was not responsible for determining whether each product sold on the site was fake**. "As a marketplace, we never take possession of any of the goods sold on the site, so it would be impossible for us to solely determine the authenticity of an item", Mr. Durzy said. 'And **we go above and beyond what the law requires us to do to keep counterfeits off the site**'." (Hafner, K., 11-27-2007, New York Times).	"Do you have common sense or any sense of responsibility? Amazon is biggest fake Network in the world. you only play with your customers." (Twitter-06-2020- Rohitparjanya).
Responsibility to avoid the overdraft costs.	"It may also be possible to ask the bank to eliminate the overdraft courtesy service. Certainly free market purists take the position that **the responsibility lies with consumers not to overspend their income**. But after a period when banks have taken so little responsibility for risk, it is hard for many experts to justify their nickel and diming behavior. "The bottom line," said Sullivan, '**is that consumers have to be on their toes'**." (Reier, S., 02-15-2008, New York Times).	"Just so everyone knows, overdraft protection is a service. so when you decide to make a purchase for more than what's in your account, the bank takes responsibility & pays the rest. you can't blame a bank for your overdrafting habits. Its literally the same concept as interest." (Twitter-01-2019-CaitlynAyres).
Responsibility to manage screen time/prevent screen addiction.	"As for controlling the time children spend on digital media, **the Harvard guide states emphatically that it is the parents' responsibility**: 'Since the devices can be turned on anytime, you as a parent need to monitor their use, keep track of time, and then make sure the agreed upon rules are followed'." (Brody, J., 07-13-2015, New York Times).	"An interesting point: "He says it is "hypocritical" of big tech companies to put the responsibility of limiting screen time on the users, when devices and algorithms are designed to be addictive." Is this asking the lions to look after the lambs?" (Twitter-04-2021-gary).
Responsibility to manage the	"Parents, when they're not trying to prevent children from sneaking into restricted films …, must now become masters of site-blocking and password installation, all the better to shield you with, my dear. If B.C.'s **proposed expansion of its ratings system**	"Anybody who ever watched South Park and decided "this cartoon makes a good point" has some serious issues that need addressing. It's satire. Sarcasm. The show had viewer

appropriateness of content.	**won't relieve parents of this ever-evolving responsibility**, it will at least give them one more ally." (n.d., 07-13-2000, The Globe and Mail).	discretion warnings beforehand. Responsibility for what media one consumes is on the person, end of story." (Twitter-05-2019-James).
Responsibility to reduce the unhealthy foods consumption.	"Right now, the average Canadian consumes 3,400 milligrams - about a teaspoon and a half - of sodium a day … It is likely that fast food companies could substantially reduce the salt in their products, translating to large gains for population health. Ever since health concerns over excessive salt in our diets gained prominence, **the food industry has fought back with claims that the salt it adds is necessary, in part, to preserve food and create texture**." (Forcadilla, E., 04-18-2012, Toronto Star).	"Listening to a debate on obesity and the predictable attempts at blame (govt, restaurants, manufacturers etc). Really irks. People need to take personal responsibility - eat less, exercise more. Stop buying unhealthy food, a bag of veg at a greengrocer is cheaper than a pizza." (Twitter-05-2021-Matt).
Responsibility to promote food products of social causes.	"The advisory panel that shapes the **guidelines recommended earlier this year that Americans eat fewer animal-based products and more plant-based foods** such as vegetables, fruits, whole grains, legumes, nuts and seeds. The advisory panel said that Mediterranean-style and vegetarian diets were good examples of this approach, and that such diets are 'more health promoting' and 'associated with less environmental impact'." (O'Connor, A., 09-23-2015, New York Times).	"I would #ESUspeakout about #sustainability & the need to take responsibility for our part in it - from the food we eat to the clothes we buy. The environment, wildlife & people are being negatively affected by our choices & we have to try harder to reduce our impact." (Twitter-01-2018-Natasha).
Responsibility to reduce the grocery waste (including food waste).	"... '**most waste occurs at the consumer level**,' said Marc Bellemare, who directs the Center for International Food and Agricultural Policy at the University of Minnesota. '**Restaurants and grocery stores don't waste as much as consumers do**." He added, "I suspect that the rise of those restaurants, my intuition is that those will mean the rise of food waste as well, **because they sell this stuff to consumers, where the bulk of the losses tend to occur'**." (Bromwich, J., 09-29-2018, New York Times).	"to make cups etc that are biodegradable and actually maybe set up some kinda bin system in store for food waste, so the plastics and paper can be taken away and recycled! The responsibility is 100% on the business to choose a better system!" (Twitter-06-2019-Lottie).
Responsibility to reduce the apparel waste.	"The clothing industry produces tons of fabric that is never sold ... As climate change has accelerated, corporations of all kinds have become increasingly preoccupied with their sustainability cred. **Four-fifths of consumers feel strongly that companies should implement programs to improve the environment**. Clothing companies in particular have faced pressure to change, from politicians, protesters at fashion shows and shoppers of all ages who want to reduce their carbon footprints." (Choi-Schagrin, W., 12-21-2019, New York Times).	"When big companies do some efforts to be more sustainable, it's great. But don't they (or do we) have a part of responsibility in creating this humongous amount of textile waste in today's "fast fashion" era?" (Twitter-07-2019-Richard).

3.10 FIGURE 1: The Mechanisms that Sustain Responsibility Devolvement



3.11 TABLE 4: Additional Quotes by Mechanisms

Mechanisms	Exemplars from the Data
Ease of Market Segmentation	**The Food and Beverage Industry** (Promote food products with social causes): • "Food experts and chefs say they've seen an uptick in people opting out of eating meat or animal products for a combination of reasons, including animal welfare, environmental and health reasons. Restaurants are also responding to the trend by offering more vegetarian, vegan and plant-based options." (Rodriguez, R., 2017, TS). • "Sales of organic food have been rising steadily over the past decade, reaching almost $30 billion in 2011, or 4.2% of all U.S. food and beverage sales …. Many of the consumers who purchase these products say paying more for organic produce, milk and meat is a trade-off they are willing to make in order to avoid exposure to chemical pesticides and fertilizers and milk from cows given bovine growth hormone." (n.d., 2013, WSJ). **The Food & Beverage Industry** (Promote food products with social causes): • "food companies including Nestlé SA, Unilever PLC and Brazilian meatpacking conglomerate JBS SA also aim to use their test kitchens and distribution networks to make meat imitations. Those efforts will hasten meat alternatives' move into the mainstream, said Bruce Friedrich, executive director of the Good Food Institute, a Washington-based group that promotes plant versions of meat and dairy products. "It messages to meat eaters, this is a product for you," Mr. Friedrich said." (Bunge, J., 2019, WSJ). • "Dunkin' Brands Group Inc. last week added breakfast sandwiches made with Beyond Meat's imitation sausage at restaurants in Manhattan. 'It's about a long-term commitment to doing things for the environment and giving [customers] choice,' Chief Executive Dave Hoffman said Thursday in an interview." (Bunge, J., 2019, WSJ).
Aids for Responsibility Taking	**The Consumer Electronics Industry** (Manage device volume): • "The newest @Apple watch will have a feature that promotes hearing health. Through notifying users of dangerous noise environments, it seeks to prevent gradual hearing loss from noise over time." (2019-Scouts). • "I applaud @Apple for including loudness warnings on #WatchOS. It's time we raise awareness on noise pollution and the potential for hearing damage. It's not only the warning but also the educational aspect that is key. Bravo! #Apple #AppleWatch" (2019-Theo). • "Kudos to @apple for bringing noise induced hearing loss awareness and prevention to the forefront of the new WatchOS. Protect your hearing!" (2019-Kyle). • "Apple says its new watch will warn users if they are at risk for hearing damage. "A benefit of an app like this is that more people will be talking about noise and how it can affect their hearing," says audiology director Dr. Kevin Franck." (2019-Mass). **The Banking Industry** (Avoid overdraft):

- "'Whether to opt into overdraft is an important decision for consumers,' Mr. Cordray told reporters. 'They need their bank or credit union to describe the service fully and accurately while giving them a reasonable chance to consent'." (Hayashi, Y., 2017, WSJ).
- "Chase alerts customers whose previous checking transactions suggest they are likely to overdraw often, said a spokeswoman. Bank representatives suggest the service, which costs $10 each day it is used, to such customers in branches and online. Wells Fargo and Chase say customers can add funds to their checking accounts by a designated time each night to avoid overdraft fees." (n.d., 2014, WSJ).

The Entertainment and Mass Media Industry (Manage content appropriateness):

- "It was clearly written on netflix that there's violence and abusive content in the movie. why people don't read any info and watch it with kids and then blame the authors?" (2021-Elikim).
- "It has an adult rating, the parents/guardians are responsible if they feel it's unsuitable for their child or do you feel the same about 18 rated movies on Netflix?" (2021-Scott).
- "you, an adult who's responsible if your kids end up watching inappropriate scenes bc it's your mistake for not checking the rating/warning: CENSOR NETFLIX CONTENTS!" (2021-Emire).
- "Netflix has an age rating on it. Assuming you use the proper filters then kids can't watch it by themselves. There are hundreds of programs more scary and violent on Netflix. The only people responsible are the parents." (2021-Steve).

The Automobile Industry (manage vehicle speed):

- "… I love cruise control. Cruise control should be standard on every vehicle, and it should be mandatory to use it … I use it wherever possible, for reasons that are purely selfish. A common excuse for not using cruise is that the feeling you're surrendering control." (Sinek, J., 2020, GM).
- "'Assuming the car is mechanically sound, cruise control is safe to use provided it's used properly. The key words are 'used properly,' because there are a number of things when it comes to cruise control that, if you don't do or aren't aware of, can cause serious problems when you're on the road,' says Paul Datzkiw, supervisor for consumer and technical services at CAA South Central Ontario." (Will, J., 2011, GM).
- "vehicle manufacturers have developed speed limiters which help the driver avoid speeding, thus taking some responsibility for their product." (2018-Deborah).

The Consumer Electronics Industry (Reduce E-wastes):

- "The best thing, of course, is to donate it to a school or a charity that could use an extra computer. But if it doesn't work well enough for that, it should be recycled. Some manufacturers will help you out. If you buy a computer from Dell, the company will take care of recycling your old one." (n.d., 2006, NYT).
- "Once it's time to get rid of that old computer, there are options for consumers to dispose of it responsibly. Most computer manufacturers have recycling programs. Dell recycles any of its products free. Consumers who buy a Dell PC can have their old computer recycled regardless of the manufacturer, too. Lenovo charges consumers $30 (U.S.), including shipping, to recycle a computer made by any manufacturer. In exchange, consumers get a $50 rebate to buy Lenovo products." (De Avila, J., 2008, GM).

- "There is bound to be unsellable e-junk in your pile. Fortunately, all Best Buy locations will take your used electronics and recycle them for free. Just bag the items up and drop them off at the store's customer-service counter, and the retailer will take care of the rest." (Chen, B., 2016, NYT)

Attribution of Governmental Responsibility	**The Automobile Industry** (Manage vehicle speed): • "Governments, meanwhile, remain timid about using modern technology to enforce speed limits. It's no surprise that pedestrian deaths are rising as a proportion of road deaths." (Koehl, A., 2017, GM). • "Attempts to lower the speed limit to 30 from 40 km/h on some residential streets in Toronto could very well be a complete waste of taxpayers' money without making our streets any safer. Such attempts may be more counterproductive among some drivers whose impatience with the lower speeds may lead them to spontaneously ramp up their speed and cause an accident." (n.d., 2015, TS). **The Entertainment and Mass Media Industry** (Manage content appropriateness): • "… an associate professor at Harvard's School of Public Health, calls for a more complete rating system that would better explain a film's content. … violent films that 10 years ago would have received an R rating in the U.S. – therefore keeping children and most teenagers out of the audience unless accompanied by an adult – today are far more likely to be branded with the PG-13 designation, meaning young people can attend on their own." (Edgers, G., 2004, GM). • "Today, however, the U.S. is seen as more accepting of violence while Canada is more open to foul language and nudity in mainstream films. The new movie 21 Jump Street, for instance, has enough "foul language," "sexual content" and "drug use" to earn a Restricted rating in the U.S., but earned a more lenient 14A in Ontario (adult accompaniment for children under 14). Same goes for at least three other current films: A Dangerous Method, Friends with Kids and Jeff, Who Lives at Home. Sexual content, language and drug use, but not violence, in these films earns them an R in the U.S. but only 14A here." (Wong, T., 2012, TS). **The Consumer Electronics Industry** (Reduce E-wastes): • "The e-waste problem is becoming urgent, notes Morawski. Canada has yet to legislate, as most European countries have, that producers make less toxic products to begin with, then take responsibility for responsible disposal. Some Canadian companies - Dell and Hewlett Packard, for example - voluntarily offer take-back programs. But that's the exception to the norm in a bustling electronics marketplace, where brands proliferate and new products pop up daily." (n.d., 2006, TS). • "'It adds awareness and convenience,' he said. 'If the Verizon store is down the block, our customers will now know that they can drop phones off there.' Environmental groups applaud the program, as far as it goes. Perhaps unsurprisingly, they want the E.P.A. to regulate as well as cajole. 'Cellphones are just the tip of the electronic waste iceberg now, but they could become a massive environmental problem,' said Beth Trask, manager for corporate partnerships at Environmental Defense. 'Voluntary action and education can help prevent that, but we need regulation too. We really need it all'." (n.d., 2008, NYT). **The Food and Beverage Industry** (Reduce food wastes): • "Please don't waste food be a responsible citizen. Govt should take action about this. Kindly don't support people like that who don't know the value of food, who don't know what is hunger/ poverty." (2021-AfifaMirza).

- “A real horror story: It's @COP26 and food waste is not on the agenda when 1/3 of all food is wasted globally and this food waste is responsible for around 10% of the world's total greenhouse gas emissions. Government needs to wake up & apply some pressure. #foodwaste.” (2021-Kitche).
- “I know we're all disappointed about government inaction on climate, so let's talk about opportunities to have impact immediately. Food waste is responsible for at least *6%* of global GHG emissions. We can change that. Right now.” (2021-Sheril).
- “A great responsibility for governments, food companies and other influencers to promote cheap, healthy choices and to develop sustainable mass-produced food and lower food waste in the process #foodwaste.” (2018-Miljo).

The Food and Beverage Industry (Reduce unhealthy food consumptions):
- “govt has singularly failed to properly regulate any of the industries that get rich off making us unhealthy, from food to road transport. It might be convenient to blame patients, especially those poor ones, for their ‘choices’, but it’s also deeply flawed.” (2018-JMolloy).
- “Gov’t wants obesity to be an individual’s fault & not the result of unregulated food industry loading cheap sugar, trans fats & salt in their Frankenstein-pre-packaged junk food #foodlabel to show exercise time is wrong. It’s #eatingdisorder mentality.” (2019-Sally).

The Clothing Industry (Reduce clothing wastes):
- “Sad...the government acknowledges that #fastfashion is problematic, but won't push to reduce #textile waste or make brands responsible for unsold clothing.” (2019-Gourmand).
- “I’ll be forever mad that the government refused to implement the environmental audit committee’s recommendation for extended producer responsibility to prevent so much textile waste ending up in landfill.” (2020-Elly).
- “you aren‘t responsible for clothing waste. I‘d say additional steps would then be political campaigning - because certain things need to happen beyond a personal level. There need to be laws and regulations, politicians need to do their part.” (2021-autistictic).

Preferred Sense of Control by Customers

The Consumer Electronics Industry (Manage device volume):
- “If Siri turns my music down one more time I’m suing apple. Maybe I WANT hearing damage. So what if I DO.” (2021-Alex).
- “Apple has no business telling me to turn my volume down. Let me experience hearing loss and mind your own business hoe.” (2021-Fetish).
- “Apple need to stop turning my volume down if I wanna damage my hearing that’s my personal choice.” (2020-ba1only).
- “Apple Did someone sue you for loss of hearing or something? Why are you so concerned about how loud my earphones are? If I want my music loud isn’t that my choice? What a world we live it when your phone automatically turns your music down.” (2021-scott).

The Automobile Industry (Manage vehicle speed):

- “i love speeding, nothing can stop me from doing that....expect if i have other people in my car, they are my responsibility.” (2014-John).
- “$240 speeding ticket and there's no one to blame but me and my love for speeding when I'm alone in the car.” (2017-Nathaly).
- “As long as that personal responsibility doesn't put anyone else at risk. Kind of like speeding. I'm accepting my own risk driving 160km/h on Highway 7, but I'm also putting others at risk by doing so.” (2021-Randy).
- “I'll still ask you the same question I asked the person before you...If I speed 95mph in a 60mph zone do I have the right to justify my actions based on other speeding drivers or is it my responsibility? I KNOW I'd be risking a ticket. Who hasn't sped on the highway?” (2021-Kevin).

The E-commerce Industry (Avoid fake or inferior goods online):

- “Ugh I paid for a fake Q Scrabble mug on ebay & its my fault because I didn't read closely and I'm going to be annoyed every time I look at it.” (2013-Justin)
- “I bought a DS game of Ebay. One that I have been after for a long time. I got it and found it was fake. It was my own fault though, I wasn't thinking.” (2018-Emma)

The Banking Industry (Avoid overdraft):

- “When you open an account at any bank, you sign a contract and agree that your fiduciary responsibility is to not overdraft your account, or you will be charged a fee. It’s literally written into what you’re signing, and your own fault if you don’t abide.” (2018-Ryan).
- “You do know what an “overdraft” is right? no company you work for can make you spend more money than you have in your bank account. what they pay you is yet again, another thing YOU agreed to. you and ONLY you are responsible for the money YOU spend.” (2019-Jenna).