4-2023

CEO humility and firm resilience

Yuehua SHEN
Singapore Management University, yhshen.2019@sjdba.smu.edu.sg

CEO HUMILITY AND FIRM RESILIENCE

SHEN YUEHUA

SINGAPORE MANAGEMENT UNIVERSITY

2023

CEO Humility and Firm Resilience

Shen Yuehua

Submitted to Lee Kong Chian School of Business
in partial fulfillment of the requirements for the Degree of
Doctor of Business Administration

Dissertation Committee:

Geng Xuesong (Chair)
Associate Professor of Strategic Management
Singapore Management University

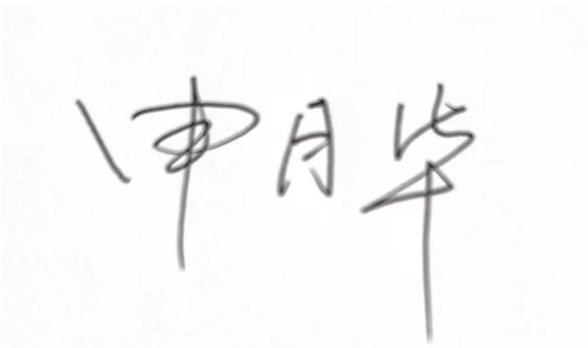
Xie Luqun (Co-supervisor)
Associate Professor of Information, Technology and Innovation
Shanghai Jiao Tong University

Chi-Ying CHENG
Associate Professor of Psychology
Singapore Management University

Singapore Management University
2023

I hereby declare that this DBA dissertation is my original work and it has been written by me in its entirety.
I have duly acknowledged all the sources of information which have been used in this dissertation.

This DBA dissertation has also not been submitted for any degree in any university previously.



Shen Yuehua

26th April 2023

CEO Humility and Firm Resilience

Shen Yuehua

Abstract

In today's fast-changing world, firm resilience becomes an important force for firms to survive and develop. This dissertation aims to investigate the relationship between CEO humility and firm resilience, and further tackle the underlying mechanism behind the relationship. Based on upper echelons theory, this dissertation proposes that CEO humility promotes firm resilience, and the positive influence is mediated by stakeholder relationship capability. Moreover, competitive uncertainty and CEO work experience variety positively moderate the connection between CEO humility and stakeholder relationship capability. Using survey data from 119 CEOs in China, this dissertation tests the theoretical hypotheses and offers several implications for firms to enhance their resilience, which contributes to extending the micro-foundation of firm resilience, enriching studies on CEO humility.

Keywords: CEO humility, firm resilience, stakeholder relationship capability, competitive uncertainty, market complexity, work experience variety

Table of Contents

List of Figures

List of Tables

Acknowledgement

This thesis is completed in the spring at the end of 3-year’s pandemic. During the pandemic, I’ve got more time to read papers and think with peace mind, and I’ve got so much gratitude in my heart.

First, I would like to thank Prof. GENG Xuesong, almost all my DBA courses were completed online, and we met each other in person till this March when I was studying in SMU campus. Prof. Geng's humility, enthusiasm, and patient guidance gave me more confidence in the completion of the thesis. Then, I would like to thank Prof Chi-Ying CHENG, her soft but strict feedback enlighted me a lot.

I was moved and grateful most to Prof Xie Luqun. She gave me a lot of comments and methods when supervising me drafting this thesis, especially when she facing the most difficult moment in her life, her courag and resilience gave me a new thinking on the life, she continued guiding me as before. She is strong and brave enough to embrace the beauty of the world, which shines and inspires me in the rest of my life.

My thanks also go to Ms. Elaine Gao, she is both a teacher and a friend. She gave me a lot of help when I wanted to give it up, and her words heeled my heart.

Last but no least, I would like to thank my family. Many thanks to my husband for his accompany, to my two kids for their understanding, and to my parents for their supports. The successful completion of the DBA thesis is also a gift to my family.

The DBA journey is to end, but a new start just begins, and lifelong learning will continue inspire me in the future.

Chapter 1 Introduction

Humility indicates individuals' tendency of acknowledging that there is something greater than the self (Ou et al., 2014), acquiring accurate self-knowledge, keeping an open mindset to improving themselves, and appreciating others' contributions and advantages (Ou et al., 2014, 2018). It is regarded as an essential trait of business leaders since humility helps to correct individuals' natural tendency to give strong priority to their own interests and needs (Wright et al., 2017). Given the important influence of CEOs on organizational outcomes as the key decision-maker, CEO humility has attracted increasing attention in both academic and media research. Humble CEOs are trending to be a preferable choice to the overconfident, arrogant, and narcissistic types (Petrenko et al., 2019). Although the strategic importance of humility has been emphasized by many scholars (Vera & Rodriguez-Lopez, 2004), CEO humility has obtained limited attention compared with other traits such as overconfidence and narcissism. Some studies have demonstrated the positive influence of CEO humility on financial performance (Ou et al., 2018), innovation performance (Nie et al., 2022; Zhang et al., 2017), and market performance (Petrenko et al., 2019). As Vera & Rodriguez-Lopez (2004) proposed, "humility supports the firm's long-term resilience" (p. 403). CEO humility may also contribute to the development of firm resilience, which refers to firms' capability to anticipate and avoid potential threats, respond to and recover as fastly as possible from disruptions or shocks (Duchek, 2020; Ortiz-de-Mandojana & Bansal, 2016; Xie et al., 2022). The potential correlation between CEO humility and firm resilience can also be inferred from the work of Dewar et al. (2022), who provide many valuable suggestions for CEOs to improve leadership. The author, Carolyn Dewar proposed that humility enables CEOs to learn new things and reach out for support and help to obtain energy to navigate the unexpected shocks in an interview[1]. And an article from PwC also suggested that leaders need to be humble to consult widely to guide their firms through the crisis[2]. However, literature on the association between CEO humility and firm resilience is still at a normative stage, lacking empirical evidence. We still know little about whether and how CEO humility influence firm resilience. Hence, this dissertation concentrates on the role of CEO humility in the development of firm resilience to extend our knowledge about the impacts of CEO humility.

In today's fast-changing world, firms are facing a turbulent environment. The volatility, uncertainty, complexity, and ambiguity (VUCA) become key characteristics of business environments. For firms in a turbulent environment, firm resilience becomes particularly important, which helps firms turn crisis into safety, even seize opportunities in crisis, realize new growth, and contribute to enterprises' long-term development (Ortiz-de-Mandojana & Bansal, 2016). And the antecedents of firm resilience have attracted extensive attention in recent studies. Prior studies have investigated various antecedents of firm

---

[1] Leadership lessons from the world's best CEOs https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/leadership-lessons-from-the-worlds-best-ceos
[2] Leading in crisis https://www.pwc.com/gx/en/issues/crisis-solutions/leading-crisis.html

resilience such as business networks (Xie et al., 2022), dynamic capability (Hussain & Malik, 2022; Jiang et al., 2019), and digital technology transformation (He et al., 2022). Several studies drawing from upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984) have investigated the impact of CEO characteristics on firm resilience. For example, Buyl et al. (2019) held the view that CEO narcissism may lead to a larger performance drop immediately after a disruption and slower recovery from the disruption, namely, CEO narcissism is negatively related to firm resilience. Sajko et al. (2021) argue that CEO greed has a negative influence on the stability and flexibility of firms facing unexpected disruptions, that is to say, CEO greed will negatively influence firm resilience. To expand this stream of literature, I aim to examine the impact of CEO humility on firm resilience in this dissertation, and strives to further explore the underlying mechanism through which CEO humility affect firm resilience.

According to the upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), I argue that CEO humility is positively associated with firm resilience, and its positive influence is positively mediated by firms' stakeholder relationship capability. Humble CEOs usually pursue something greater than the self and tend to establish an organizational vision for the collective interests (Ou et al., 2014) of various stakeholders, thus developing a good relationship with stakeholders. In addition, humble CEOs acknowledge their limitation and are willing to appreciate others' contributions (Ou et al., 2018). They realize that the achievement of organizational goals does not rely on firms alone (Ou et al., 2018) but depends on the efforts of different stakeholders, and will take various measures to gain stakeholders' support, and thereby promoting firms' stakeholder relationship capability. The strong stakeholder relationship capability will further help firms to gain valuable resources and information from various stakeholders (Jiang et al., 2020), enabling firms to better anticipate potential threats, fastly respond to and recover from disruptions and even achieve a superior position after disruptions, thus promoting firm resilience. Moreover, the impact of CEO humility on stakeholder relationship capability will rely on internal and external contexts. And I investigate the moderating role of competitive uncertainty, market complexity, and CEO work experience variety in this dissertation. When competitive uncertainty or market complexity is high, the ambiguity in markets may increase the discretion of humble CEOs, and the correlation between CEO humility and stakeholder relationship capability will be enhanced. For humble CEOs with diverse work experience in different types of organizations, they can better absorb and accumulate rich knowledge and skills from their prior work experience, and fully apply these diverse knowledge and skills to develop close and good relationships with a lot of stakeholders. Thus, the positive influence of CEO humility on stakeholder relationship capability will be enhanced when CEO work experience variety is high.

This dissertation aims to contribute to prior literature in the following aspects. First, this dissertation extends studies on CEO humility. Humility is an essential virtue and trait of CEOs, but obtained limited attention in prior studies (Sun et al., 2021). Extant research on leader humility mainly concentrated on its effect at the individual-level or team-level outcomes (Li et al., 2020; Morris et al., 2005; Ye et al., 2020), and the impacts of CEO humility on organizational outcomes still requires further investigation (Cortes-Mejia et al., 2022). This dissertation investigates the impact of CEO humility on firm resilience, which helps to extend studies on humility at the executive level and expand the research on the upper echelons theory. Second, this dissertation enriches the micro-foundations of firm resilience. Prior studies have investigated various antecedents of firm resilience but mainly concentrate on organizational factors (Chewning et al., 2013; Xie et al., 2022; Yuan et al., 2022). We still know little about how individuals (Van Der Vegt et al., 2015), especially CEOs, exert their influence on firm resilience (Wall & Bellamy, 2019). This dissertation reveals the important role of CEO humility in facilitating firm resilience, expanding the antecedents of firm resilience from the aspect of CEO characteristics (Buyl et al., 2019; Sajko et al., 2021; Torres & Augusto, 2021), which contributes to extending the micro-foundations of firm resilience. Third, this dissertation tackles the underlying mechanism behind the correlation between CEO humility and firm resilience. Studies on mediation mechanisms that link CEO humility to firm-level outcomes are still limited and deserve further exploration (Ou et al., 2018). The process by which CEO characteristics work on organizational outcomes is usually viewed as a "black box" in studies based on the upper echelons theory, which was criticized much in prior research (Hambrick, 2007; Wang et al., 2015). By investigating the mediation effect of stakeholder relationship capability and moderating effect of internal and external factors, this dissertation helps to explain how CEO humility influence firm resilience and what contingency will influence the role of CEO humility, which contributes to deepening our understanding of the impacts of CEO humility under different contexts.

Chapter 2 Literature Review

2.1 Upper Echelons Theory

The subjective Expected Utility Model in new classical economics assumes that people are “economic men”. It is assumed that people can understand every influencing factor of decision-making, fully predict every possible result and its probability of occurrence, and rank the preferences of various results when making decisions (Savage, 1972). However, this assumption is inconsistent with the actual situation. In fact, it is impossible for human beings to acquire all the information related to decision-making, and the thinking capability of humans is also limited. In normal circumstances, people can only make the most satisfying decision rather than the optimal decision, that is, can only have “Bounded Rationality” (Simon, 1990). Therefore, the bounded rationality hypothesis was put forward (Simon, 1990). Based on the bounded rationality hypothesis, Hambrick & Mason (1984) put forward the upper echelons theory (UET), pointing out that the personalities, values, and experiences of senior executives will exert impacts on their perception of decision-making situations. Senior executives with different psychological characteristics examine the environment from different perspectives, pay attention to different information, and understand and use information differently, so they will make different strategic choices, which affect the behavior of firms. Therefore, the organizational strategic choices are a reflection of its senior managers (Hambrick, 2007; Hambrick & Mason, 1984). The key idea of upper echelons theory is: (1) executives take actions according to their personalized understanding of the strategic situation they are facing (2) personalized understanding is influenced by executives' personalities, values, and experiences (Hambrick, 2007).

The extant literature on the impacts of executives on the behavior and results of organizations can be roughly classified into two aspects: observable characteristics and unobservable psychological characteristics of executives. The observable characteristics of executives mainly include demographic characteristics and task-related characteristics. Demographic characteristics, such as race, age, gender, etc., reflect the natural attributes of senior executives. Task-related characteristics, such as work experience and educational background, reflect executives' competency (Jackson et al., 2003). Psychological characteristics refer to the psychological feature that individuals often and stably display when carrying out activities. For example, some CEOs are overconfident, some CEOs are hubris and narcissistic, and some CEOs are humble, introverted or risk averse. These internal differences among executives are difficult to measure, but they are closely related to executives' decision-making and corporate behavior.

The early upper echelons theory mainly discussed the observable characteristics of executives. Hambrick pointed out the necessity of using the background characteristics rather than psychological dimensions for research under the upper echelons theory: firstly, it is difficult to directly measure the values and perception of situations of executives, and many executives are unwilling to participate in psychological assessments. Secondly, there is no appropriate psychological measurement index corresponding to some influential background features (such as tenure and functional background). Finally, the final application of upper echelons theory (such as selection of management and competitor analysis) requires managers' observable background data. Therefore, early studies in the strategic field generally regard demographic characteristics as proxy variables of psychological characteristics to study the impact of executives on enterprise behavior and performance. For example, Martin et al. (2009) proved that compared with enterprises run by male CEOs firms, firms managed by female CEOs have lower volatile earnings, less leverage, and a higher possibility of survival. Based on panel data of US enterprises from 1992 to 2004, Khan & Vieito (2013) found that the risk level of firms managed by female CEOs is lower. Yim (2013) also found the significant negative influence of CEO age on enterprises' risk-taking behavior such as research and development activities and acquisitions. Jalbert et al. (2002) pointed out the impacts of CEOs' possession of a degree and firms' performance. However, Gottesman & Morey (2010) found that there is no obvious support that the selectivity or type of CEO education is correlated to corporate performance. Custódio & Metzger (2014) found companies with CEOs with financial professional backgrounds hold less cash, more debt and buy back more shares. Simsek (2007) suggested that CEO tenure will exert an impact on TMT risk-taking propensity and entrepreneurial initiatives, and further exert influence on firm performance. Chen et al. (2019) investigated the correlation between CEO tenure and corporate social responsibility (CSR) performance and found that compared with CEOs' later tenure, firms' CSR activities are more in their early tenure.

In recent years, an increasing number of scholars start to emphasize that we should pay attention to the impacts of executives' unobservable psychological characteristics in corporate decision-making. Multiple methods such as questionnaires and technical analysis to measure executives' psychological dimension indicators (such as values and personalities) have been used to study the impacts of executives' unobservable psychological characteristics on corporate behavior and performance. Overconfidence, narcissism, hubris, and humility are common traits of CEOs, and the impacts of these psychological characteristics have been discussed a lot in prior research. It has been found that overconfident CEOs are more likely to be responsive to cash flow (Malmendier & Tate, 2005), and they tend to overestimate the profits of investment projects, which causes higher stock price crashes (Kim et al., 2016). Galasso & Simcoe (2011) argued that overconfident CEOs tend to engage in innovation. Chatterjee & Hambrick (2007) proved that narcissistic CEOs are more likely to take bold actions to attract attention, and highly narcissistic CEOs will take more bold acquisitions because of social appraisements, which leads to extreme fluctuations in corporate performance

(A. Chatterjee & Hambrick, 2007, 2011). Using 395 samples of American listed companies from 2006 to 2010, Kashmiri et al. (2017) demonstrated the correlation between narcissistic CEOs and radical innovation. Li & Tang (2010) proved the positive correlation between CEO hubris and corporate risk-taking through empirical research. Tang et al. (2015) established the link between CEO hubris and CSR. Park et al. (2018) studied CEO hubris and its negative impact on the performance of enterprises. Ou et al. (2014) argued that CEO humility is positively correlated to authorized leadership behavior, and it is conducive to the integration of the top management team. Ou et al. (2018) further found that influenced by humble CEOs, top management teams can have common visions and goals, share information, make joint decisions, and improve enterprise performance. Zhang et al. (2017) used multi-source data to prove that CEOs with two traits, namely, narcissism and humility, are more socially attractive and can cultivate enterprise innovation culture and improve enterprise innovation performance.

Extant studies on the impacts of CEOs' observable characteristics and unobservable psychological characteristics on organizational outcomes are summed up in Table 2-1.

Table 2-1 Studies on the Impact of CEO Characteristics and Organizational Outcomes

CEO characteristics		references
Observable characteristics	gender	Faccio et al., 2016; Khan & Vieito, 2013; Martin et al., 2009
	age	Huang et al., 2012; Serfling, 2014; Yim, 2013
	educational background	Gottesman & Morey, 2010; Jalbert et al., 2002, 2010
	work experience	Custódio & Metzger, 2014; Hamori & Koyuncu, 2015; Reed & Reed, 1989
	tenure	Chen et al., 2019; Luo et al., 2014; Simsek, 2007
Unobservable psychological characteristics	overconfidence	Galasso & Simcoe, 2011; Kim et al., 2016; Malmendier & Tate, 2005
	narcissism	Chatterjee & Hambrick, 2007, 2011; Kashmiri et al., 2017; Oesterle et al., 2016
	hubris	Li & Tang, 2010; Park et al., 2018; Tang et al., 2015
	humility	Cortes-Mejia et al., 2022; Ou et al., 2018; Sun et al., 2021
	risk preference	Doukas & Mandal, 2018; Kraiczy et al., 2015; Rashad Abdel-Khalik, 2014

2.2 CEO Humility

The word of "humility" originated from the Latin word, humilis, which means "humble", "grounded", "low", "insignificant" or "from the earth" (Brunzel & Ebsen, 2022). According to the Oxford Dictionary, humility refers to one's quality of not being proud since he/she is aware of shortcomings. Humility is an enduring and stable trait, which is a component of an individual's personality (Tangney, 2000), although some scholars also held the view that humility can be gradually changed through systematic training or life experience (Ou et al., 2014). Humility is built on a view that the self is not the center of the universe and there is something greater than the self (Morris et al., 2005). Tangney (2000) argued that humility covers five dimensions, including the capability to accept limitations, view the self's position in the world accurately, hold an open mindset to suggestions and new ideas, keep low self-focus, and appreciate the advantages of all things. Owens et al. (2013) suggested that humility involves three characteristics: the willingness to view the self correctly, appreciation contributions and advantages of others, and teachability. Ou et al. (2014) believed that humility involves six dimensions, including acceptance of the view that there is something greater than the self, self-awareness, appreciation of others, openness to feedback, self-transcendent pursuit, and low self-focus. Maldonado et al. (2018) summarized the five characteristics of humility: teachability, accurate self-awareness, self-transcendent pursuits, low self-focus, and appreciation of others. In a word, humble individuals can notice their shortcomings and limitations and not avoid self-comparisons (Brunzel & Ebsen, 2022).

Some people regard humility as the synonym of modesty (Nielsen & Marrone, 2018) and some seemingly related constructs like low self-regard, learning goal orientation, and openness to experience, however, humility is different from these constructs in fact. In terms of modesty, modesty is characterized by being not boastful (Owens et al., 2013) and most studies have distinguished humility from modesty (Davis et al., 2010) given that the definition of humility is only similar to one dimension of modesty, namely, an accurate self-view (Brunzel & Ebsen, 2022). From the aspect of low self-regard, humility is quite distinct from low self-regard since it requires a high level of self-esteem to correctly view and acknowledge one's talents and deficits (Tangney, 2000). From the aspect of openness to experience, openness to experience demonstrates the degree to which people are insightful and appreciate unusual ideas, art, adventure, emotion, and novelty (Barrick & Mount, 1991), which do not highlight being open to self-evaluative information such as feedback, while humility concentrates on the openness to feedback (Owens et al., 2013). From the aspect of learning goal orientation, it refers to the motivation of understanding and mastering the task to adapt to the task situations (Dweck, 2013), which indicates a desire to master new skills and develop new capabilities, while humility demonstrates the appreciation of others' advantages and accurate self-perspective in addition to learning (Owens et al., 2013).

Given that humility is usually regarded as a counterbalancing trait to weaken the negative impacts of "negative" traits (Brunzel & Ebsen, 2022), it is usually regarded as the opposite of narcissism or arrogance. Narcissism demonstrates an inflated self-awareness and the demand for external reinforcement of individuals (Gerstner et al., 2013), and arrogance indicates exaggerated self-importance and the feeling of superiority (Toscano et al., 2018), while humility indicates an accurate self-awareness, which is totally different from narcissism or arrogance (Cortes-Mejia et al., 2022). However, humility also involves characteristics that are not included in narcissism and arrogance, such as appreciation of others' advantages and contributions and teachability (Cortes-Mejia et al., 2022). Lacking narcissism or arrogance does not absolutely indicates the existence of humility (Nielsen & Marrone, 2018). Hence, narcissism or arrogance is not the absolute antonym of humility. In fact, some scholars found that humility and narcissism can coexist in one individual and exert an interactive influence on his/her behaviors and further influence organizational outcomes (Nie et al., 2022; Zhang et al., 2017).

The difference between humility and seemingly related or opposite constructs is summed up in Table 2-2.

Table 2-2 The Difference between Humility and Other Constructs

Construct	Definition	Difference
Modesty	Characterized by being not boastful (Owens et al., 2013)	The definition of humility only overlaps with one dimension of modesty, namely, an accurate self-view (Brunzel & Ebsen, 2022)
Low self-regard	A low level of self-esteem	Humility requires a high level of self-esteem to correctly view and acknowledge one's talents and deficits (Tangney, 2000)
Openness to experience	The degree to which individuals are insightful and appreciate unusual ideas, art, adventure, emotion, and novelty (Barrick & Mount, 1991)	Openness to experience does not highlight being open to self-evaluative information such as feedback, while humility concentrates on openness to feedback (Owens et al., 2013)
Learning goal orientation	The motivation of understanding and mastering the task to adapt to the task situations (Dweck, 2013)	Humility demonstrates the appreciation of others' advantages and accurate self-perspective in addition to learning (Owens et al., 2013).
Narcissism	An inflated self-awareness and the demand for external reinforcement of individuals (Gerstner et al., 2013)	Humility involves characteristics that are not included in narcissism, such as teachability and appreciation of others' advantages and contributions (Cortes-Mejia et al., 2022)
Arrogance	Exaggerated self-importance and the feeling of superiority (Toscano et al., 2018)	Humility involves characteristics that are not included in arrogance, such as teachability and appreciation of others' advantages and contributions (Cortes-Mejia et al., 2022)

Given the negative impact on the company caused by many CEO scandals in the past 20 years, scholars have started to suggest CEOs to admit their limitations, put themselves in perspective, and take full advantage of the strengths of their followers and peers, in other words, to keep humble (Ancona et al., 2007; Ou et al., 2018). The strategic importance of leader humility has been highlighted by many scholars (Vera & Rodriguez-Lopez, 2004), and studies on leader humility have increasingly attracted attention in academics. Some empirical studies have investigated the impacts of leader humility on individual-level or team-level outcomes, including employee retention (Ou et al., 2017; Owens et al., 2013), employee engagement (Owens et al., 2013), employee creative performance (Lei et al., 2021; Ye et al., 2020), subordinate compliance (Chiu & Hung, 2022), follower vulnerability and felt authenticity (Oc et al., 2020), followers' prosociality (Carnevale et al., 2019), team helping behaviors (Wang et al., 2022), psychological safety of teams (Rego et al., 2021), team effectiveness (Chiu et al., 2022; Rego et al., 2018) team creativity (Li et al., 2022; Wang et al., 2020), and team performance (Owens & Hekman, 2016; Rego et al., 2019).

Given that CEOs play a crucial role in decision-making and exert great influence on firms (Quigley & Hambrick, 2015), one stream of studies has started to notice the impact of humility at the executive level. For example, Ou et al. (2014) held the view that CEO humility promotes top management team integration by building an empowering climate, and promotes the commitment, engagement, and job performance of middle managers. Ou et al. (2018) pointed out that CEO humility will facilitate top management team integration, contribute to low pay disparity between the CEOs and top management teams, facilitate firms' ambidextrous strategic orientation, and further promote the performance of enterprises. Ashford et al. (2018) held the view that humble

CEOs help to facilitate top management team potency by encouraging feedback and input from top management team members, and further promote the performance of enterprises. Petrenko et al. (2019) found that firms managed by humble CEOs usually show higher market performance benefiting from the expectation discount. Li et al. (2020) held the view that CEO humility helps to reduce conflicts in the entrepreneurial team, which contributes to high entrepreneurial performance. Hong (2020) pointed out that CEO humility is beneficial to corporate social responsibility. Hutt & Gopalakrishnan (2020) proposed that CEO humility help firms to better manage a multicultural workforce and develop organizational cultures of ambidexterity. Ren et al. (2020) stated that the humble leadership of CEOs contributes to the development of transactive memory systems, which further facilitates the performance of start-ups. Sun et al. (2021) proposed that CEO humility is beneficial for firms' green innovation. Cortes-Mejia et al. (2022) believed that CEO humility facilitates the decentralization of top management teams in decision-making, which will help to develop an ethical culture within firms. Nie et al. (2022) suggested that CEO humility shows positive correlations with firms' exploitative innovation as well as explorative innovation. Zhou et al. (2022) argued that CEO humility can help firms to gain more benefits and advantages from inter-firm collaboration.

Several studies have started to further investigate the interactive impacts of CEO humility and other traits. For example, Zhang et al. (2017) held the view that the interaction of a CEO's narcissism and humility exerts a positive influence on firms' innovative culture and innovation performance. Nie et al. (2022) found that firms managed by humble and narcissistic CEOs show a higher level of exploitative and explorative innovation performance than firms managed by humble and less narcissistic CEOs.

The prior papers on outcomes of CEO humility are summed up in Table 2-3 as follows.

Table 2-3 Outcomes of CEO Humility

Outcomes		**References**
TMT-level outcomes	TMT integration	Ou et al., 2014, 2018
	TMT vertical pay disparity	Ou et al., 2018
	TMT decentralization	Cortes-Mejia et al., 2022
	Entrepreneurial team relationship conflict	Li et al., 2020
Firm-level outcomes	Firm performance	Ou et al., 2018; Ren et al., 2020
	Firm innovation	Nie et al., 2022; Zhang et al., 2017
	Green innovation	Sun et al., 2021
	Market performance	Petrenko et al., 2019
	Entrepreneurial performance	Li et al., 2020
	Inter-firm collaboration	Zhou et al., 2022
	Corporate social responsibility	Hong, 2020

2.3 Firm Resilience

Resilience is usually viewed as a multi-dimensional and multi-disciplinary concept, involving various fields from physical and material attributes to psychological behaviors (Kamalahmadi & Parast, 2016; Ponomarov & Holcomb, 2009; Walker et al., 2002). Resilience indicates the capability of a system to recover and return to its initial state after experiencing disruptions (Cumming et al., 2005). in the 1980s, the term "resilience" has been brought into the field of enterprise management (Meyer, 1982; Staw et al., 1981) to describe the capability of enterprises to anticipate and avoid potential threats, respond to and recover fastly from disruptions or shocks (Duchek, 2020; Ortiz-de-Mandojana & Bansal, 2016; Xie et al., 2022). The unexpected disruptions or shocks may come from the inside of the firm, such as the sudden death of top managers, or come from external environments, such as terrorist attacks, natural disasters, and the financial crisis (Iborra et al., 2020).

Given the special value of resilience for firms' survival and succusses, extant studies have discussed a lot on the antecedents of firm resilience. Most of these studies focus on firm-level influencing factors. Organizational resources, capabilities, and practices play essential roles in the development of firm resilience.

From the aspect of organizational resources, advanced technologies such as information and communication technologies, are crucial resources of firms (Ritter & Pedersen, 2020), whose influence on firm resilience has been discussed a lot in prior research. For instance, Li et al. (2022) argued that digital technologies facilitate information sharing in supply chains, improve the velocity, visibility, and transparency of supply chains, and further help firms to avoid supply chain disruptions and better cope with unexpected shocks. Chewning et al. (2013) found that information and communication technologies contribute to communication network rebuilding and expansion, resources gathering, and work routines enacting, which facilitates firm resilience. He et al. (2022) argued that digital transformation contributes to the resistance to external risks, playing an important role in organizational resilience building. Good relationships with stakeholders are crucial resources of firms in the development of firm resilience, which facilitate the sharing of information, resources, and visions between firms and their stakeholders, promote firms' flexibility and reliability, and further enhance firm resilience (Liu & Yin, 2020). For example, Kim (2020) argued that good organization-employee relationships are beneficial to the building of firm resilience. Xie et al. (2022) found that business network enables firms to gain cognitive and relational resources to respond flexibly to market changes, displaying a positive association with firm resilience. Coles et al. (2021) held the view that social networks offer more access to resources for firms, which contribute to firms' short-run survival and long-run recovery when faced with unexpected disruptions or shocks. Organizational cultures are unique resources of firms, appropriate cultures facilitate the development of firm resilience. Teamwork cultures, respect for people, innovative cultures, and outcome-oriented cultures encourage employees to make effort to avoid potential threats and cope with unexpected disruptions, which are beneficial for firm resilience (Su et al., 2022).

From the aspect of organizational capabilities, various capabilities play important roles in the building of firm resilience. For example, dynamic capabilities enable firms to be aware of market changes and recombine external and internal resources to cope with unexpected disruptions, showing a positive correlation with firm resilience (Akpan et al., 2022; Hussain & Malik, 2022; Jiang et al., 2019). Absorptive capacity helps firms to assimilate new knowledge, combine new information with extant knowledge, and employ available resources to respond to changes, which contributes to firms' resilience building (Yuan et al., 2022). Organizational learning capabilities enable firms to learn new information to put forward solutions for disruptions and reflect on the causes of disruptions to learn from lessons to avoid potential threats, helping firms to better anticipate, respond to, and recover from disruptions (Orth & Schuldis, 2021; YahiaMarzouk & Jin, 2022). Ambidexterity capability helps firms to reconfigure resources, generate new ideas, and improve efficiency to cope with disruptions by taking advantage of the complementarity between exploitation and exploration (Gayed & El Ebrashi, 2023; Iborra et al., 2020).

From the aspect of organizational practices, engagements in corporate social responsibility activities and strategic human resource management are beneficial for the development of firm resilience. Engaging in corporate social responsibility activities improves firms' reputation and helps firms to gain support from different stakeholders to cope with unexpected adverse events, and recover from shocks fastly (Boubaker et al., 2022; Ortiz-de-Mandojana & Bansal, 2016; Rodríguez-Sánchez et al., 2021), thus promoting firm resilience. Strategic human resource management practices improve employees' competencies, enabling firms to stimulate the potential energy of employees to respond to unexpected disruptions flexibly, which is critical for firms to achieve resilience (Bouaziz & Hachicha, 2018; Lengnick-Hall et al., 2011; Roumpi, 2023).

According to the upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), one stream of research has started to examine the executive-level antecedents of firm resilience. Several studies demonstrate the impacts of CEOs' demographic characteristics on firm resilience. For example, Torres & Augusto (2021) argued that CEO duality contributes to effective communication in the board, and enables firms to respond to shocks rapidly. Some studies demonstrate the impact of executive psychological characteristics on firm resilience. For instance, Branicki et al. (2017) held the view that entrepreneurs with high resilience can help firms to better deal with unexpected threats and disruptions, contributing to the building of firm resilience. Wall & Bellamy (2019) argued that the owner-manager's adaptability, sense of confidence, and sense of purposefulness will contribute to firm resilience. Buyl et al. (2019) held the view that CEO narcissism may lead to a larger performance drop immediately after a disruption and slower recovery from the disruption, namely, CEO narcissism is negatively correlated to firm resilience. Prayag et al. (2020) stated that the psychological capital of business owner-managers, including optimism, hope, psychological resilience, and self-efficacy, enables them to better cope with shocks, and thus promoting firm resilience. Sajko et al. (2021)

argued that CEO greed exerts a negative influence on the stability and flexibility of firms facing unexpected disruptions, that is to say, CEO greed will negatively influence firm resilience. Kunz & Sonnenholzner (2022) discussed the potential influence of managerial overconfidence on firm resilience. Weis & Klarner (2022) argued that CEOs' future temporal depth enables them to detect early signals of potential threats and take actions in advance to prevent negative impacts, thus showing a positive association with firm resilience. And there is also some evidence about the correlation between executive leadership and firm resilience. Odeh et al. (2021) argued that transformational leadership facilitates the development of adaptive cultures, and further enhances firm resilience. Although the efforts made by these studies to demonstrate the executive influence on firm resilience, how individuals (Van Der Vegt et al., 2015), especially CEOs, exert their influence on firm resilience (Wall & Bellamy, 2019), still deserve further exploration.

Prior studies on the antecedents of firm resilience can be summed up in Table 2-4 as follows.

Table 2-4 Antecedents of Firm Resilience

Antecedents			References
Firm-level factors	Organizational resources	Advanced technologies (e.g., digital technologies, information technologies)	Chewning et al., 2013; He et al., 2022; Li et al., 2022
		Stakeholder relationship (e.g., Business networks, organization-employee relationships)	Coles et al., 2021; Kim, 2020; Liu & Yin, 2020; Xie et al., 2022
		Organizational culture	Su et al., 2022
	Organizational capabilities	Dynamic capability	Akpan et al., 2022; Hussain & Malik, 2022; Jiang et al., 2019
		Absorptive capacity	Yuan et al., 2022
		Organizational learning capabilities	Orth & Schuldis, 2021; YahiaMarzouk & Jin, 2022
		Ambidexterity capability	Gayed & El Ebrashi, 2022; Iborra et al., 2020
	Organizational practices	Corporate social responsibility	Boubaker et al., 2022; Ortiz-de-Mandojana & Bansal, 2016; Rodríguez-Sánchez et al., 2021
		Strategic human resource management	Bouaziz & Hachicha, 2018; Lengnick-Hall et al., 2011; Roumpi, 2021
Executive level factors	Psychological characteristics	CEO greed	Sajko et al., 2021
		CEO narcissism	Buyl et al., 2019
		Psychological capital	Prayag et al., 2020; Wall & Bellamy, 2019
		Entrepreneurial resilience	Branicki et al., 2017
		Managerial overconfidence	Kunz & Sonnenholzner, 2022
		CEOs' future temporal depth	Weis & Klarner, 2022
	Demographic characteristics	CEO duality	Torres & Augusto, 2021
	Leadership	Transformational leadership	Odeh et al., 2021

2.4 Stakeholder Relationship Capability

The stakeholder theory highlights the reciprocity of responsibility between companies and the stakeholders to realize different performance goals (Friedman & Miles, 2002). Stakeholders refer to individuals or groups who can affect or are affected by the company's strategic outcomes (Freeman, 2010). The group could be societal, organizational, and economic (Werther Jr & Chandler, 2010). Stakeholders have material interests in firms and own resources to affect the survival of firms (Pajunen, 2006). Without support from stakeholders, enterprises can not exist as an enterprise (Mainardes et al., 2011). The needs, preferences and resources of stakeholders influence firms' development greatly (Li et al., 2018). Stakeholders can influence companies' behaviors and outcomes by providing important resources to offer support for firms, generating value-creating assets, or imposing sanctions and penalties for improper behaviors (Li et al., 2018). They will take actions to exert influence on firms when they want to protect their benefits or when they think that firms are responsive to their goals and requirements (Loi, 2016). Stakeholders are not competitors of firms in zero-sum games (Strand & Freeman, 2015). To survive and gain success in the long run, firms should look beyond their shareholders and pay attention to the requirements and goals of various stakeholders (Donaldson & Preston, 1995). Firms must take the benefits and needs of different stakeholders into consideration when seeking their own interests

(Freeman, 2010). By combining the interests of both firms' own and stakeholders, firms are more likely to generate more value and gain a competitive advantage (Westermann-Behaylo et al., 2016).

The influences of different stakeholders on firms are not equal and the interests of some stakeholders may be competing (Rowley, 1997). Stakeholders who have the greatest impact on the company's performance are called primary stakeholders, including investors, shareholders, employees, suppliers, customers, and the communities (Harrison et al., 2010). Firms need to manage the potential tensions and conflicts of different stakeholders by identifying the competing interests of various stakeholders and taking measures to accommodate or reconcile the competing interests (Gao & Slawinski, 2015; Hart & Sharma, 2004). In general, firms usually prioritize stakeholders based on their power, urgency, and legitimacy (Mitchell et al., 1997), among which power indicates the capability of stakeholders to control core resources, urgency emerges when stakeholders urgently call for action, and legitimacy indicates whether the interest of stakeholders will be accepted by society (McKnight & Linnenluecke, 2016).

A good relationship with stakeholders contributes to reducing business uncertainty and transaction costs, thereby improving a company's legitimacy and reputation (Jones et al., 2018). It not only helps well-performing firms to maintain their competitive advantage, but also enables firms with poor financial performance to recover fast from unfavorable positions (Choi & Wang, 2009).

Hence, firms need to learn how to engage with well different stakeholders in appropriate ways (Foster & Jonker, 2005) and enhance their capability to respond to and satisfy the expectations of different stakeholders (Pedrini & Ferri, 2018). It is critical for firms to develop stakeholder relationship capability, which demonstrates a firm's capability to cooperate with, interact, and build close and good relationships with different stakeholders (Jiang et al., 2020; Jones et al., 2018). Firms with a high level of stakeholder relationship capability can better sense the concerns of different stakeholders concerns and satisfy their demands effectively (Jiang et al., 2020). In return, stakeholders will offer support such as valuable information and resources for value co-creation (Kazadi et al., 2016), helping firms to strengthen their reputation, human capital, and innovation (Surroca et al., 2010), improve decision quality (Valiyan et al., 2022), respond to environmental changes effectively, and thus surpass their competitors from the aspect of long-run value creation (García-Sánchez et al., 2018). Hence, stakeholder relationship capability shows a positive correlation with firms' financial performance (Choi & Wang, 2009), innovation performance (Jiang et al., 2020), and sustainable innovation and development (Veronica et al., 2020), becoming a source of a firm's competitiveness (Williams et al., 2020). Especially for firms in emerging economies faced with great challenges such as a lack of resources and imperfect institutions, the support from stakeholders becomes more important (Li et al., 2018), and the value of stakeholder relationship capability becomes more significant.

Chapter 3 Hypothesis Development

3.1 CEO Humility and Firm Resilience

According to the upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), CEOs' characteristics will exert an impact on their interpretation of environments and further influence the strategic choice of firms. Humility is a critical yet underexplored characteristic of CEOs (Ou et al., 2018), which indicates individuals' tendency of acknowledging that there is something greater than the self (Ou et al., 2014), acquiring exact self-knowledge, being open to improving themselves, and appreciating others' contributions and advantages (Ou et al., 2014, 2018). And I hold the view that humble CEOs enable firms better anticipate and avoid threats, and fastly respond to and recover from unexpected disruptions, that is to say, CEO humility will promote firms' resilience.

First, humble CEOs can facilitate firm resilience by gathering and learning various information. Humble CEOs acknowledge that they have disadvantages (Ou et al., 2014). They will actively seek feedback and information from different angles, keep open minds toward different ideas and perspectives (Nie et al., 2022), and will be less likely to reject knowledge and information that contradicts their ideas (Ou et al., 2018). By actively seeking feedback (Ou et al., 2014), learning from others (Cortes-Mejia et al., 2022), and deeply analyzing various information (Zhang et al., 2017), humble CEOs will reflect on their strategic decisions, improving their strategies to avoid potential threats. When faced with unexpected disruptions, they will listen to advice and absorb the insight from different angles, try to learn useful lessons from failures, and adjust their strategies to correct the cause of the problem and facilitates firms' recovery as soon as possible (Vera & Rodriguez-Lopez, 2004), thus promoting firm resilience.

Second, humble CEOs can take full advantage of others' strengths to facilitate firm resilience. Humble CEOs will appreciate others' advantages and strengths (Ou et al., 2014). They are more willing to hire and promote talents and provide platforms to show talents (Zhang et al., 2017). They tend to incorporate various ideas and aspirations of TMT members in decision-making (Cortes-Mejia et al., 2022; Ou et al., 2018) and willingly empower employees to improve work performance during the implementation of strategies (Ou et al., 2014). In this way, humble CEOs can stimulate the potential of TMT members in making effective strategies (Cortes-Mejia et al., 2022) and motivate employees to better implement the strategies in order to avoid threats or fastly respond to and recover from unexpected disruptions. Moreover, CEO humility facilitates an atmosphere of information sharing, cooperation, and shared vision within the enterprise (Ou et al., 2018). By setting a good example for subordinates, humble CEOs encourage subordinates to learn from each other and work hard toward shared goals (Li et al., 2020) to respond to unexpected disruptions and facilitate firms to recover from disruptions as soon as possible, facilitating firm resilience.

Third, CEO humility facilitates the development of good relationships with stakeholders, which helps firms to avoid, respond to, and recover from unexpected disruptions. Driven by the desire to achieve something greater than the self, the life pursuit of humble CEOs is not so much about themselves as about a larger community and a larger whole (Morris et al., 2005). Hence, humble CEOs will take the interests and benefits of various stakeholders into consideration when making strategies, and thus develop close relationships with stakeholders. A good relationship with stakeholders offers great support for firms, helping firms to maintain stability and flexibility when facing unexpected shocks and disruptions, and better recover from the shocks and disruptions (Sajko et al., 2021). Therefore, I believe that CEO humility helps to facilitate firm resilience, which suggests the following assumption:

Hypothesis 1: CEO humility is positively associated with firm resilience.

3.2 Mediating Effect of Stakeholder Relationship Capability

According to the stakeholder theory, firms must take the needs and interests of different stakeholders into consideration when seeking their own economic benefits (Freeman, 2010). Stakeholder relationship capability, which indicates the capability of enterprises to cooperate with, interact, and establish close and good relationships with different stakeholders (Jiang et al., 2020; Jones et al., 2018), is a crucial source of firms' competitive advantage (Williams et al., 2020) and helps firms to cope with adverse conditions and recover fastly from unfavorable positions (Choi & Wang, 2009). I believe that CEO humility may help firms to develop good relationships with stakeholders and strengthen stakeholder relationship capability, and such an ability plays an essential role in the development of firm resilience. That is to say, stakeholder relationship capability may have a positive mediating effect on the correlation between CEO humility and firm resilience.

For one thing, CEO humility contributes to firms' stakeholder relationship capability. Humility drives CEOs to seek something greater than the self, hence, humble CEOs tend to set up an organizational vision for collective and greater interests instead of a vision of achieving personal honor (Ou et al., 2014). They will strive to prevent autocratic processes that focus only on their own interests and tend to involve others in their decision-making (Cortes-Mejia et al., 2022). Being open-minded and concerned for the voices of various stakeholders, humble CEOs can better integrate different stakeholders' views into their visions and strategies (Zhang et al., 2017), take the interests and preferences of various stakeholders into consideration, and avoid harming stakeholders when seeking firms' own economic benefits (Cortes-Mejia et al., 2022), thus developing a good relationship with stakeholders. In addition, humble CEOs are not afraid to admit their limitation and are willing to appreciate others' contributions (Ou et al., 2018). They acknowledge that organizational development can not be achieved alone (Ou et al., 2018) and the realization of organizational goals depends on the integrated efforts of internal and external stakeholders (Frostenson, 2016). Hence, they will take various measures to satisfy the needs and preferences of various stakeholders to gain support from stakeholders for realizing firms' performance goals. Moreover, humble CEOs set good examples within firms, encouraging TMT members and employees to share diverse perspectives, which will further favor an organizational climate to consider various stakeholders' interests (Cortes-Mejia et al., 2022). Such a climate facilitates firms' interaction and collaboration with stakeholders and helps to develop close stakeholder relationships. Therefore, I argue that CEO humility will be positively correlated to firms' stakeholder relationship capability.

For another thing, stakeholder relationship capability will be positively associated with firm resilience. First of all, stakeholder relationship capability helps firms to anticipate and avoid disruptions, thus maintaining stability relatively when disruptions occur. Stakeholders trust firms with high stakeholder relationship capabilities and are more likely to share sensitive information with them (Ortiz-de-Mandojana & Bansal, 2016). And the information is critical in firms' early warning systems for disruptions, which enables firms to sense changes and threats and therefore be prepared in advance to avoid negative influences of disruptions (Ortiz-de-Mandojana & Bansal, 2016). Through developing a close relationship with stakeholders, firms can be more steadily embedded in their environments, which helps to increase legitimacy and decrease their exposure to unsystematic risks; hence, firms with high stakeholder relationship capability display a relatively high level of stability immediately when the disruptions occur (Sajko et al., 2021). Second, stakeholder relationship capability enables firms to better respond to disruptions and recover from them fast. Firms with high stakeholder relationship capability tend to take responsibility for satisfying the requirements of different stakeholders, in return, stakeholders are willing to offer support such as valuable resources and information to help firms to realize mutually beneficial goals (Jiang et al., 2020). When facing unexpected disruptions, such support from stakeholders is critical for firms to deal with disruptions and recover from them as soon as possible. For example, a good labor relationship promotes employees to adjust their wages and working time willingly to deal with disruptions, and close interactions with supply chain partners contribute to common efforts for recovery from disruptions (Sajko et al., 2021). A good stakeholder relationship helps firms to combine external and internal resources and knowledge to adjust their strategies to move out of an unfavorable position fastly (Choi & Wang, 2009). Moreover, stakeholder relationship capability facilitates mutual learning and knowledge exchange between firms and stakeholders through close interactions and relationships (Jiang et al., 2020). The knowledge and information enable firms to deal with different situations (Santoro et al., 2020), providing new ideas for solving various problems brought by disruptions and helping firms to recover from disruptions fastly (Sajko et al., 2021). Third, stakeholder relationship capability may even help firms to seize opportunities in crisis and realize new growth after disruptions. A good relationship with stakeholders helps firms to identify and establish new opportunities for growth, and achieve a new round of growth (Ortiz-de-Mandojana & Bansal, 2016). In a word, a high level of stakeholder relationship capability helps firms to better forecast, respond to, and recover from unexpected disruptions and even achieve a superior position after disruptions, thus promoting firm resilience.

Taken together, I argue that stakeholder relationship capability exerts a positive mediating effect on the correlation between CEO humility and firm resilience. Therefore, the following assumption is proposed:

Hypothesis 2: Stakeholder relationship capability positively mediates the relationship between CEO humility and firm resilience.

3.3 Moderating Effects of Internal and External Factors

3.3.1 Moderating Effect of Competitive Uncertainty

Competitive uncertainty reflects the extent to which the competitive environment faced by firms is unpredictable (Qian et al., 2013; Tan & Litsschert, 1994). In environments with high levels of competitive uncertainty, it becomes very difficult to forecast changes in market demands, technologies, policies, resource supplies, and competitor actions (Qian et al., 2013; Westphal & Zhu, 2019). The incomplete and vague information in uncertain environments increases the challenges faced by firms (Nie et al., 2022) and increases the perceived risk of firm failure (Agle et al., 2006). The high level of ambiguity in highly uncertain environments extends the scope of CEOs' possible action (Engelen et al., 2015), increasing the managerial discretion of CEOs and enabling CEOs to exert greater influence on strategic choices (Agle et al., 2006; J. Li & Tang, 2010). Moreover, the information asymmetry between stakeholders and the firm increases greatly when competitive uncertainty is high (Patel, 2011), and it becomes more difficult for firms to identify the different requirements of various stakeholders and build good and close relationships with different stakeholders. In such a context, firms rely more on CEOs to and make effective strategies to manage the requirements of different stakeholders. Hence, humble CEOs have more power in decision-making, and can take various measures to establish or maintain close and good relationships with various stakeholders as they want. Moreover, CEOs have greater symbolic significance and the followers will show greater efforts and cooperation when competitive uncertainty is high (Agle et al., 2006). In a highly uncertain environment, firm members tend to follow the style and behavior of humble CEOs (Nie et al., 2022) to consider various stakeholders' interests in their work, providing greater support for firms to better interact, collaborate with, and build good relationships with stakeholders. Hence, when competitive uncertainty is high, the positive connection between CEO humility and the stakeholder relationship capability of firms will be amplified.

On the contrary, when competitive uncertainty is low, changes are predictable (Jaworski & Kohli, 1993) and it is easier to identify and manage different requirements of various stakeholders. Firms can depend on their prior routines and capabilities (Zhou et al., 2022) to cope with the relationships with various stakeholders, and the discretion of humble CEOs is limited and their strategic choice is restricted . In such a context, humble CEOs may not be able to make effective strategies to meet the requirements of different stakeholders and develop or maintain good relationships with them as they want due to the low discretion. Hence, the positive influence of CEO humility on stakeholder relationship capability is weakened in environments with lower levels of competitive uncertainty. Hence, I put forward the assumption as follows:

Hypothesis 3: Competitive uncertainty positively moderates the relationship between CEO humility and stakeholder relationship capability.

3.3.2 Moderating Effect of Market Complexity

Market complexity indicates the degree to which the market condition is heterogeneous and competitive (Dess & Beard, 1984; Simsek et al., 2010). When the number of competitors increases or the industry concentration decreases, market complexity may increase (Li & Tang, 2010). In highly complex markets, a lot of competing products and brands are available for customers, a lot of organizations and people engage in product pricing, distribution and promotion, customer demands vary depending on market segments, and a large number of people are affected in order to purchase these products (Khan, 2020). The high ambiguity faced by firms in highly complex markets makes it more difficult for firms to accurately and comprehensively analyze and evaluate their situation as well as manage the competitive activities, increasing the information-processing demands for the firms (Souder et al., 2012).In such a situation, CEOs have fewer restrictions, their untested maneuvering range has been expanded and their influences on firms' strategies making will become more significant (Ren et al., 2021). Hence, humble CEOs have more managerial discretion (Ataay, 2020) and can better take measures to satisfy the needs of different stakeholders and develop good relationships with them. In addition, the increasing complexity in markets entails more engagement with various stakeholders such as customers and employees (Souder et al., 2012). And the development and maintenance of close relationships with various stakeholders become more urgent but challenging for firms. In such a situation, the willingness and knowledge of humble CEOs in dealing with collective interests become more essential for firms to develop strong stakeholder relationship capability. Therefore, the correlation between CEO humility and stakeholder relationship capability will be enhanced in such a context.

By contrast, norms are well developed in less complex markets, and CEOs' discretion will decrease under such a context (Ataay, 2020; Li & Tang, 2010; Ren et al., 2021). In such a context, even if humble CEOs want to make strategies to satisfy the requirements of various stakeholders and build close relationships with them, the effectiveness of their strategies may not be satisfying limited to their low discretion. Also, there are fewer organizations and people engaging in product pricing, distribution and promotion when market complexity is low, and the management of different stakeholders becomes relatively easy for firms. And the willingness and knowledge of humble CEOs to deal with different stakeholders become less critical in such a situation. Therefore, the positive influence of CEO humility on stakeholder relationship capability will be weaker when market complexity is low. Thus, the following hypothesis is put forward:

Hypothesis 4: Market complexity positively moderates the relationship between CEO humility and stakeholder relationship capability.

3.3.3 Moderating Effect of CEO Work Experience Variety

CEO work experience variety refers to the extent to which CEOs have accumulated diverse work experience from different areas or institutions (Crossland et al., 2014; Georgakakis & Ruigrok, 2017). CEOs can accumulate different knowledge and skills in different areas or firms during their prior different work experience (Georgakakis & Ruigrok, 2017). Given that humble people can usually be more aware of their shortcomings (Brunzel & Ebsen, 2022), appreciate others' strengths (Ou et al., 2014; Owens et al., 2013), and hold an open mindset to suggestions and new ideas (Tangney, 2000), humble CEOs with a high level of work experience variety can better learn from others and are open to suggestions to overcome their shortcomings. Therefore, humble

CEOs can better learn and absorb the rich knowledge and skills in their diverse work experience in different areas, and the diverse knowledge and skills are very helpful for them to analyze various problems faced by firms and consider the relationships with stakeholders from different angles. In addition to the knowledge gained through diverse work experiences, CEOs with a high level of work experience variety also have more external communication links and broad ties to gain more information (Hu & Liu, 2015) for decision-making. What's more, the diverse work experience also enhances CEOs' ability to learn fastly and apply knowledge and skills accumulated from their prior work in different areas to adapt to new environments (Crossland et al., 2014; Georgakakis & Ruigrok, 2017). Humble CEOs with a high level of work experience variety can better apply their diverse knowledge and skills to make effective strategies to satisfy the requirements of different stakeholders and maintain good relationships with them. Moreover, work experience variety shapes CEOs' cognitive breadth (Crossland et al., 2014) and makes CEOs to be more open to different ideas (Musteen et al., 2006), which enables them to propose diverse solutions to business solutions(Crossland et al., 2014). When firms are faced with different requirements of various stakeholders or criticism from certain types of stakeholders, humble CEOs with a high level of work experience variety can propose more solutions to better satisfy the needs of different stakeholders and better interact and collaborate with them. Furthermore, a high level of work experience variety enables CEOs to better transfer their knowledge and skills to other members of the firm (Georgakakis & Ruigrok, 2017). The diverse knowledge transferred from humble CEOs to top management team members and employees further facilitates the effective implantation of strategies on stakeholders, enabling firms to better develop or maintain good relationships with stakeholders. Therefore, the positive influence of CEO humility on stakeholder relationship capability will be enhanced when CEO work experience variety is high. Therefore, I propose the hypothesis as follows:

Hypothesis 5: CEO Work experience variety positively moderates the relationship between CEO humility and stakeholder relationship capability.

The theoretical model of the relationship among CEO humility, stakeholder relationship capability, and firm resilience as well as their relationships under different contexts can be summarized as follows in Figure 3-1.

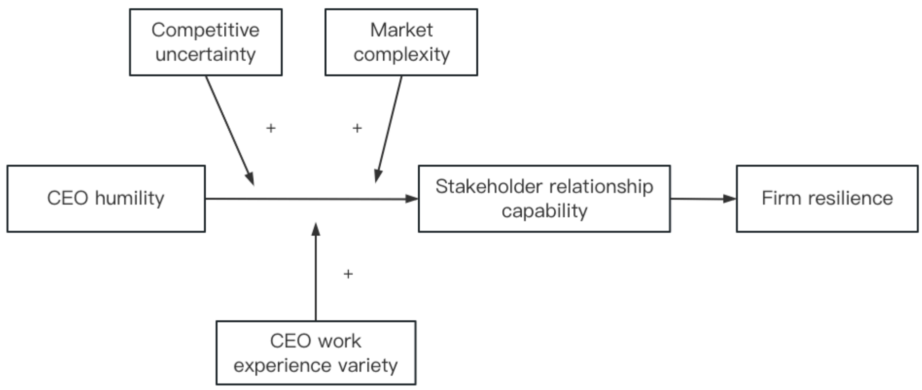


Figure 3-1 Theoretical Model

Chapter 4 Method

4.1 Data and Sample

To test my theoretical model, I adopt the survey method to collect data. A back-translation process was conducted given that the scales of this dissertation were developed in English that have been developed and validated in prior research. I randomly select 500 firms from the lists of EMBA and DBA alumni and contact these firms to invite their CEOs to participate in my survey. To ensure the applicability and reliability of the conclusion, I randomly select firms from different industries.

The survey was conducted from January 2023 to April 2023. CEOs were asked to evaluate their humility, the stakeholder relationship capability, resilience of their firms and evaluate the environments in which their firms are embedded. Also, they were required to give basic information about themselves like their gender, age, and educational level, as well as basic information about their firms such as the established time, employee numbers, and the return on sales of the firm.

I obtained 127 questionnaires after the survey. After excluding invalid samples with missing values, the final sample of this dissertation contains 119 firms.

4.2 Measure

4.2.1 Independent Variable

CEO humility is measured by the nine-item scale developed by Owens et al. (2013) in this dissertation, which demonstrates individuals' tendency to view the self correctly, appreciate contributions and advantages of others, and the teachability. Sample items include: "I actively seek feedback, even if it is critical". Cronbach's alpha for the scale is 0.880, demonstrating a relatively high level of internal consistency.

4.2.2 Dependent Variable

Firm resilience is measured by a four-item scale adapted from Ambulkar et al. (2015) and Parker and Ameen (2018). The scale captures firms' ability to maintain situational awareness of potential threats and fastly adjust, adapt, and respond to adverse events. Cronbach's alpha for this scale is 0.902, demonstrating a high level of reliability.

The items of the independent variable and dependent variable are displayed in Table 4-1 as follows.

Table 4-1 Items of the Independent Variable and Dependent Variable

Variable	Items
CEO humility	I actively seek feedback, even if it is critical
	I admit it when I don't know how to do something
	I acknowledge when others have more knowledge and skills than me
	I take notice of others' strengths
	I often compliment others on their strengths
	I show appreciation for the unique contributions of others
	I am willing to learn from others
	I am open to the ideas of others
	I am open to the advice of others
Firm resilience	Our firm can deal with changes brought by unexpected adverse events.
	Our firm can adapt easily to unexpected adverse events.
	Our firm can respond fastly to unexpected adverse events.
	Our firm always maintains high situational awareness.

4.2.3 Mediating Variable

Stakeholder relationship capability is measured by a six-item scale proposed by Jiang et al. (2020) in this dissertation. Respondents are required to assess their firms' ability to interact, collaborate with, and build close relationships with various stakeholders. Specifically, they will be asked to evaluate the following detailed capabilities of their firms, which are presented in Table 4-2 as follows. Cronbach's alpha for this scale is 0.926, demonstrating a relatively high level of reliability.

Table 4-2 Items of Stakeholder Relationship Capability

Dimensions	**Capabilities**
Interaction	early sensing of societal concerns
	listening to various stakeholder voices
	communicating a company's point of view to stakeholders
Cooperation	seeking public consultation for new development
	cooperating with stakeholders to solve problems
Developing close relationships	improving goodwill among stakeholders and building positive relationships with stakeholders

4.2.4 Moderating Variables

(1) Competitive Uncertainty

Competitive uncertainty is measured by a seven-item scale following Qian et al. (2013). CEOs are asked to demonstrate the degree to which each dimension of external environments faced by their firms is unpredictable, including market demand, competitors' actions, product or process technology, relevant policies, customer needs and buying behaviour, goals and actions of alliance partners, and availability of needed talent. The items of competitive uncertainty are summarized in Table 7 as follows. Cronbach's alpha for this scale of competitive uncertainty is 0.844, demonstrating a relatively high level of reliability.

(2) Market Complexity

Market complexity is measured by the scale developed by Homburg et al. (1999), which includes eight items to demonstrate the heterogeneity and competitiveness in the market faced by the firm. And the items of market complexity are offered in Table 7. Cronbach's alpha for this scale of market complexity is 0.881, demonstrating a relatively high level of internal consistency.

(3) CEO Work Experience Variety

CEO work experience variety is calculated by the number of different types of organizations that the CEO has ever worked in. CEOs are required to indicate what types of organizations they have worked in during their career, including state-owned or collective enterprises, foreign-invested, Hong Kong, Macao, and Taiwan enterprises, private enterprises, government departments, banks or other financial institutions, universities or other research institutions, military or military departments, and other public institutions. The more types of organizations that CEOs have ever worked in, the more diverse work experience they will accumulate.

To sum up, Table 4-3 summarizes the items of moderating variables.

Table 4-3 Items of Moderating Variables

Variable	Items
Competitive uncertainty	To what extent is the external environment faced by your company unpredictable in the following aspects? (1= Highly predictable, 3= Neutral, 5= Highly unpredictable)
	1) Product and/or process technology
	2) Market demand
	3) Customer needs and buying behavior
	4) Competitors' actions
	5) Availability of needed talent
	6) Relevant policies
	7) Goals and actions of alliance partners
Market complexity	1) The number of products and brands is very high.
	2) The number of people/organizations involved in the distribution process is very high.
	3) The number of people involved in the buying process is very high.
	4) Communication varies very much across different customer segments.
	5) Customer requirements vary a lot across different customer segments.
	6) There is a lot of variety in products for sale.
	7) There is a lot of variety in the type of people involved in the buying process.
	8) There are many people other than direct customers who must be influenced in order to sell.

4.2.5 Control Variables

To control the impact of firm-level, top management team (TMT) level CEO-level, and industry-level factors on stakeholder relationship capability and firm resilience, various variables are included in the model in this dissertation.

From the aspect of firm-level factors, firm size, firm age, and firm performance are considered in the model. Firm size is controlled by the logarithm of the number of employees in the firm. Bigger firms usually have more tangible and intangible resources to develop close and good relationships with various stakeholders and deal with adverse events (Baghersad & Zobel, 2022), thus influencing stakeholder relationship capability and firm resilience. Firm age is calculated as the logarithm of the number of years since the firm was set up. As aging, firms can better understand and meet the requirements of different stakeholders and better respond to potential threats and unexpected shocks with the accumulation of experience (Baghersad & Zobel, 2022). Firm performance is controlled given that well-performing firms usually have more resources (Li et al., 2021) to satisfy the needs of different stakeholders and maintain good relationships with them, and better make strategies to adapt and respond to potential threats and negative events. It is measured by a three-item scale developed by Worren et al. (2002) the three items include “Over the past 3 years, our financial performance has been outstanding”, “Over the past 3 years, our financial performance has exceeded our competitors'”, and “Over the past 3 years, our sales growth has exceeded our competitors'”. Cronbach’s alpha for the scale of firm performance is 0.870, demonstrating a relatively high level of reliability.

From the aspect of TMT level factors, TMT size is taken into consideration in this dissertation. It is measured by a categorical variable, 1 presents that there are no more than 5 top managers in the TMT of the firm, 2 presents that the top managers in their TMT range from 6 to 10, 3 presents that the top managers in their TMT range from 11 to 15, 4 presents that the top managers in their TMT range from 16 to 20, 5 presents that there are more than 20 top managers in their

TMT. A larger top management team can provide new insights (Kiss et al., 2020) into how to develop and maintain good relationships with various stakeholders and how to anticipate potential threats and cope with unexpected shocks.

From the aspect of CEO-level factors, CEO age, gender, and education are taken into consideration in my model. CEO age is measured by a categorical variable (1=no older than 30 years old, 2=31-40 years old, 3=41-50 years old, 4=51-60 years old, 5=older than 60 years old). As CEOs get older, they accumulated experience and knowledge on how to interact with different stakeholders and how to deal with unexpected events faced by firms. CEO gender is measured by a dummy variable. If the CEO is male, then I give the value of 1 to the variable, if the CEO is female, then the value of it is 0. Males and females usually have different attitudes towards many events, influencing their network ties (Marvel et al., 2015). The differences between them may reflect in their strategic decision-making (Mahto et al., 2018), thus influencing stakeholder relationship capability and firm resilience. CEO education is measured by a categorical variable (1=Below undergraduate degree, 2=Undergraduate degree, 3=Master's degree, 4=Doctoral degree). The educational level reflects the human capital and capability of CEOs to certain extent (Honjo & Kato, 2022). Highly educated CEOs usually have more cognitive resources and knowledge to deal with people and things (Wally & Baum, 1994), thus influencing their strategies to build relationships with different stakeholders and cope with unexpected events.

From the aspect of industry-level factors, given that firms in different industries may be faced with different kinds of stakeholders and threats, the stakeholder relationship capabilities and firm resilience may vary in different industries. To control the impact of industries, I include the industry dummies in the model. The industry distribution of my sample firms includes the manufacturing industry (31.93%), information transmission, software and information technology services industry (21.01%), wholesale and retail (14.29%), business service industry (12.61%), finance industry (11.76%), real estate industry (5.04%), and culture, sports and entertainment industry (3.36%). The measures of different control variables are displayed in Table 4-4 as follows.

Table 4-4 Measures of Control Variables

Variables		Measures
Firm level	Firm size	The logarithm of the number of employees in the firm
	Firm age	The logarithm of the number of years since the firm was set up
	Firm performance	A three-item scale developed by Worren et al. (2002)
TMT level	TMT size	A categorical variable (1=no more than 5; 2=6-10; 3=11-15; 4=16-20; 5=more than 20)
CEO level	CEO age	A categorical variable (1=30 or below; 2=31-40; 3=41-50; 4=51-60; 5= 61 or above)
	CEO gender	A dummy variable (1=male; 0=female)
	CEO education	A categorical variable (1=Below undergraduate degree; 2=Undergraduate degree; 3=Master's degree; 4=Doctoral degree)

Chapter 5 Results

5.1 Validity and Reliability

The confirmatory factor analysis (CFA) is adopted. A six-factor model including CEO humility, stakeholder relationship capability, firm resilience, competitive uncertainty, market complexity, and firm performance is conducted. The model fits the data well ($\chi 2$ (260) =445.923, $p \leq .01$; CFI = 0.913, SRMR = 0.062, RMSEA=0.078).

To test the discriminant validity, I compare the six-factor model with alternative models, and the comparison of CFA models is presented in Table 5-1.

Table 5-1 Comparison of CFA Models

Model	χ2	Df	CFI	SRMR	RMSEA
Six-factor model	445.923	260	0.913	0.062	0.078
Five-factor model 1 (CEO humility and firm resilience combined)	669.298	265	0.811	0.093	0.113
Five-factor model 2 (CEO humility and stakeholder relationship capability combined)	671.000	265	0.810	0.091	0.113
Five-factor model 3 (CEO humility and competitive uncertainty combined)	679.436	265	0.806	0.110	0.115
Five-factor model 4 (CEO humility and market complexity combined)	747.008	265	0.774	0.116	0.124
Five-factor model 5 (CEO humility and firm performance combined)	628.223	265	0.830	0.097	0.107
Five-factor model 6 (stakeholder relationship capability and firm resilience combined)	570.772	265	0.857	0.072	0.098
Five-factor model 7 (stakeholder relationship capability and competitive uncertainty combined)	681.918	265	0.805	0.111	0.115
Five-factor model 8 (stakeholder relationship capability and market complexity combined)	740.141	265	0.777	0.111	0.123
One-factor model	1461.642	275	0.444	0.163	0.190

As we can see in the table, compared with five-factor or one-factor models, the six-factor model fits the data the best, which demonstrates a high discriminant validity.

To test the convergent validity, I explore the standardized factor loadings, which demonstrates that all standardized factor loadings exceed the accepted level of 0.40 and are significant, indicating a high convergent validity.

The Cronbach's alphas of the variables in this dissertation are bigger than 0.7, which indicates the scales used in the dissertation have high reliability.

5.2 Common Method Bias

Because the CEOs answered all questions in this survey, the common method bias may be a concern in my results. In order to alleviate the concern about common method bias, I take a lot of measures. During the survey, I avoid the face-to-face interview to avoid the negative influence of social desirability. I guarantee the anonymity of the answers in the questionnaires. And the constructs are displayed in the questionnaire out of order to prevent CEOs from guessing the potential relationships between constructs. CEOs are informed that there are no right or wrong answers, they just need to choose the answer according to their actual feelings. In addition, the Harman's One Factor Test is adopted in this dissertation. If the variance of the first factor in exploratory factor analysis exceeds 50%, the common method bias may be serious (Fuller et al., 2016). The test result shows that the variance is 24.52%, which is smaller than 50%. Hence, common method bias is not a big issue in my results.

5.3 Descriptive Statistics and Correlations

Table 5-2 presents the descriptive statistics of variables in this dissertation, with their mean values, standard deviations, minimum values, and maximum values. The mean value of firm resilience is 3.889, and its min value is 1.5 and the max value is 5, suggesting that the resilience level of the sample firms is quite different, some firms show a high level of resilience, while some firms show lower levels. The average value of CEO humility is 4.352 and the standard deviation of it is 0.562, indicating that most of the CEOs in the sample firms are quite humble. The mean value of stakeholder relationship capability is 3.999, and its standard deviation is 0.717, most of the sample firms can develop close relationships with stakeholders and show a relatively high level of stakeholder relationship capability. The mean value of competitive uncertainty is 3.408 and the standard deviation is 0.647; the mean value of market complexity is 3.533 and the standard deviation is 0.759; different firms are faced with different levels of competitive uncertainty and market complexity. The firm age of the sample firms ranges from 0.693 to 3.761, the oldest firm in the sample was established in 1981, and the youngest firm in the sample was set up in 2022. The mean value of CEO Work experience variety is 1.723, and its range is from 1 to 4, suggesting that CEOs in the sample have worked in 1.723 different types of organizations, and some CEO have even worked in 4 different types of organizations during their career. The mean value of CEO gender is 0.773, demonstrating that 77.3% of CEOs in the sample are male.

Table 5-2 Descriptive Statistics of Main Variables

Variable	Mean	Std. Dev.	Min	Max
Firm resilience	3.889	0.769	1.5	5
Stakeholder relationship capability	3.999	0.717	1	5
CEO humility	4.352	0.562	1.333	5
Competitive uncertainty	3.408	0.647	1.714	5
Market complexity	3.533	0.759	1.75	5
CEO work experience variety	1.723	0.758	1	4
Firm age	2.539	0.713	.693	3.761
Firm size	5.025	1.958	1.792	11.608
Firm performance	3.535	0.781	1	5
TMT size	2.319	1.353	1	5
CEO age	2.891	0.821	1	5
CEO gender	0.773	0.421	0	1
CEO education	2.899	0.706	1	4

Note: N=119

The correlation coefficients between the main variables are presented in Table 5-3.

Table 5-3 Pairwise Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Firm resilience	1.000												
2. Stakeholder relationship capability	0.698***	1.000											
3. CEO humility	0.369***	0.398***	1.000										
4. Competitive uncertainty	-0.082	0.107	0.126	1.000									
5. Market complexity	0.090	0.160*	0.056	0.209**	1.000								
6. CEO work experience variety	-0.021	0.049	0.067	-0.157*	-0.154*	1.000							
7. Firm age	0.060	-0.047	-0.099	-0.025	0.043	-0.084	1.000						
8. Firm size	-0.061	-0.007	-0.188**	0.041	-0.026	-0.015	0.549***	1.000					
9. Firm performance	0.341***	0.486***	0.319***	0.244***	0.105	-0.091	0.107	0.088	1.000				
10. TMT size	0.083	0.072	-0.124	-0.059	-0.102	-0.078	0.335***	0.611***	0.021	1.000			
11. CEO age	0.132	0.115	-0.030	0.030	-0.089	0.128	0.154*	0.187**	0.101	0.154*	1.000		
12. CEO gender	0.026	0.079	-0.101	0.090	-0.050	0.200**	0.125	0.155*	0.140	0.158*	0.124	1.000	
13. CEO education	0.018	-0.084	0.024	0.067	0.000	-0.037	0.006	0.052	-0.014	-0.073	0.098	-0.021	1.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

As displayed in Table 5-3, CEO humility is positively and significantly connected with firm resilience, which provides preliminary for hypothesis 1. There is also a positive and significant correlation between CEO humility and stakeholder relationship capability. And stakeholder relationship capability is significantly and positively connected with firm resilience as predicted. Taken together, the correlations among CEO humility, stakeholder relationship capability and firm resilience provide preliminary support for the mediating effect of stakeholder relationship capability. What's more, the correlation coefficients between control variables are small, demonstrating that multicollinearity is not a serious issue in this dissertation. Moreover, the variance inflation factor (VIF) test is also adopted to test the multicollinearity (Wooldridge, 2010). The results suggest that the average value of VIF is 1.39, and the maximum value of VIF is 1.56, which are smaller than 5. Thus, the multicollinearity risks are very low in this dissertation (S. Chatterjee & Hadi, 1977).

5.4 Hypothesis Testing

5.4.1 Main Effect and Mediating Effect

Ordinary least squares (OLS) regression analysis is employed in this dissertation to test the hypotheses. Table 5-4 presents the regression results of the impact of CEO humility on firm resilience as well as the mediating role of stakeholder relationship capability on the connection between CEO humility and firm resilience.

Table 5-4 Main Effect of CEO Humility and Mediating Role of Stakeholder Relationship Capability

	Model 1 Stakeholder relationship capability	Model 2 Firm resilience	Model 3 Firm resilience	Model 4 Firm resilience
Firm age	-0.096	0.122	0.190**	0.190**
	(0.094)	(0.112)	(0.088)	(0.085)
Firm size	-0.028	-0.086**	-0.077*	-0.067*
	(0.040)	(0.038)	(0.041)	(0.040)
Firm performance	0.365***	0.247**	0.019	-0.010
	(0.104)	(0.111)	(0.087)	(0.083)
TMT size	0.077	0.104**	0.050	0.050
	(0.056)	(0.049)	(0.044)	(0.043)
CEO age	0.062	0.090	0.042	0.046
	(0.081)	(0.088)	(0.066)	(0.065)
CEO gender	0.015	0.019	-0.029	0.008
	(0.164)	(0.177)	(0.113)	(0.122)
CEO education	-0.065	0.030	0.084	0.076
	(0.088)	(0.081)	(0.074)	(0.071)
CEO work experience variety	0.071	-0.040	-0.069	-0.090
	(0.073)	(0.079)	(0.066)	(0.065)
Competitive uncertainty	-0.051	-0.231*	-0.182**	-0.195**
	(0.127)	(0.131)	(0.088)	(0.089)
Market complexity	0.138	0.113	0.014	0.016
	(0.090)	(0.089)	(0.065)	(0.064)
CEO humility	0.378***	0.474***		0.207
	(0.114)	(0.162)		(0.126)
Stakeholder relationship capability			0.757***	0.705***
			(0.082)	(0.082)
Constant	0.792	0.762	0.765	0.203
	(0.715)	(0.985)	(0.698)	(0.754)
Industry effect	Yes	Yes	Yes	Yes
N	119	119	119	119
R^2	0.382	0.321	0.573	0.588

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Hypothesis 1 forecasts a positive correlation between CEO humility and firm resilience. As displayed in Model 2, the coefficient of CEO humility for predicting firm resilience is 0.474, which is significant at the level of 1%. The result indicates that CEO humility helps to facilitate firm resilience, thereby offering empirical support for Hypothesis 1.

Hypothesis 2 argues that stakeholder relationship capability positively mediates the correlation between CEO humility and firm resilience. Model 1 shows the regression results of the impact of CEO humility on stakeholder relationship capability. The result demonstrates that CEO humility is positively correlated with stakeholder relationship capability at a significance level of 1% ($b=0.378$, $p<0.01$), providing support for part of Hypothesis 2. In Model 3, stakeholder relationship capability is positively and significantly related to firm resilience ($b=0.757$, $p<0.01$). Model 4 includes CEO humility and stakeholder relationship capability to predict firm resilience. As displayed in the model, CEO humility is still positively and but not significantly related to firm resilience ($b=0.207$, $p>0.1$), stakeholder relationship capability is positively and significantly related to firm resilience ($b=0.705$, $p<0.01$), which give empirical support for part of Hypothesis 2. Taken together, the positive connection between CEO humility and firm resilience is positively mediated by stakeholder relationship capability, namely, CEO humility facilitates firm resilience via enhancing stakeholder relationship capability. What's more, the Sobel test and bootstrap method are used to test the mediating role of stakeholder relationship capability. The result of the Sobel test demonstrates that the p-value is 0.0027, which is significant at 1% level. Hence, hypothesis 2 is verified again. By adopting the PROCESS macro for SPSS (Hayes, 2013), I test the indirect effect through bootstrap methods. The results demonstrate that the indirect effect is 0.267 and its 95% Monte Carlo bootstrapped confidence interval (CI) excludes zero, ranging from 0.059 to 0.459. Therefore, the positive mediating effect of stakeholder relationship capability is confirmed again.

5.4.2 Moderating Effects

Table 5-5 displays the regression results of the moderating effect of internal and external factors on the correlation between CEO humility and stakeholder relationship capability.

Table 5-5 Moderating Effects on the Relationship between CEO Humility and Stakeholder Relationship Capability

	Model 5	Model 6	Model 7	Model 8
Firm age	-0.089	-0.098	-0.122	-0.116
	(0.094)	(0.096)	(0.093)	(0.093)
Firm size	-0.040	-0.027	-0.030	-0.045
	(0.043)	(0.040)	(0.041)	(0.044)
Firm performance	0.370***	0.365***	0.363***	0.367***
	(0.102)	(0.104)	(0.106)	(0.103)
TMT size	0.090	0.077	0.079	0.093
	(0.056)	(0.057)	(0.055)	(0.056)
CEO age	0.052	0.062	0.062	0.050
	(0.080)	(0.082)	(0.078)	(0.077)
CEO gender	-0.003	0.017	0.007	-0.018
	(0.162)	(0.164)	(0.162)	(0.162)
CEO education	-0.038	-0.065	-0.068	-0.038
	(0.088)	(0.089)	(0.085)	(0.087)
Competitive uncertainty	-0.068	-0.053	-0.052	-0.067
	(0.117)	(0.123)	(0.123)	(0.111)
Market complexity	0.121	0.135	0.130	0.117
	(0.089)	(0.100)	(0.086)	(0.085)
CEO work experience variety	0.092	0.070	0.056	0.079
	(0.071)	(0.070)	(0.072)	(0.069)
CEO humility	0.324***	0.379***	0.482***	0.438***
	(0.114)	(0.115)	(0.120)	(0.118)
CEO humility*Competitive uncertainty	0.352**			0.394**
	(0.165)			(0.152)
CEO humility*Market complexity		0.019		-0.045
		(0.207)		(0.171)
CEO humility*CEO work experience variety			0.298**	0.349**
			(0.144)	(0.142)
Constant	2.004***	2.707***	2.420***	2.651***
	(0.579)	(0.784)	(0.684)	(0.477)
Industry effect	Yes	Yes	Yes	Yes
N	119	119	119	119
R^2	0.410	0.382	0.400	0.434

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Hypothesis 3 argues that competitive uncertainty has a positive moderating effect on the relationship between CEO humility and stakeholder relationship capability. In Model 5, the coefficient of the interaction term between CEO humility and competitive uncertainty is positive for stakeholder relationship capability at the 10% significance level ($b=0.352$, $p<0.05$), which gives empirical evidence for Hypothesis 3. Hence, the positive moderating role of competitive uncertainty is confirmed.

Figure 5-1 captures the moderating effect of competitive uncertainty on the relationship between CEO humility and stakeholder relationship capability. For firms faced with high levels of competitive uncertainty (one SD larger than the mean value), CEO humility is positively and significantly associated with stakeholder relationship capability ($b=0.552$, $p<0.01$). And the stakeholder relationship capability in firms managed by CEOs with high humility (one SD larger than the mean value) compared with firms managed by CEOs with low levels of humility (one SD smaller than the mean value) improves by 17.1%. By contrast, when competitive uncertainty is low (one SD smaller than the mean value), the relationship between CEO humility and stakeholder relationship capability becomes no longer significant ($b=0.096$, $p>0.1$). And the stakeholder relationship capability in firms managed by CEOs with high humility (one SD larger than the mean value) compared with firms managed by CEOs with low humility (one SD smaller than the average) improves only by 2.7%. Hence, the benefits of CEO humility for stakeholder relationship capability will be enhanced when competitive uncertainty is high, providing additional support for Hypothesis 3. As shown in the figure, when competitive uncertainty is low, although the firms operated by humble CEOs show a higher level of stakeholder relationship capability, the difference in stakeholder relationship capability between firms operated by humble CEOs and those operated by less humble CEOs is not significant. Whereas the difference in highly uncertain environments is very significant. Less humble CEOs are more likely to lose points in stakeholder relationship management when competitive uncertainty is high, and firms that are operated by less humble CEOs and faced with high competitive uncertainty show the lowest level of stakeholder relationship capability compared with other conditions.

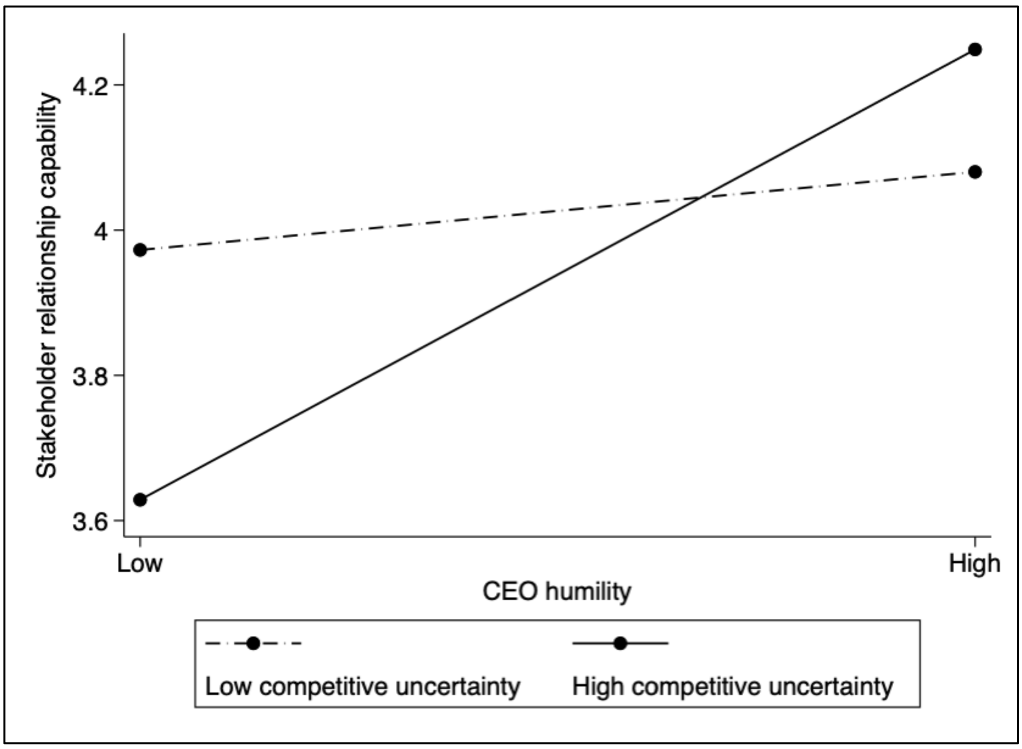


Figure 5-1 Moderating Effect of Competitive Uncertainty on the Relationship between CEO Humility and Stakeholder Relationship Capability

Hypothesis 4 forecasts a positive moderating role of market complexity on the positive relationship between CEO humility and stakeholder relationship capability. The result in Model 6 shows a positive but not significant coefficient of the interaction term between CEO humility and market complexity ($b=0.019$, $p>0.1$), failing to give empirical evidence for hypothesis 4.

Hypothesis 5 forecasts that the positive impacts of CEO humility on stakeholder relationship capability will be strengthened when CEO work experience variety is high. In Model 7, the coefficient of the interaction term between CEO humility and CEO work experience variety is 0.298, which is positive at a significance level of 5% ($b=0.298$, $p<0.05$), indicating a positive moderating effect of CEO work experience variety on the relationship between CEO humility and stakeholder relationship capability. Therefore, Hypothesis 5 is validated.

Figure 5-2 presents the moderating effect of CEO work experience variety. For CEOs with high levels of work experience variety (one SD larger than the mean value), CEO humility is positively and significantly associated with stakeholder relationship capability ($b=0.708$, $p<0.01$). And the stakeholder relationship capability in firms managed by CEOs with high humility (one SD larger than the mean value) compared with firms managed by CEOs with low humility (one SD smaller than the mean value) improves by 21.9%. On the contrary, when CEO work experience variety is low (one SD smaller than the mean value), the relationship between CEO humility and stakeholder relationship capability becomes less significant (b=0.267, p<0.05). And the stakeholder relationship capability in firms managed by CEOs with high humility (one SD larger than the mean value) compared with firms managed by CEOs with low humility (one SD smaller than the mean value) improves only by 7.6%. Therefore, the CEO work experience variety amplifies the positive association between CEO humility and stakeholder relationship capability, thereby giving additional evidence for Hypothesis 5.

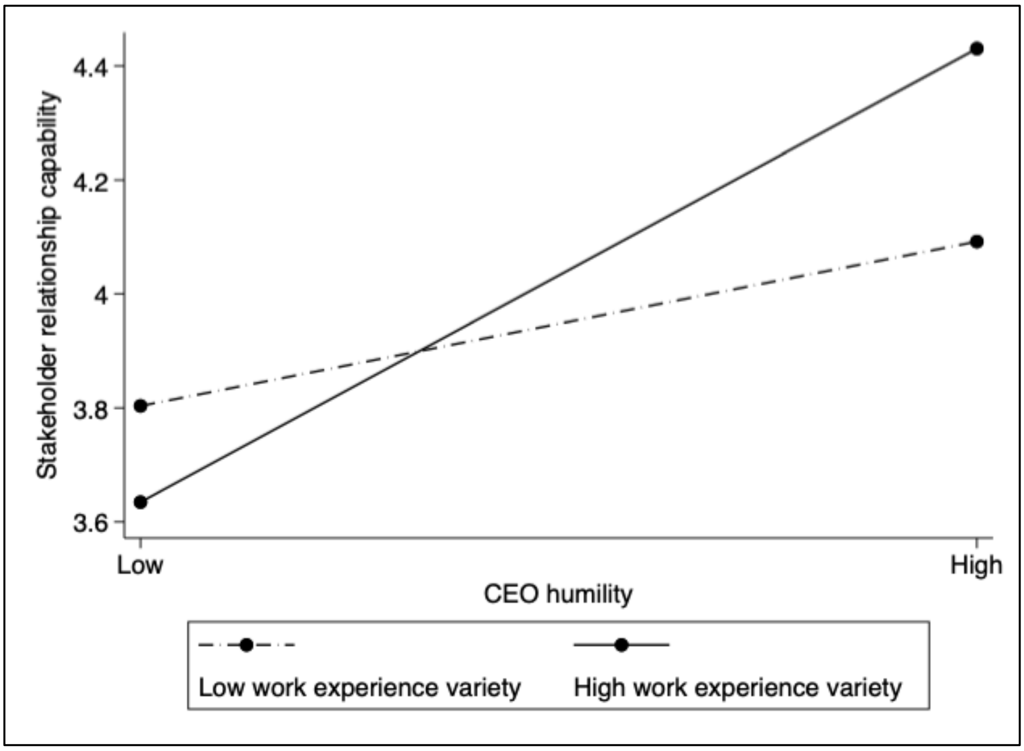


Figure 5-2 Moderating effect of CEO work experience variety on the relationship between CEO humility and stakeholder relationship capability

In a word, four hypotheses in the study are confirmed by the empirical results while one hypothesis does not obtain empirical support. Specifically, the regression results suggest that CEO humility helps to facilitate firm resilience. Stakeholder relationship capability positively mediates the positive relationship between CEO humility and firm resilience. Competitive uncertainty and CEO work experience variety positively moderate the positive relationship between CEO humility and stakeholder relationship capability. However, market complexity does not show a significant positive moderating effect on the relationship between CEO humility and stakeholder relationship capability as I expected.

5.5 Robustness Check

In order to check the robustness of the results in this dissertation, I have taken various measures.

First of all, I change the measure of firm resilience and firm resilience. The alternative measure of firm resilience is developed by Do et al. (2022), which indicates the agility, robustness, and integrity of firms when facing unexpected disruptions. The nine items of firm resilience are shown in Table 5-6 as follows.

Table 5-6 Items of Firm Resilience

Dimensions	Items
robustness	My organization stands straight and preserves its position.
	My organization is successful in generating diverse solutions.
	My organization shows resistance to the end in order not to lose.
	My organization does not give up and continues its path.
agility	My organization rapidly takes action.
	My organization develops alternatives in order to benefit from negative circumstances.
	My organization is agile in taking required action when needed.
integrity	My organization is a place where all the employees engaged to do what is required from them.
	My organization is successful in acting as a whole with all of its employees.

The new regression results with the alternative measure for firm resilience is presented in Table 5-7 as follows.

Table 5-7 New Regression Results on Firm Resilience

	Model 9	Model 10	Model 11
Firm age	0.089	0.157**	0.157**
	(0.093)	(0.069)	(0.066)
Firm size	-0.064*	-0.054	-0.045
	(0.037)	(0.035)	(0.035)
Firm performance	0.313***	0.083	0.057
	(0.119)	(0.083)	(0.081)
TMT size	0.021	-0.033	-0.033
	(0.044)	(0.037)	(0.036)
CEO age	0.048	0.001	0.004
	(0.085)	(0.058)	(0.058)
CEO gender	-0.042	-0.086	-0.052
	(0.177)	(0.116)	(0.122)
CEO education	-0.104	-0.052	-0.059
	(0.081)	(0.073)	(0.070)
CEO work experience variety	0.134*	0.102*	0.084
	(0.070)	(0.056)	(0.055)
Competitive uncertainty	-0.154	-0.106	-0.118
	(0.139)	(0.091)	(0.093)
Market complexity	0.027	-0.072	-0.070
	(0.085)	(0.059)	(0.058)
CEO humility	0.452***		0.187
	(0.141)		(0.114)
Stakeholder relationship capability		0.746***	0.700***
		(0.082)	(0.096)
Constant	1.059	1.012*	0.504
	(0.807)	(0.579)	(0.582)
Industry effect	Yes	Yes	Yes
N	119	119	119
R^2	0.352	0.614	0.627

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

As presented in Table 5-7, CEO humility is still positively and significantly related to firm resilience (b=0.452, p<0.01) in Model 9, giving additional evidence for Hypothesis 1. In Model 10, stakeholder relationship capability is still significantly and positively associated with firm resilience (b=0.746, p<0.01). After including both CEO humility and stakeholder relationship capability to forecast firm resilience in Model 11, the coefficient of stakeholder relationship capability is still significant and positive (b=0.700, p<0.01). Taken with the positive and significant association between CEO humility and stakeholder relationship capability that has been proved in Model 1 above, the regression results with new measures of firm resilience provide additional evidence for the positive mediating effect of stakeholder relationship capability. The result of the Sobel test demonstrates that the p-value is 0.0025, which is significant at the 1% level. Hence, hypothesis 2 is verified again. The results of bootstrap methods demonstrate that the indirect effect is 0.265 and its 95% Monte Carlo bootstrapped confidence interval (CI) excludes zero, ranging from 0.060 to 0.442. Therefore, Hypothesis 2 is supported again.

Second, I also change the measure of important control variables to check the robustness of my results in this dissertation. I use objective data to measure firm performance in this section. As a matter of fact, I use the return on sales (ROS) of the firm to indicate their performance, which is a common objective measure for firm performance. The new regression results are displayed in Table 5-8 and Table 5-9 as follows.

Table 5-8 New Regression Results on Main Effect of CEO Humility and Mediating Role of Stakeholder Relationship Capability

	Model 12 Stakeholder relationship capability	Model 13 Firm resilience	Model 14 Firm resilience	Model 15 Firm resilience
Firm age	-0.066	0.137	0.186^{**}	0.182^{**}
	(0.095)	(0.109)	(0.084)	(0.081)
Firm size	-0.001	-0.062	-0.070^{*}	-0.061
	(0.049)	(0.041)	(0.040)	(0.039)
ROS	0.006	0.009^{*}	0.005	0.005
	(0.005)	(0.005)	(0.004)	(0.004)
TMT size	0.066	0.100^{*}	0.053	0.055
	(0.063)	(0.052)	(0.044)	(0.043)
CEO age	0.083	0.110	0.049	0.053
	(0.087)	(0.088)	(0.064)	(0.064)
CEO gender	0.114	0.067	-0.042	-0.012
	(0.188)	(0.184)	(0.113)	(0.121)
CEO education	-0.093	0.003	0.074	0.067
	(0.088)	(0.083)	(0.075)	(0.071)
CEO work experience variety	0.021	-0.069	-0.067	-0.084
	(0.079)	(0.087)	(0.069)	(0.066)
Competitive uncertainty	-0.001	-0.218	-0.199^{**}	-0.218^{**}
	(0.141)	(0.139)	(0.086)	(0.088)
Market complexity	0.154	0.123	0.014	0.017
	(0.101)	(0.094)	(0.064)	(0.063)
CEO humility	0.554^{***}	0.584^{***}		0.202
	(0.106)	(0.147)		(0.127)
Stakeholder relationship capability			0.754^{***}	0.689^{***}
			(0.064)	(0.070)
Constant	0.861	0.791	0.763	0.198
	(0.820)	(1.047)	(0.716)	(0.757)
N	119	119	119	119
Industry effect	Yes	Yes	Yes	Yes
R^2	0.274	0.295	0.580	0.595

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

As presented in Table 5-8, the coefficient of CEO humility is 0.584 in Model 13, which is significant at the level of 1%, offering additional empirical support for Hypothesis 1. In Model 12, CEO humility is positively connected with stakeholder relationship capability at a significance level of 1% ($b=0.554$, $p<0.01$). Model 15 includes both CEO humility and stakeholder relationship capability to predict firm resilience, and the coefficient of stakeholder relationship capability is still positive and significant ($b=0.689$, $p<0.01$). Taken together, Hypothesis 2 is supported again, the positive connection between CEO humility and firm resilience is positively mediated by stakeholder relationship capability. In addition, the Sobel test and bootstrap method are used to test the mediating role of stakeholder relationship capability. The result of the Sobel test demonstrates that the p-value is 0.00004, which is significant at the 1% level. Hence, hypothesis 2 is verified again. The results of bootstrap methods demonstrate that the indirect effect is 0.382 and its 95% Monte Carlo bootstrapped confidence interval (CI) excludes zero, ranging from 0.192 to 0.570. Therefore, the positive mediating effect of stakeholder relationship capability is confirmed again.

Table 5-9 New regression results on moderating effects

	Model 16	Model 17	Model 18
Firm age	-0.057	-0.066	-0.100
	(0.096)	(0.096)	(0.098)
Firm size	-0.014	-0.001	-0.003
	(0.051)	(0.049)	(0.049)
ROS	0.004	0.006	0.008
	(0.005)	(0.005)	(0.005)
TMT size	0.075	0.066	0.069
	(0.063)	(0.064)	(0.062)
CEO age	0.072	0.083	0.085
	(0.086)	(0.088)	(0.085)
CEO gender	0.107	0.114	0.097
	(0.186)	(0.187)	(0.185)
CEO education	-0.067	-0.093	-0.099
	(0.087)	(0.089)	(0.086)
Competitive uncertainty	-0.006	-0.000	-0.009
	(0.134)	(0.138)	(0.135)
Market complexity	0.140	0.155	0.144
	(0.100)	(0.110)	(0.097)
CEO work experience variety	0.036	0.021	0.004
	(0.079)	(0.077)	(0.078)
CEO humility	0.514^{***}	0.554^{***}	0.676^{***}
	(0.115)	(0.107)	(0.109)
CEO humility*Competitive uncertainty	0.296^{*}		
	(0.174)		
CEO humility*Market complexity		-0.002	
		(0.212)	
CEO humility*CEO work experience variety			0.362^{**}
			(0.143)
Constant	2.951^{***}	3.475^{***}	3.047^{***}
	(0.586)	(0.813)	(0.711)
N	119	119	119
Industry effect	Yes	Yes	Yes
R^2	0.293	0.274	0.300

Standard errors in parentheses, $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

As displayed in Model 16, the coefficient of the interaction term between competitive uncertainty and CEO humility is 0.296, which is significant at the level of 10%. Hence, the positive moderating effect of competitive uncertainty on the relationship between CEO humility and stakeholder relationship capability obtains additional support. In Model 17, the interaction term of market complexity and CEO humility is not significant at the 10% level ($b=-0.002$, $p>0.1$). Therefore, the positive moderating effect of market complexity is not supported by the empirical results. The coefficient of the interaction term between CEO work experience variety and CEO humility is 0.362 in Model 18, which is positive and significant at the 5% level. Therefore, the positive moderating effect of CEO work experience variety on the relationship between CEO humility and stakeholder relationship capability is confirmed again.

In a word, the new regression results with alternative measures of firm resilience and firm performance are consistent with the regression results in the hypothesis testing section, which demonstrates that the empirical results of this dissertation are robust.

5.6 Supplementary Analysis

5.6.1 Integrative Moderated Mediation Models

Combining Hypotheses 2, Hypothesis 3, and Hypothesis 5, I further propose the integrative moderated mediation models in which competitive uncertainty and CEO work experience variety moderate the indirect relationship between CEO humility and firm resilience via stakeholder relationship capability.

From the aspect of competitive uncertainty, when competitive uncertainty is low, CEOs with high humility have more discretion to make and implement effective strategies to satisfy the needs of different stakeholders and build and maintain good relationships with them, and further obtain strong support from them to deal with potential threats and unexpected shocks, which helps to facilitate firm resilience. By contrast, when competitive uncertainty is low, norms are built and CEOs with high humility usually have less discretion to make and implement strategies to better interact and cooperate with various stakeholders, thus can obtain less support from them to develop firm resilience. Hence, I argue that the indirect impacts of CEO humility on firm resilience through stakeholder relationship capability will be stronger when competitive uncertainty is high.

From the aspect of CEO work experience variety, humble CEOs with a high level of work experience variety can better apply their knowledge and skills accumulated from their prior work experiences in different areas or organizations to deal with different requirements of various stakeholders, and better interact and cooperate with them, and further obtain their support and resources to cope with potential threats and unexpected shocks, which helps to facilitate firm resilience. Therefore, I argue that CEO work experience variety will enhance the indirect impacts of CEO humility on firm resilience through stakeholder relationship capability.

In order to test the moderated mediation models, the bootstrap method is used by adopting the PROCESS macro for SPSS (Hayes, 2013).

In terms of competitive uncertainty, the results of bootstrap methods demonstrate that when competitive uncertainty is low (one SD smaller than the mean value), the conditional indirect effect of CEO humility on firm resilience via stakeholder relationship capability is 0.068 and its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from -0.177 to 0.329, which includes 0. While when competitive uncertainty is high (one SD larger than the mean value), the conditional indirect effect of CEO humility on firm resilience via stakeholder relationship capability is 0.395 and its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from 0.196 to 0.709, which does not include 0. And the index of mediated moderation is 0.252, its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from 0.019 to 0.572, which does not include 0. Taken together, the integrative moderated mediation model in which competitive uncertainty moderates the indirect relationship between CEO humility and firm resilience via stakeholder relationship capability is supported.

In terms of CEO work experience variety, the results of bootstrap methods demonstrate that when CEO work experience variety is low (one SD smaller than the mean value), the conditional indirect effect of CEO humility on firm resilience via stakeholder relationship capability is 0.186 and its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from 0.013 to 0.375.

While when CEO work experience variety is high (one SD larger than the mean value), the conditional indirect effect of CEO humility on firm resilience via stakeholder relationship capability is 0.493 and its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from 0.254 to 0.811. And the index of mediated moderation is 0.207, its 90% Monte Carlo bootstrapped confidence interval (CI) ranges from 0.017 to 0.422, which does not include 0. Taken together, the integrative moderated mediation model in which CEO work experience variety moderates the indirect relationship between CEO humility and firm resilience via stakeholder relationship capability is supported.

In a word, the supplementary analysis suggests that competitive uncertainty and CEO work experience variety positively moderate the indirect connection between CEO humility and firm resilience.

5.6.2 Influence of Different Dimensions of CEO Humility

As Owens et al. (2013) suggested, humility involves three dimensions: the willingness to view oneself accurately, appreciation of others' contributions and strengths, and teachability. I further explore the influence of three dimensions of CEO humility on firm resilience.

Table 5-10 Influence of three dimensions of CEO humility on firm resilience

	Model 19	Model 20	Model 21
Firm age	0.121	0.116	0.120
	(0.114)	(0.117)	(0.120)
Firm size	-0.089**	-0.097**	-0.096**
	(0.038)	(0.039)	(0.040)
Firm performance	0.302***	0.289**	0.255**
	(0.101)	(0.113)	(0.119)
TMT size	0.100**	0.112**	0.109**
	(0.050)	(0.051)	(0.047)
CEO age	0.108	0.105	0.056
	(0.089)	(0.087)	(0.092)
CEO gender	-0.019	0.008	-0.012
	(0.170)	(0.175)	(0.172)
CEO education	0.034	0.047	0.017
	(0.084)	(0.088)	(0.085)
CEO work experience variety	-0.070	-0.021	0.019
	(0.079)	(0.083)	(0.083)
Competitive uncertainty	-0.242*	-0.200	-0.231*
	(0.130)	(0.135)	(0.130)
Market complexity	0.120	0.109	0.123
	(0.092)	(0.092)	(0.090)
Willingness to view oneself accurately	0.371***		
	(0.122)		
Appreciation of others' contributions and strengths		0.318**	
		(0.125)	
Teachability			0.337***
			(0.128)
Constant	1.102	1.070	1.398
	(0.905)	(1.000)	(0.888)
Industry effect	Yes	Yes	Yes
N	119	119	119
R^2	0.312	0.288	0.290

Standard errors in parentheses, $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

5.6.3 Integration of CEO Humility and Narcissism

Prior studies have suggested that humility and narcissism can coexist in one individual and exert an interactive influence on his/her behaviors and further influence organizational outcomes (Nie et al., 2022; Zhang et al., 2017).

Zhang et al. (2017) demonstrated that the interaction of CEO humility and narcissism is positively related to the innovative culture and innovation performance of firms. Nie et al. (2022) argued that humble and narcissistic CEOs can better facilitate firms’ exploitative innovation and explorative innovation. Combined narcissism and humility may enable CEOs to both utilize existing knowledge and explore new areas (Nie et al., 2022; Zhang et al., 2017), which may be a strong force of firm resilience. And I wonder whether the interaction of CEO humility and narcissism can promote firm resilience or not. So, I include CEO narcissism and the interaction of CEO humility and narcissism in the model, and the regression results are displayed in Table 5-11.

Table 5-11 Interaction of CEO Humility and Narcissism

	Model 22 Stakeholder relationship capability	Model 23 Firm resilience	Model 24 Firm resilience	Model 25 Firm resilience
Firm age	-0.087	0.128	0.096	0.189**
	(0.094)	(0.113)	(0.116)	(0.085)
Firm size	-0.028	-0.086**	-0.076*	-0.066*
	(0.040)	(0.039)	(0.040)	(0.040)
Firm performance	0.333***	0.226**	0.206*	-0.009
	(0.101)	(0.111)	(0.113)	(0.084)
TMT size	0.077	0.104**	0.103**	0.050
	(0.053)	(0.049)	(0.048)	(0.043)
CEO age	0.101	0.115	0.117	0.044
	(0.083)	(0.086)	(0.083)	(0.066)
CEO gender	0.025	0.025	0.054	0.008
	(0.165)	(0.178)	(0.173)	(0.121)
CEO education	-0.049	0.041	0.030	0.076
	(0.084)	(0.080)	(0.079)	(0.072)
CEO work experience variety	0.041	-0.060	-0.057	-0.088
	(0.070)	(0.081)	(0.081)	(0.062)
Competitive uncertainty	-0.055	-0.234*	-0.260*	-0.195**
	(0.123)	(0.128)	(0.134)	(0.090)
Market complexity	0.131	0.108	0.099	0.016
	(0.087)	(0.089)	(0.090)	(0.064)
CEO narcissism	0.209**	0.137	0.106	-0.011
	(0.089)	(0.100)	(0.104)	(0.092)
CEO humility	0.310***	0.430***	0.580***	0.210
	(0.112)	(0.164)	(0.150)	(0.135)
CEO narcissism*CEO humility			0.243*	
			(0.145)	
Stakeholder relationship capability				0.708***
				(0.082)
Constant	0.438	0.530	2.979***	0.220
	(0.730)	(0.978)	(0.694)	(0.764)
Industry effect	Yes	Yes	Yes	Yes
N	119	119	119	119
R^2	0.410	0.331	0.347	0.588

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

As presented in Table 5-11, after controlling the influence of CEO narcissism, the regression results are in line with those in Table 12. CEO humility is positively associated with stakeholder relationship capability ($b=0.310$, $p<0.01$) and firm resilience ($b=0.430$, $p<0.01$), and stakeholder relationship capability is positively associated with firm resilience after controlling CEO humility ($b=0.708$, $p<0.01$). In model 24, the interaction of CEO narcissism and CEO humility is positively related to firm resilience ($b=0.243$, $p<0.1$), suggesting that humble and narcissistic CEOs can better promote firm resilience.

Chapter 6 Discussion

This dissertation investigates the impacts of CEO humility on firm resilience and further explores the underlying mechanism by examining the mediating role of stakeholder relationship capability and the moderating roles of different factors, including competitive uncertainty, market complexity, and CEO work experience variety. Using survey data from 119 CEOs in China, this dissertation tests the theoretical model and gets several interesting findings. This dissertation has great theoretical contributions and offers valuable references for practices, but it also has some limitations that need further exploration.

6.1 Theoretical Contribution

This dissertation strives to make some contributions to prior literature in the following aspects.

First, this dissertation enriches related studies on CEO humility. As an underexplored virtue and trait of CEOs (Sun et al., 2021), CEO humility obtained increasing attention in recent studies, but we still know little about its influence. Extant research on leader humility mainly concentrated on its effect at the individual-level or team-level outcomes, such as employee retention (Ou et al., 2017; Owens et al., 2013), employee engagement (Owens et al., 2013), employee creative performance (Lei et al., 2021; Ye et al., 2020), subordinate compliance (Chiu & Hung, 2022), follower vulnerability and felt authenticity (Oc et al., 2020), followers' prosociality (Carnevale et al., 2019), team helping behaviors (Wang et al., 2022), psychological safety of teams (Rego et al., 2021), team effectiveness (Chiu et al., 2022; Rego et al., 2018) team creativity (Li et al., 2022; Wang et al., 2020), and team performance (Owens & Hekman, 2016; Rego et al., 2019). Given the important role of CEOs in decision-making and firms' development (Quigley & Hambrick, 2015), several studies have started to notice the impacts of CEO humility on firm-level outcomes, such as firm performance (Ou et al., 2018; Q. Ren et al., 2020), firm innovation (Nie et al., 2022; Zhang et al., 2017), green innovation (Sun et al., 2021), market performance (Petrenko et al., 2019), entrepreneurial performance (Li et al., 2020), inter-firm collaboration (Zhou et al., 2022), and corporate social responsibility (Hong, 2020). Although these studies offer new insights into the role of CEO humility in firms' operations and development, how CEO humility influences firm resilience is still underexplored. In recent years, the strategic importance of leader humility has been increasingly highlighted by many scholars (Vera & Rodriguez-Lopez, 2004), and CEOs are suggested to keep humble to avoid scandal and negative impacts (Ancona et al., 2007; Ou et al., 2018). The influences of CEO humility on organizational outcomes deserve further exploration (Cortes-Mejia et al., 2022). Responding to this call, this dissertation examines the connection between CEO humility and firm resilience, which contributes to extending studies on humility at the executive level.

Second, this dissertation enriches the micro-foundations of firm resilience. With the increasing complexity and turbulence in environments, firm resilience becomes particularly important for firms' long-term development and has attracted extensive attention in recent studies (Ortiz-de-Mandojana & Bansal, 2016). And scholars have explored various factors influencing firm resilience. However, these studies mainly concentrate on macro organizational factors, including organizational resources such as advanced technologies (Chewning et al., 2013; He et al., 2022; L. Li et al., 2022), stakeholder relationships (Coles et al., 2021; Kim, 2020; Liu & Yin, 2020; Xie et al., 2022), and organizational culture (Su et al., 2022); organizational capabilities such as dynamic capability (Akpan et al., 2022; Hussain & Malik, 2022; Y. Jiang et al., 2019), absorptive capacity (Yuan et al., 2022), organizational learning capabilities and ambidexterity capability (Gayed & El Ebrashi, 2023; Iborra et al., 2020); and organizational practices such as corporate social responsibility (Boubaker et al., 2022; Ortiz-de-Mandojana & Bansal, 2016; Rodríguez-Sánchez et al., 2021) and strategic human resource management (Bouaziz & Hachicha, 2018; Lengnick-Hall et al., 2011; Roumpi, 2023). We still know little about how individuals (Van Der Vegt et al., 2015), especially CEOs, exert their influence on firm resilience (Wall & Bellamy, 2019). Although several studies started to notice the impact of CEO characteristics on firm resilience, such as CEO greed (Sajko et al., 2021), CEO narcissism (Buyl et al., 2019), CEOs' future temporal depth (Weis & Klarner, 2022), and CEO duality (Torres & Augusto, 2021), we still know little about the impact of CEO humility in nurturing firm resilience, and the micro-foundation of firm resilience requires further investigation. This dissertation shows the essential role of CEO humility in promoting firm resilience, which contributes to extending the antecedents of firm resilience in terms of CEO characteristics (Buyl et al., 2019; Sajko et al., 2021; Torres & Augusto, 2021) and enriching studies on the micro-foundation of firm resilience.

Third, this dissertation tackles the mechanism behind the connection between CEO humility and firm resilience. Studies on CEO humility encourage the exploration of the mediation mechanisms that link CEO humility to firm-level outcomes (Ou et al., 2018). Responding to this call, this dissertation examines the mediation effect of stakeholder relationship capability and the moderating effects of competitive uncertainty, market complexity, and CEO work experience variety, which helps to better explain how CEO humility affects firm resilience and what factors will influence the connection between CEO humility and stakeholder relationship capability, deepening our understanding of the impacts of CEO humility under different contexts.

Last but not least, this dissertation contributes to studies based on upper echelons theory. On one hand, this dissertation investigates the impact of CEO humility, extending the traits explored in studies based on upper echelons theory. Although the stream of studies based on upper echelons theory has provided constructive insights into how CEOs influence firm-level outcomes, most of them concentrated on a limited group of CEO characteristics, such as CEO narcissism, hubris, and overconfidence (Kiss et al., 2022). By exploring the role of CEO humility, an essential but underexplored trait of CEOs, in developing firm resilience, this dissertation expands the group of CEO characteristics in studies based on upper echelons theory. On the other hand, this dissertation helps to open the "black box" criticized a lot in studies based on the upper echelons theory. The upper echelons theory provides a good theoretical framework to analyze the impact of CEO characteristics on firm-level outcomes, however, the process by which CEO characteristics work on organizational outcomes is usually viewed as a "black box", which was criticized much in prior research (Hambrick, 2007; Neely Jr et al., 2020; Wang et al., 2015). To open the "black box", it is necessary to examine the mediating mechanism and boundary conditions of the connection between CEO characteristics and organizational outcomes (Arena et al., 2018; Zhang & Wang, 2020). By analyzing the mediation effect of stakeholder relationship capability and the moderating effects of various factors, including competitive uncertainty, market complexity, and CEO work experience variety, this dissertation tackles the mechanism behind the connection between CEO humility and firm resilience, which helps to open the "black box" behind the relationship.

6.2 Practical Implications

This dissertation also has high practical contributions in the aspects as follows.

First, this dissertation shows that CEO humility is beneficial to firm resilience, which provides valuable references for firms to develop resilience.

In today's fast-changing world, volatility, uncertainty, complexity, and ambiguity become key characteristics of business environments, and firm resilience becomes increasingly critical for firms' long-term development. How to develop firm resilience becomes an essential issue for firms. As the results of this dissertation suggest, hiring a humble CEO may be a useful way for firms to facilitate firm resilience. Humble CEOs will help firms to build close relationships with various stakeholders and gain their support to better anticipate and avoid threats, and fast respond to and recover from unexpected disruptions, thus promoting firm resilience. Humility is a measurable trait and there are many mature scales or other instruments to measure individuals' humility. Nowadays, personality test becomes very common in recruitment. To promote firm resilience, firms can include humility in the personality test when hiring or promoting key decision-makers, selecting humble CEOs to lead the firm to become more resilient when facing unexpected crises. Specifically, the results of this dissertation demonstrate that when competitive uncertainty is high, the positive impact of CEO humility on firms' stakeholder relationship capability will be amplified. Hence, firms that are faced with high levels of competitive uncertainty need to attach more importance to the trait of humility when hiring or selecting CEOs. In addition, the results also demonstrate that CEO humility exerts stronger positive influences on stakeholder relationship capability if the CEO is with a high level of work experience variety. Therefore, prior work experience can also be taken into consideration when hiring or selecting humble CEOs. Firms can select CEOs who are humble and also has diverse work experience, these characteristics may help firms to better interact and cooperate with different stakeholders to gain their support and resources, and further facilitates firm resilience.

Second, the results of this dissertation also demonstrate that stakeholder relationship capability exerts a positive mediating effect on the relationship between CEO humility and firm resilience, which indicates the essential role of stakeholder relationship capability in developing firm resilience. Hence, in order to gain more support from stakeholders to enhance firm resilience, firms need to build close relationships with different stakeholders. Specifically, firms should realize that stakeholders are not competitors of firms in zero-sum games but their friends. Firms should look beyond their shareholders and take the benefits and needs of different stakeholders into consideration when seeking their own interests and making strategic decisions. At the same time, the influences of different stakeholders on firms are not equal and the interests of some stakeholders may be competing. And firms need to manage the potential tensions and conflicts of different stakeholders. In this way, firms can enhance their stakeholder relationship capability, and fully utilize the resources and information provided by stakeholders to better anticipate and avoid disruptions and cope with unexpected crises, developing a high level of firm resilience.

6.3 Limitations

Although this dissertation There are also some limitations in this dissertation, which require future studies to further investigate.

First of all, this dissertation uses the survey method to test the theoretical hypotheses. Given the answers in the questionnaires are self-reported and cross-sectional, the common method bias and endogeneity may be a concern of this dissertation. Although I have taken various measures to minimize its negative influence and adopted various methods to test the common method bias, the survey method inevitably suffers from these problems. Future studies can use other methods or collect data from different sources to avoid these problems. For example, future works can use multi-source survey data to test my hypotheses. Future studies can also design experiments to test the theoretical model of this dissertation with low risks of endogeneity. And an objective measure of CEO humility can be adopted to prevent CEOs from overestimating or underestimating their humility.

Second, the sample size in this dissertation is relatively small because it is very challenging to collect the CEO data. In prior research, the response rate is usually 12–14% in studies using CEO samples (Herrmann & Nadkarni, 2014; Kiss et al., 2020). To provide stronger support for the theoretical model, future studies can expand the sample size. In addition, I collect data of CEOs in Chinese companies, which may limit the universality of the results. Also, the sample selection bias may also be a concern in this dissertation, given that the sample firms come from lists of EMBA and DBA alumni, most of which may be located in cities that are relatively close to the school. And future studies can use samples from other sources and other countries to test whether the connection between CEO humility and firm resilience is still significant in different cultural backgrounds.

Third, this dissertation identifies stakeholder relationship capability as an important mediating mechanism that links CEO humility and firm resilience the other potential underlying mechanism behind the relationship deserves further investigation. For example, learning climate may be a potential mediating mechanism. CEO humility may foster a learning climate within firms, and a learning organization may better adapt to environmental changes and show a high level of resilience. Moreover, humble CEOs may consider different factors when making strategies, thus facilitating strategic decision comprehensiveness. And a comprehensive preparation in strategies enables firms to better anticipate potential threats and deal with unexpected disruptions. Strategic decision comprehensiveness may also be a potential mechanism. Future studies can further test whether learning climate and strategic decision comprehensiveness serves as mediating roles in the relationship between CEO humility and firm resilience.

Fourth, this dissertation enriches studies on the micro-foundation of firm resilience as well as literature on CEO humility by investigating the impact of CEO humility on firm resilience. The two streams of studies deserve further exploration. From the aspect of micro-foundation of firm resilience, future studies can investigate the role of other characteristics of CEOs or top management teams in developing firm resilience. For example, in terms of CEO characteristics, whether CEOs' study experience, work experience, and other psychological traits such as cognitive flexibility affect firm resilience still remain to be answered. In terms of top management teams, the impact of gender diversity and age diversity in top management teams on firm resilience can be further explored. From the aspect of CEO humility, future studies can further examine the impacts of CEO humility on firms' other strategies and outcomes. For example, whether CEO humility influences the competitive strategies and marketing strategies of firms? Does a humble CEO lead firms to build more strategic alliances with other firms or universities and benefit more from alliances?

Chapter 7 Conclusion

In today's fast-changing world, the environment faced by firms becomes more and more turbulent, complex, and vague. Unexpected disruptions happen frequently, which may result in decreases in firm performance and even the failure of firms. Under this context, firms' ability to anticipate and avoid potential threats, respond to and recover as fast as possible from disruptions or shocks, namely, firm resilience, becomes more critical for firms' survival and development. More and more studies are investigating the antecedents of firm resilience and one stream of studies has started to notice the question of how individuals play a role in the development of firm resilience, especially the key decision-makers such as CEOs. To enrich the micro-foundation of firm resilience, this dissertation pays attention to the role of CEO humility in developing firm resilience, and further explore the underlying mechanism behind the relationship by investigating the mediating effect of stakeholder relationship capability and moderating effect of different factors. Using survey data of 119 CEOs from firms in China, this dissertation obtains several interesting findings.

First of all, CEO humility is positively associated with firm resilience. The firms managed by humble CEOs will display a higher level of capability to anticipate and avoid potential threats, respond to and recover as fast as possible from disruptions or shocks. Humble CEOs can better gather information from feedback and learn from others to make effective strategies to cope with potential threats and adverse events. And they can also take full advantage of others' strengths, build a good atmosphere of information sharing, cooperation, and shared vision within the enterprise, and develop close relationships with different stakeholders to facilitate firm resilience. Hence, the level of humility can be an important factors for firms when hiring or selecting CEOs to promote firm resilience.

Second, stakeholder relationship capability is an important mediating mechanism that links relationship between CEO humility and firm resilience. That is to say, CEO humility facilitates firm resilience via enhancing stakeholder relationship capability. Humble CEOs can realize that the achievement of organizational goals does not rely on firms alone but depends on the efforts of different stakeholders, and will take various measures to gain stakeholders' support, and thereby promoting firms' stakeholder relationship capability. And the strong stakeholder relationship capability will further help firms to gain valuable resources and information from various stakeholders, which enables firms to better anticipate potential threats, fastly respond to and recover from disruptions and even achieve a superior position after disruptions, thus facilitating firm resilience.

Third, the impacts of CEO humility on stakeholder relationship capability will be contingent on various factors. The empirical results of this dissertation suggest that competitive uncertainty and CEO work experience variety positively moderates the relationship between CEO humility and stakeholder relationship capability. From the aspect of competitive uncertainty, the ambiguity in environments with a high level of competitive uncertainty will increase. In such a context, humble CEOs have more discretionary power to make effective strategies to satisfy the requirements of various stakeholders, and the relationship between CEO humility and stakeholder relationship capability will be amplified. From the aspect of CEO work experience variety, humble CEOs with diverse work experience in different types of organizations can usually better absorb and accumulate abundant knowledge and skills from their work experience, and fully apply these knowledge and skills to satisfy different requirements of various stakeholders and develop close and good relationships with them. Thus, the positive impacts of CEO humility on stakeholder relationship capability will be strengthened for CEOs with high levels of work experience variety.

By investigating the positive influence of CEO humility on firm resilience, the positive mediating role of stakeholder relationship capability, and the positive moderating effects of competitive uncertainty and CEO work experience variety, this dissertation deepens our understanding of CEO humility and firm resilience, contributes to studies on the micro-foundation of firm resilience, CEO humility and literature based on the upper echelons theory, and offers valuable references for firms to achieve a higher level of resilience.

References

Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., & Srinivasan, D. (2006). Does CEO Charisma Matter? An Empirical Analysis Of The Relationships Among Organizational Performance, Environmental Uncertainty, And Top Management Team Perceptions Of CEO Charisma. *Academy of Management Journal*, *49*(1), 161–174. https://doi.org/10.5465/amj.2006.20785800

Akpan, E. E., Johnny, E., & Sylva, W. (2022). Dynamic capabilities and organizational resilience of manufacturing firms in Nigeria. *Vision*, *26*(1), 48–64. https://doi.org/10.1177/0972262920984545

Ambulkar, S., Blackhurst, J., & Grawe, S. (2015). Firm's resilience to supply chain disruptions: Scale development and empirical examination. *Journal of Operations Management*, *33–34*, 111–122. https://doi.org/10.1016/j.jom.2014.11.002

Ancona, D., Malone, T. W., Orlikowski, W. J., & Senge, P. M. (2007). In praise of the incomplete leader. *Harvard Business Review*, *85*(2).

Arena, C., Michelon, G., & Trojanowski, G. (2018). Big Egos Can Be Green: A Study of CEO Hubris and Environmental Innovation. *British Journal of Management*, *29*(2), 316–336. https://doi.org/10.1111/1467-8551.12250

Ashford, S. J., Wellman, N., Sully de Luque, M., De Stobbeleir, K. E., & Wollan, M. (2018). Two roads to effectiveness: CEO feedback seeking, vision articulation, and firm performance. *Journal of Organizational Behavior*, *39*(1), 82–95. https://doi.org/10.1002/job.2211

Ataay, A. (2020). CEO outsiderness and firm performance in an emerging economy: The moderating role of managerial discretion. *Journal of Management & Organization*, *26*(5), 798–814. https://doi.org/10.1017/jmo.2018.36

Baghersad, M., & Zobel, C. W. (2022). Organizational Resilience to Disruption Risks: Developing Metrics and Testing Effectiveness of Operational Strategies. *Risk Analysis*, *42*(3), 561–579. https://doi.org/10.1111/risa.13769

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*(1), 1–26. https://doi.org/10.1111/j.1744-6570.1991.tb00688.x

Bouaziz, F., & Hachicha, Z. S. (2018). Strategic human resource management practices and organizational resilience. *Journal of Management Development*.

Boubaker, S., Liu, Z., & Zhan, Y. (2022). Customer relationships, corporate social responsibility, and stock price reaction: Lessons from China during health crisis times. *Finance Research Letters*, 102699. https://doi.org/10.1016/j.frl.2022.102699

Branicki, L. J., Sullivan-Taylor, B., & Livschitz, S. R. (2017). How entrepreneurial resilience generates resilient SMEs. *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1244–1263. https://doi.org/10.1108/IJEBR-11-2016-0396

Brunzel, J., & Ebsen, D. (2022). The role of humility in Chief Executive Officers: A review. *Review of Managerial Science*, 1–46. https://doi.org/10.1007/s11846-022-00590-0

Buyl, T., Boone, C., & Wade, J. B. (2019). CEO narcissism, risk-taking, and resilience: An empirical analysis in US commercial banks. *Journal of Management*, *45*(4), 1372–1400. https://doi.org/10.1177/0149206317699521

Carnevale, J. B., Huang, L., & Paterson, T. (2019). LMX-differentiation strengthens the prosocial consequences of leader humility: An identification and social exchange perspective. *Journal of Business Research*, *96*, 287–296. https://doi.org/10.1016/j.jbusres.2018.11.048

Chatterjee, A., & Hambrick, D. C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, *52*(3), 351–386. https://doi.org/10.2189/asqu.52.3.351

Chatterjee, A., & Hambrick, D. C. (2011). Executive personality, capability cues, and risk taking: How narcissistic CEOs react to their successes and stumbles. *Administrative Science Quarterly*, *56*(2), 202–237. https://doi.org/10.1177/0001839211427534

Chatterjee, S., & Hadi, A. S. (1977). *Regression analysis by example*. Wiley.

Chen, W. T., Zhou, G. S., & Zhu, X. K. (2019). CEO tenure and corporate social responsibility performance. *Journal of Business Research*, *95*, 292–302. https://doi.org/10.1016/j.jbusres.2018.08.018

Chewning, L. V., Lai, C.-H., & Doerfel, M. L. (2013). Organizational resilience and using information and communication technologies to rebuild communication structures. *Management Communication Quarterly*, *27*(2), 237–263. https://doi.org/10.1177/0893318912465815

Chiu, C.-Y., Balkundi, P., Owens, B. P., & Tesluk, P. E. (2022). Shaping positive and negative ties to improve team effectiveness: The roles of leader humility and team helping norms. *Human Relations*, *75*(3), 502–531. https://doi.org/10.1177/001872672096813

Chiu, T.-C., & Hung, Y. (2022). Impacts of leader humility between authority and trustworthiness on compliance: Tests of three-way interaction. *Psychological Reports*, *125*(1), 398–421. https://doi.org/10.1177/0033294120973

Choi, J., & Wang, H. (2009). Stakeholder relations and the persistence of corporate financial performance. *Strategic Management Journal*, *30*(8), 895–907. https://doi.org/10.1002/smj.759

Coles, T., Ritchie, B. W., Wang, J., & others. (2021). Building business resilience to external shocks: Conceptualising the role of social networks to small tourism & hospitality businesses. *Journal of Hospitality and Tourism Management*, *48*, 210–219. https://doi.org/10.1016/j.jhtm.2021.06.012

Cortes-Mejia, S., Cortes, A. F., & Herrmann, P. (2022). Sharing strategic decisions: CEO humility, TMT decentralization, and ethical culture. *Journal of Business Ethics*, *178*(1), 241–260. https://doi.org/10.1007/s10551-021-04766-8

Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. (2014). CEO Career Variety: Effects on Firm-Level Strategic and Social Novelty. *Academy of Management Journal*, *57*(3), 652–674. https://doi.org/10.5465/amj.2012.0469

Cumming, G. S., Barnes, G., Perz, S., Schmink, M., Sieving, K. E., Southworth, J., Binford, M., Holt, R. D., Stickler, C., & Van Holt, T. (2005). An exploratory framework for the empirical measurement of resilience. *Ecosystems*, *8*(8), 975–987. https://doi.org/10.1007/s10021-005-0129-z

Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO′ s work experience and firm′ s financial policies. *Journal of Financial Economics*, *114*(1), 125–154. https://doi.org/10.1016/j.jfineco.2014.06.002

Davis, D. E., Worthington Jr, E. L., & Hook, J. N. (2010). Humility: Review of measurement strategies and conceptualization as personality judgment. *The Journal of Positive Psychology*, *5*(4), 243–252. https://doi.org/10.1080/17439761003791672

Dess, G. G., & Beard, D. W. (1984). Dimensions of Organizational Task Environments. *Administrative Science Quarterly*, *29*(1), 52–73. https://doi.org/10.2307/2393080

Dewar, C., Keller, S., & Malhotra, V. (2022). *CEO Excellence: The Six Mindsets That Distinguish the Best Leaders from the Rest*. Simon and Schuster.

Do, H., Budhwar, P., Shipton, H., Nguyen, H.-D., & Nguyen, B. (2022). Building organizational resilience, innovation through resource-based management initiatives, organizational learning and environmental dynamism. *Journal of Business Research*, *141*, 808–821. https://doi.org/10.1016/j.jbusres.2021.11.090

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, *20*(1), 65–91. https://doi.org/10.5465/amr.1995.9503271992

Doukas, J. A., & Mandal, S. (2018). CEO risk preferences and hedging decisions: A multiyear analysis. *Journal of International Money and Finance*, *86*, 131–153. https://doi.org/10.1016/j.jimonfin.2018.04.007

Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, *13*(1), 215–246. https://doi.org/10.1007/s40685-019-0085-7

Dweck, C. S. (2013). *Self-theories: Their role in motivation, personality, and development*. Psychology press.

Engelen, A., Neumann, C., & Schwens, C. (2015). "Of course I can": The effect of CEO overconfidence on entrepreneurially oriented firms. *Entrepreneurship Theory and Practice*, *39*(5), 1137–1160. https://doi.org/10.1111/etap.12099

Faccio, M., Marchica, M.-T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193–209.

Foster, D., & Jonker, J. (2005). Stakeholder relationships: The dialogue of engagement. *Corporate Governance: The International Journal of Business in Society*, *5*(5), 51–57. https://doi.org/10.1108/14720700510630059

Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge university press.

Friedman, A. L., & Miles, S. (2002). Developing stakeholder theory. *Journal of Management Studies*, *39*(1), 1–21.

Frostenson, M. (2016). Humility in business: A contextual approach. *Journal of Business Ethics*, *138*(1), 91–102. https://doi.org/10.1007/s10551-015-2601-9

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, *69*(8), 3192–3198. https://doi.org/10.1016/j.jbusres.2015.12.008

Galasso, A., & Simcoe, S. T. (2011). CEO Overconfidence and Innovation. *Management Science*, *57*(8), 1469–1484. https://doi.org/10.1287/mnsc.1110.1374

Gao, J., & Slawinski, N. (2015). The impact of stakeholder management on corporate international diversification. *Business and Society Review*, *120*(3), 409–433. https://doi.org/10.1111/basr.12061

García-Sánchez, E., García-Morales, V. J., & Martín-Rojas, R. (2018). Analysis of the impact of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship. *International Entrepreneurship and Management Journal*, *14*(2), 345–377. https://doi.org/10.1007/s11365-017-0436-9

Gayed, S., & El Ebrashi, R. (2023). Fostering firm resilience through organizational ambidexterity capability and resource availability: Amid the COVID-19 outbreak. *International Journal of Organizational Analysis*, *31*(1), 253–275. https://doi.org/10.1108/IJOA-09-2021-2977

Georgakakis, D., & Ruigrok, W. (2017). CEO Succession Origin and Firm Performance: A Multilevel Study. *Journal of Management Studies*, *54*(1), 58–87. https://doi.org/10.1111/joms.12194

Gerstner, W.-C., König, A., Enders, A., & Hambrick, D. C. (2013). CEO narcissism, audience engagement, and organizational adoption of technological discontinuities. *Administrative Science Quarterly*, *58*(2), 257–291.

Gottesman, A. A., & Morey, M. R. (2010). CEO educational background and firm financial performance. *Journal of Applied Finance (Formerly Financial Practice and Education)*, *20*(2).

Hambrick, D. C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*, *32*(2), 334–343. https://doi.org/10.5465/amr.2007.24345254

Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of its Top Managers. *Academy of Management Review*, *9*(2), 193–206. https://doi.org/10.5465/AMR.1984.4277628

Hamori, M., & Koyuncu, B. (2015). Experience matters? The impact of prior CEO experience on firm performance. *Human Resource Management*, *54*(1), 23–44.

Harrison, J. S., Bosse, D. A., & Phillips, R. A. (2010). Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Management Journal*, *31*(1), 58–74.

Hart, S. L., & Sharma, S. (2004). Engaging fringe stakeholders for competitive imagination. *Academy of Management Perspectives*, *18*(1), 7–18.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

He, Z., Huang, H., Choi, H., & Bilgihan, A. (2022). Building organizational resilience with digital transformation. *Journal of Service Management*.

Herrmann, P., & Nadkarni, S. (2014). Managing Strategic Change: The Duality of Ceo Personality. *Strategic Management Journal*, *35*(9), 1318–1342. https://doi.org/10.1002/smj.2156

Homburg, C., Workman, J. P., & Krohmer, H. (1999). Marketing's Influence within the Firm. *Journal of Marketing*, *63*(2), 1–17. https://doi.org/10.1177/002224299906300201

Hong, S. M. (2020). CEO humble leadership and corporate social responsibility: The moderating effect of firm slack. *The Journal of Economics, Marketing and Management*, *8*(2), 27–38.

Honjo, Y., & Kato, M. (2022). Are founder-CEOs resilient to crises? The impact of founder-CEO succession on new firm survival. *International Small Business Journal*, *40*(2), 205–235.

Hu, C., & Liu, Y.-J. (2015). Valuing diversity: CEOs' career experiences and corporate investment. *Journal of Corporate Finance*, *30*, 11–31. https://doi.org/10.1016/j.jcorpfin.2014.08.001

Huang, H.-W., Rose-Green, E., & Lee, C.-C. (2012). CEO age and financial reporting quality. *Accounting Horizons*, *26*(4), 725–740.

Hussain, M., & Malik, M. (2022). How do dynamic capabilities enable hotels to be agile and resilient? A mediation and moderation analysis. *International Journal of Hospitality Management*, *106*, 103266.

Hutt, C., & Gopalakrishnan, S. (2020). Leadership humility and managing a multicultural workforce. *South Asian Journal of Business Studies*, *9*(2), 251–260.

Iborra, M., Safón, V., & Dolz, C. (2020). What explains the resilience of SMEs? Ambidexterity capability and strategic consistency. *Long Range Planning*, *53*(6), 101947.

Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, *29*(6), 801–830.

Jalbert, T., Furumo, K., & Jalbert, M. (2010). Does educational background affect CEO compensation and firm performance? *The Journal of Applied Business Research*, *27*(1), 15–40.

Jalbert, T., Rao, R. P., & Jalbert, M. (2002). Does school matter? An empirical analysis of CEO education, compensation, and firm performance. *International Business and Economics Research Journal*, *1*(1), 83–98.

Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, *57*(3), 53–70. https://doi.org/10.2307/1251854

Jiang, W., Wang, A. X., Zhou, K. Z., & Zhang, C. (2020). Stakeholder relationship capability and firm innovation: A contingent analysis. *Journal of Business Ethics*, *167*(1), 111–125.

Jiang, Y., Ritchie, B. W., & Verreynne, M.-L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *International Journal of Tourism Research*, *21*(6), 882–900.

Jones, T. M., Harrison, J. S., & Felps, W. (2018). How applying instrumental stakeholder theory can provide sustainable competitive advantage. *Academy of Management Review*, *43*(3), 371–391.

Kamalahmadi, M., & Parast, M. M. (2016). A review of the literature on the principles of enterprise and supply chain resilience: Major findings and directions for future research. *International Journal of Production Economics*, *171*, 116–133. https://doi.org/10.1016/j.ijpe.2015.10.023

Kashmiri, S., Nicol, C. D., & Arora, S. (2017). Me, myself, and I: influence of CEO narcissism on firms' innovation strategy and the likelihood of product-harm crises. *Journal of the Academy of Marketing Science*, *45*(5), 633–656. https://doi.org/10.1007/s11747-017-0535-8

Kazadi, K., Lievens, A., & Mahr, D. (2016). Stakeholder co-creation during the innovation process: Identifying capabilities for knowledge creation among multiple stakeholders. *Journal of Business Research*, *69*(2), 525–540.

Khan, H. (2020). Is marketing agility important for emerging market firms in advanced markets? *International Business Review*, *29*(5), 101733. https://doi.org/10.1016/j.ibusrev.2020.101733

Khan, W. A., & Vieito, J. P. (2013). CEO gender and firm performance. *Journal of Economics and Business*, *67*, 55–66.

Kim, J.-B., Wang, Z., & Zhang, L. (2016). CEO overconfidence and stock price crash risk. *Contemporary Accounting Research*, *33*(4), 1720–1749.

Kim, Y. (2020). Organizational resilience and employee work-role performance after a crisis situation: Exploring the effects of organizational resilience on internal crisis communication. *Journal of Public Relations Research*, *32*(1–2), 47–75.

Kiss, A. N., Cortes, A. F., & Herrmann, P. (2022). CEO proactiveness, innovation, and firm performance. *The Leadership Quarterly*, *33*(3), 101545.

Kiss, A. N., Libaers, D., Barr, P. S., Wang, T., & Zachary, M. A. (2020). CEO cognitive flexibility, information search, and organizational ambidexterity. *Strategic Management Journal*, *41*(12), 2200–2233.

Kraiczy, N. D., Hack, A., & Kellermanns, F. W. (2015). What Makes a Family Firm Innovative? CEO Risk-Taking Propensity and the Organizational Context of Family Firms. *Journal of Product Innovation Management*, *32*(3), 334–348. https://doi.org/10.1111/jpim.12203

Kunz, J., & Sonnenholzner, L. (2022). Managerial overconfidence: Promoter of or obstacle to organizational resilience? *Review of Managerial Science*, 1–62. https://doi.org/10.1007/s11846-022-00530-y

Lei, S., Peng, L., & Guo, Y. (2021). Investigating the effect of leader humility on subordinates' service creativity: A moderated dual path model. *Current Psychology*, 1–13.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, *21*(3), 243–255. https://doi.org/10.1016/j.hrmr.2010.07.001

Li, J., & Tang, Y. (2010). CEO Hubris and Firm Risk Taking in China: The Moderating Role of Managerial Discretion. *Academy of Management Journal*, *53*(1), 45–68. https://doi.org/10.5465/amj.2010.48036912

Li, J., Xia, J., & Zajac, E. J. (2018). On the duality of political and economic stakeholder influence on firm innovation performance: Theory and evidence from Chinese firms. *Strategic Management Journal*, *39*(1), 193–216. https://doi.org/10.1002/smj.2697

Li, L., Wang, Z., Ye, F., Chen, L., & Zhan, Y. (2022). Digital technology deployment and firm resilience: Evidence from the COVID-19 pandemic. *Industrial Marketing Management*, *105*, 190–199.

Li, R., Wang, S., & Wang, H. (2022). Leader humility and team creativity: The role of team creative efficacy and task interdependence. *Journal of General Management*, *47*(4), 246–258.

Li, Y., Wei, F., Chen, S., & Yan, Y. (2020). Effects of CEO humility and relationship conflict on entrepreneurial performance. *International Journal of Conflict Management*, *31*(3), 489–508.

Li, Y., Zhang, B., Fan, D., & Li, Z. (2021). Digital media, control of corruption, and emerging multinational enterprise's FDI entry mode choice. *Journal of Business Research*, *130*, 247–259. https://doi.org/10.1016/j.jbusres.2021.03.006

Liu, Y., & Yin, J. (2020). Stakeholder relationships and organizational resilience. *Management and Organization Review*, *16*(5), 986–990.

Loi, T. H. (2016). Stakeholder management: A case of its related capability and performance. *Management Decision*.

Luo, X., Kanuri, V. K., & Andrews, M. (2014). How does CEO tenure matter? The mediating role of firm-employee and firm-customer relationships. *Strategic Management Journal*, *35*(4), 492–511.

Mahto, R. V., McDowell, W. C., Kudlats, J., & Dunne, T. C. (2018). Learning Orientation and Performance Satisfaction as Predictors of Small Firm Innovation: The Moderating Role of Gender. *Group Decision and Negotiation*, *27*(3), 375–391. https://doi.org/10.1007/s10726-018-9566-x

Mainardes, E. W., Alves, H., & Raposo, M. (2011). Stakeholder theory: Issues to resolve. *Management Decision*.

Maldonado, T., Vera, D., & Ramos, N. (2018). How humble is your company culture? And, why does it matter? *Business Horizons*, *61*(5), 745–753.

Malmendier, U., & Tate, G. (2005). CEO overconfidence and corporate investment. *The Journal of Finance*, *60*(6), 2661–2700.

Martin, A. D., Nishikawa, T., & Williams, M. A. (2009). CEO gender: Effects on valuation and risk. *Quarterly Journal of Finance and Accounting*, 23–40.

Marvel, M. R., Lee, I. H., & Wolfe, M. T. (2015). Entrepreneur gender and firm innovation activity: A multilevel perspective. *IEEE Transactions on Engineering Management*, *62*(4), 558–567. https://doi.org/10.1109/TEM.2015.2454993

McKnight, B., & Linnenluecke, M. K. (2016). How firm responses to natural disasters strengthen community resilience: A stakeholder-based perspective. *Organization & Environment*, *29*(3), 290–307.

Meyer, A. D. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, 515–537.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, *22*(4), 853–886.

Morris, J. A., Brotheridge, C. M., & Urbanski, J. C. (2005). Bringing humility to leadership: Antecedents and consequences of leader humility. *Human Relations*, *58*(10), 1323–1350.

Musteen, M., Barker, V. L., & Baeten, V. L. (2006). CEO attributes associated with attitude toward change: The direct and moderating effects of CEO tenure. *Journal of Business Research*, *59*(5), 604–612. https://doi.org/10.1016/j.jbusres.2005.10.008

Neely Jr, B. H., Lovelace, J. B., Cowen, A. P., & Hiller, N. J. (2020). Metacritiques of upper echelons theory: Verdicts and recommendations for future research. *Journal of Management*, *46*(6), 1029–1062. https://doi.org/10.1177/0149206320908640

Nie, X., Yu, M., Zhai, Y., & Lin, H. (2022). Explorative and exploitative innovation: A perspective on CEO humility, narcissism, and market dynamism. *Journal of Business Research*, *147*, 71–81.

Nielsen, R., & Marrone, J. A. (2018). Humility: Our current understanding of the construct and its role in organizations. *International Journal of Management Reviews*, *20*(4), 805–824.

Oc, B., Daniels, M. A., Diefendorff, J. M., Bashshur, M. R., & Greguras, G. J. (2020). Humility breeds authenticity: How authentic leader humility shapes follower vulnerability and felt authenticity. *Organizational Behavior and Human Decision Processes*, *158*, 112–125.

Odeh, R. B. M., Obeidat, B. Y., Jaradat, M. O., Alshurideh, M. T., & others. (2021). The transformational leadership role in achieving organizational resilience through adaptive cultures: The case of Dubai service sector. *International*

Journal of Productivity and Performance Management. https://doi.org/10.1108/IJPPM-02-2021-0093

Oesterle, M.-J., Elosge, C., & Elosge, L. (2016). Me, myself and I: The role of CEO narcissism in internationalization decisions. *International Business Review*, *25*(5), 1114–1123.

Orth, D., & Schuldis, P. M. (2021). Organizational learning and unlearning capabilities for resilience during COVID-19. *The Learning Organization*.

Ortiz-de-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, *37*(8), 1615–1631. https://doi.org/10.1002/smj.2410

Ou, A. Y., Seo, J. (Jamie), Choi, D., & Hom, P. W. (2017). When Can Humble Top Executives Retain Middle Managers? The Moderating Role of Top Management Team Faultlines. *Academy of Management Journal*, *60*(5), 1915–1931. https://doi.org/10.5465/amj.2015.1072

Ou, A. Y., Tsui, A. S., Kinicki, A. J., Waldman, D. A., Xiao, Z., & Song, L. J. (2014). Humble chief executive officers' connections to top management team integration and middle managers' responses. *Administrative Science Quarterly*, *59*(1), 34–72.

Ou, A. Y., Waldman, D. A., & Peterson, S. J. (2018). Do Humble CEOs Matter? An Examination of CEO Humility and Firm Outcomes. *Journal of Management*, *44*(3), 1147–1173. https://doi.org/10.1177/0149206315604187

Owens, B. P., & Hekman, D. R. (2016). How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal*, *59*(3), 1088–1111.

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science*, *24*(5), 1517–1538.

Pajunen, K. (2006). Stakeholder influences in organizational survival. *Journal of Management Studies*, *43*(6), 1261–1288.

Park, J.-H., Kim, C., Chang, Y. K., Lee, D.-H., & Sung, Y.-D. (2018). CEO hubris and firm performance: Exploring the moderating roles of CEO power and board vigilance. *Journal of Business Ethics*, *147*(4), 919–933.

Parker, H., & Ameen, K. (2018). The role of resilience capabilities in shaping how firms respond to disruptions. *Journal of Business Research*, *88*, 535–541. https://doi.org/10.1016/j.jbusres.2017.12.022

Patel, P. C. (2011). Role of manufacturing flexibility in managing duality of formalization and environmental uncertainty in emerging firms. *Journal of Operations Management*, *29*(1), 143–162. https://doi.org/10.1016/j.jom.2010.07.007

Pedrini, M., & Ferri, L. M. (2018). Stakeholder management: A systematic literature review. *Corporate Governance: The International Journal of Business in Society*, *19*(1), 44–59.

Petrenko, O. V., Aime, F., Recendes, T., & Chandler, J. A. (2019). The case for humble expectations: CEO humility and market performance. *Strategic Management Journal*, *40*(12), 1938–1964.

Ponomarov, S. Y., & Holcomb, M. C. (2009). Understanding the concept of supply chain resilience. *The International Journal of Logistics Management*, *20*(1), 124–143.

Prayag, G., Ozanne, L. K., de Vries, H., & others. (2020). Psychological capital, coping mechanisms and organizational resilience: Insights from the 2016 Kaikoura earthquake, New Zealand. *Tourism Management Perspectives*, *34*, 100637. https://doi.org/10.1016/j.tmp.2020.100637

Qian, C., Cao, Q., & Takeuchi, R. (2013). Top management team functional diversity and organizational innovation in China: The moderating effects of environment: Research Notes and Commentaries. *Strategic Management Journal*, *34*(1), 110–120. https://doi.org/10.1002/smj.1993

Quigley, T. J., & Hambrick, D. C. (2015). Has the "CEO effect" increased in recent decades? A new explanation for the great rise in America's attention to corporate leaders. *Strategic Management Journal*, *36*(6), 821–830. https://doi.org/10.1002/smj.2258

Rashad Abdel-Khalik, A. (2014). CEO risk preference and investing in R & D. *Abacus*, *50*(3), 245–278.

Reed, R., & Reed, M. (1989). CEO experience and diversification strategy fit. *Journal of Management Studies*, *26*(3), 251–270.

Rego, A., Melo, A. I., Bluhm, D. J., Júnior, D. R., & others. (2021). Leader-expressed humility predicting team psychological safety: A personality dynamics lens. *Journal of Business Ethics*, *174*(3), 669–686.

Rego, A., Owens, B., Yam, K. C., Bluhm, D., Cunha, M. P. e, Silard, A., Gonçalves, L., Martins, M., Simpson, A. V., & Liu, W. (2019). Leader humility and team performance: Exploring the mediating mechanisms of team PsyCap and task allocation effectiveness. *Journal of Management*, *45*(3), 1009–1033.

Rego, A., Simpson, A. V., & others. (2018). The perceived impact of leaders' humility on team effectiveness: An empirical study. *Journal of Business Ethics*, *148*(1), 205–218.

Ren, Q., Xu, Y., Zhou, R., & Liu, J. (2020). Can CEO's humble leadership behavior really improve enterprise performance and sustainability? A case study of Chinese start-up companies. *Sustainability*, *12*(8), 3168.

Ren, S., Wang, Y., Hu, Y., & Yan, J. (2021). CEO hometown identity and firm green innovation. *Business Strategy and the Environment*, *30*(2), 756–774.

Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, *86*, 180–190.

Rodríguez-Sánchez, A., Guinot, J., Chiva, R., & López-Cabrales, Á. (2021). How to emerge stronger: Antecedents and consequences of organizational resilience. *Journal of Management & Organization*, *27*(3), 442–459. https://doi.org/10.1017/jmo.2019.5

Roumpi, D. (2023). Rethinking the strategic management of human resources: Lessons learned from Covid-19 and the way forward in building resilience. *International Journal of Organizational Analysis*, *31*(1), 215–231.

Rowley, T. J. (1997). Moving beyond dyadic ties: A network theory of stakeholder influences. *Academy of Management Review*, *22*(4), 887–910.

Sajko, M., Boone, C., & Buyl, T. (2021). CEO Greed, Corporate Social Responsibility, and Organizational Resilience to Systemic Shocks. *Journal of Management*, *47*(4), 957–992.

Santoro, G., Bertoldi, B., Giachino, C., & Candelo, E. (2020). Exploring the relationship between entrepreneurial resilience and success: The moderating role of stakeholders' engagement. *Journal of Business Research*, *119*, 142–150. https://doi.org/10.1016/j.jbusres.2018.11.052

Savage, L. J. (1972). *The foundations of statistics*. Courier Corporation.

Serfling, M. A. (2014). CEO age and the riskiness of corporate policies. *Journal of Corporate Finance*, *25*, 251–273. https://doi.org/10.1016/j.jcorpfin.2013.12.013

Simon, H. A. (1990). Bounded rationality. In *Utility and probability* (pp. 15–18). Springer.

Simsek, Z. (2007). CEO tenure and organizational performance: An intervening model. *Strategic Management Journal*, *28*(6), 653–662. https://doi.org/10.1002/smj.599

Simsek, Z., Heavey, C., & Veiga, J. (Jack) F. (2010). The impact of CEO core self-evaluation on the firm's entrepreneurial orientation. *Strategic Management Journal*, *31*(1), 110–119.

Souder, D., Simsek, Z., & Johnson, S. G. (2012). The differing effects of agent and founder CEOs on the firm's market expansion. *Strategic Management Journal*, *33*(1), 23–41. https://doi.org/10.1002/smj.944

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, *26*(4), 501–524. https://doi.org/10.2307/2392337

Strand, R., & Freeman, R. E. (2015). Scandinavian cooperative advantage: The theory and practice of stakeholder engagement in Scandinavia. *Journal of Business Ethics*, *127*(1), 65–87. https://doi.org/10.1007/s10551-013-1792-1

Su, S., Baird, K., & Munir, R. (2022). Organisational resilience: The role of organisational culture from an organisational life cycle perspective. *International Journal of Manpower*, *ahead-of-print*.

Sun, D., Zeng, S., Lin, H., Yu, M., & Wang, L. (2021). Is green the virtue of humility? the impact of humble CEOs on corporate green innovation in China. *IEEE Transactions on Engineering Management*, 1–11. https://doi.org/10.1109/TEM.2021.3106952

Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, *31*(5), 463–490. https://doi.org/10.1002/smj.820

Tan, J., & Litsschert, R. J. (1994). Environment-strategy relationship and its performance implications: An empirical study of the chinese electronics industry. *Strategic Management Journal*, *15*(1), 1–20. https://doi.org/10.1002/smj.4250150102

Tang, Y., Qian, C., Chen, G., & Shen, R. (2015). How CEO hubris affects corporate social (ir)responsibility. *Strategic Management Journal*, *36*(9), 1338–1357. https://doi.org/10.1002/smj.2286

Tangney, J. P. (2000). Humility: Theoretical perspectives, empirical fingings and directions for future research. *Journal of Social and Clinical Psychology*, *19*(1), 70.

Torres, P., & Augusto, M. (2021). Attention to social issues and CEO duality as enablers of resilience to exogenous shocks in the tourism industry. *Tourism Management*, *87*, 104400. https://doi.org/10.1016/j.tourman.2021.104400

Toscano, R., Price, G., & Scheepers, C. (2018). The impact of CEO arrogance on top management team attitudes. *European Business Review*, *30*(6). https://doi.org/10.1108/EBR-12-2016-0156

Valiyan, H., Abdoli, M., & Saghari, M. A. (2022). Stakeholder relationship capability and investment efficiency: A mosaic theory test. *Measuring Business Excellence*, *26*(3), 346–365.

Van Der Vegt, G. S., Essens, P., Wahlström, M., & George, G. (2015). Managing risk and resilience. *Academy of Management Journal*, *58*(4), 971–980. https://doi.org/10.5465/amj.2015.4004

Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues: Humility as a source of competitive advantage. *Organizational Dynamics*, *33*(4), 393–408. https://doi.org/10.1016/j.orgdyn.2004.09.006

Veronica, S., Alexeis, G.-P., Valentina, C., & Elisa, G. (2020). Do stakeholder capabilities promote sustainable business innovation in small and medium-sized enterprises? Evidence from Italy. *Journal of Business Research*, *119*, 131–141.

Walker, B., Carpenter, S., Anderies, J., Abel, N., Cumming, G., Janssen, M., Lebel, L., Norberg, J., Peterson, G. D., & Pritchard, R. (2002). Resilience management in social-ecological systems: A working hypothesis for a participatory approach. *Conservation Ecology*, *6*(1).

Wall, T., & Bellamy, L. (2019). Redressing small firm resilience: Exploring owner-manager resources for resilience. *International Journal of Organizational Analysis*, *27*(2), 269–288. https://doi.org/10.1108/IJOA-02-2018-1364

Wally, S., & Baum, J. R. (1994). Personal and structural determinants of the pace of strategic decision making. *Academy of Management Journal*, *37*(4), 932–956.

Wang, D., Liu, Y., Hsieh, Y.-C., & Zhang, Z. (2022). Top-down and Bottom-up: Examining Reciprocal Relationships Between Leader Humility and Team Helping Behavior. *Journal of Organizational Behavior*.

Wang, T., Libaers, D., & Jiao, H. (2015). Opening the Black Box of Upper Echelons in China: TMT Attributes and Strategic Flexibility. *Journal of Product Innovation Management*, *32*(5), 685–703.

Wang, X., Li, H., & Yin, H. (2020). Antecedents and consequences of creativity in teams: When and how leader humility promotes performance via team creativity. *The Journal of Creative Behavior*, *54*(4), 843–856.

Weis, M., & Klarner, P. (2022). A CEO's future temporal depth and organizational resilience. *Schmalenbach Journal of Business Research*, 1–35.

Werther Jr, W. B., & Chandler, D. (2010). *Strategic corporate social responsibility: Stakeholders in a global environment*. Sage.

Westermann-Behaylo, M. K., Van Buren, H. J., & Berman, S. L. (2016). Stakeholder capability enhancement as a path to promote human dignity and cooperative advantage. *Business Ethics Quarterly*, *26*(4), 529–555.

Westphal, J. D., & Zhu, D. H. (2019). Under the radar: How firms manage competitive uncertainty by appointing friends of other chief executive officers to their boards. *Strategic Management Journal*, *40*(1), 79–107. https://doi.org/10.1002/smj.2966

Williams, C., You, J. J., & Joshua, K. (2020). Small-business resilience in a remote tourist destination: Exploring close relationship capabilities on the island of St Helena. *Journal of Sustainable Tourism*, *28*(7), 937–955.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT Press.

Worren, N., Moore, K., & Cardona, P. (2002). Modularity, strategic flexibility, and firm performance: A study of the home appliance industry. *Strategic Management Journal*, *23*(12), 1123–1140. https://doi.org/10.1002/smj.276

Wright, J. C., Nadelhoffer, T., Perini, T., Langville, A., Echols, M., & Venezia, K. (2017). The psychological significance of humility. *The Journal of Positive Psychology*, *12*(1), 3–12.

Xie, X., Wu, Y., Palacios-Marqués, D., & Ribeiro-Navarrete, S. (2022). Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technological Forecasting and Social Change*, *177*, 121548.

YahiaMarzouk, Y., & Jin, J. (2022). Linking environmental scanning and organizational learning with organizational resilience of Egyptian SMEs: The moderating role of environmental uncertainty. *International Journal of Organizational Analysis*, *ahead-of-print*.

Ye, B. H., Tung, V. W. S., Li, J. J., & Zhu, H. (2020). Leader humility, team humility and employee creative performance: The moderating roles of task dependence and competitive climate. *Tourism Management*, *81*, 104170.

Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics*, *108*(1), 250–273.

Yuan, R., Luo, J., Liu, M. J., & Yu, J. (2022). Understanding organizational resilience in a platform-based sharing business: The role of absorptive capacity. *Journal of Business Research*, *141*, 85–99.

Zhang, C., & Wang, H. (2020). CEO learning goal orientation and firm innovation: The mechanism and boundary conditions. *Journal of Small Business Management*, *58*(5), 948–974.

Zhang, H., Ou, A. Y., Tsui, A. S., & Wang, H. (2017). CEO humility, narcissism and firm innovation: A paradox perspective on CEO traits. *The Leadership Quarterly*, *28*(5), 585–604. https://doi.org/10.1016/j.leaqua.2017.01.003

Zhou, J., Bu, M., & Jia, L. (2022). Leader humility and inter-firm collaboration: The moderating role of firm status and environmental uncertainty. *Leadership & Organization Development Journal*, *6*(43), 953–977. https://doi.org/10.1108/LODJ-12-2021-0538

Appendix

SURVEY TO CEO

Company Name:___________

BACKGROUND INFORMATION ABOUT YOUR COMPANY

1. The establishment year of your company：_____________;

registered address:__________(Province)________________(City)

1. At present, the number of employees in your company is ________。

2. At present, the number of members in your top management team is_______。

3. At present, the return on sales of your company is _________%.

BACKGROUND INFORMATION ABOUT YOUSELF

1. Your gender: ☐ Male ☐ Female

2. Your age：☐ 30 or below ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61 or above

3. Your highest academic degree： ☐ Bachelor or below ☐ Bachelor ☐ Master ☐ PhD

4. Are you the founder of the company：☐ Yes ☐ No

5. Your share proportion of the company：___________%. （If none, then 0）

6. How many years have you been CEO?

☐ 2 years below ☐ 2-4 ☐ 4-6 ☐☐ 6-8 ☐ 8-10 ☐ 10 years or above

7. Before your current job, did you work in the following places respectively?

☐ State-owned or collective enterprises ☐ Private enterprises

☐ Foreign-invested, Hong Kong, Macao, and Taiwan enterprises

☐ Government departments ☐ Banks or other financial institutions

☐ Universities or other research institutions

☐ Military or military departments ☐ Other public institutions

INDIVIDUAL TRAITS

1. To what extent do you agree with the following statements? (1= Strongly disagree, 3 = Neutral, 5 = Strongly agree).

	Strongly disagree			Strongly agree	
1) I actively seek feedback, even if it is critical	1	2	3	4	5
2) I admit it when I don't know how to do something	1	2	3	4	5
3) I acknowledge when others have more knowledge and skills than me	1	2	3	4	5
4) I take notice of others' strengths	1	2	3	4	5
5) I often compliment others on their strengths	1	2	3	4	5
6) I show appreciation for the unique contributions of others	1	2	3	4	5
7) I am willing to learn from others	1	2	3	4	5
8) I am open to the ideas of others	1	2	3	4	5
9) I am open to the advice of others	1	2	3	4	5

FIRM STRATEGY

1. Do you think your company is strong or weak in the following aspects? (1= Very weak, 3 = Neutral, 5 = Very strong).

	Very weak			Very strong	
1) Early sensing of societal concerns	1	2	3	4	5
2) Listening to various stakeholder voices	1	2	3	4	5
3) Communicating a company's point of view to stakeholders	1	2	3	4	5
4) Seeking public consultation for new development	1	2	3	4	5
5) Cooperating with stakeholders to solve problems	1	2	3	4	5
6) Improving goodwill among stakeholders and building positive relationships with stakeholders	1	2	3	4	5

2. To what extent do you agree with the following statements? (1= Strongly disagree, 3 = Neutral, 5 = Strongly agree).

	Strongly disagree			Strongly agree	
1) Over the past 3 years, our financial performance has been outstanding	1	2	3	4	5
2) Over the past 3 years, our financial performance has exceeded our competitors'	1	2	3	4	5
3) Over the past 3 years, our sales growth has exceeded our competitors'	1	2	3	4	5

3. To what extent do you agree with the following statements? (1= Strongly disagree, 3 = Neutral, 5 = Strongly agree).

	Strongly disagree			Strongly agree	
1) My organization stands straight and preserves its position.	1	2	3	4	5
2) My organization is successful in generating diverse solutions.	1	2	3	4	5
3) My organization shows resistance to the end in order not to lose.	1	2	3	4	5
4) My organization does not give up and continues its path.	1	2	3	4	5
5) My organization rapidly takes action.	1	2	3	4	5
6) My organization develops alternatives in order to benefit from negative circumstances.	1	2	3	4	5
7) My organization is agile in taking required action when needed.	1	2	3	4	5
8) My organization is a place where all the employees engaged to do what is required from them.	1	2	3	4	5
9) My organization is successful in acting as a whole with all of its employees.	1	2	3	4	5

4. To what extent do you agree with the following statements? (1= Strongly disagree, 3 = Neutral, 5 = Strongly agree).

	Strongly disagree			Strongly agree	
1) Our firm can deal with changes brought by unexpected adverse events.	1	2	3	4	5
2) Our firm can adapt easily to unexpected adverse events.	1	2	3	4	5
3) Our firm can respond fastly to unexpected adverse events.	1	2	3	4	5
4) Our firm always maintains high situational awareness.	1	2	3	4	5

BUSINESS ENVIRONMENT

1. To what extent do you agree with the following statements? (1= Strongly disagree, 3 = Neutral, 5 = Strongly agree).

	Strongly disagree			Strongly agree	
1) The number of products and brands is very high.	1	2	3	4	5
2) The number of people/organizations involved in the distribution process is very high.	1	2	3	4	5
3) The number of people involved in the buying process is very high.	1	2	3	4	5
4) Communication varies very much across different customer segments.	1	2	3	4	5
5) Customer requirements vary a lot across different customer segments.	1	2	3	4	5
6) There is a lot of variety in products for sale.	1	2	3	4	5
7) There is a lot of variety in the type of people involved in the buying process.	1	2	3	4	5
8) There are many people other than direct customers who must be influenced in order to sell.	1	2	3	4	5

2. To what extent is the external environment faced by your company unpredictable in the following aspects?
(1= Highly predictable, 3= Neutral, 5= Highly unpredictable)

	Strongly disagree			Strongly agree	
1) Product and/or process technology	1	2	3	4	5
2) Market demand	1	2	3	4	5
3) Customer needs and buying behavior	1	2	3	4	5
4) Competitors' actions	1	2	3	4	5
5) Availability of needed talent	1	2	3	4	5
6) Relevant policies	1	2	3	4	5
7) Goals and actions of alliance partners	1	2	3	4	5