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CEO Narcissism and Global Performance Variance in Multinational Enterprises: The Roles of Foreign Direct Investment Risk-Taking and Business Group Affiliation

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This study examines key mechanisms through which CEO narcissism influences global performance variance in the context of Asian emerging market multinational enterprises. Building on the contextual reinforcement model of narcissism and the cushion hypothesis, we focus on the role of foreign direct investment (FDI) risk-taking and business group affiliation (BGA). We test our moderated mediation model on data from 149 South Korean multinational enterprises from 2006 to 2016. The results show that CEO narcissism is positively associated with FDI risk-taking. The effect of CEO narcissism on global performance variance is mediated by FDI risk-taking. Furthermore, BGA moderates the above-mentioned relationships. Our findings offer important contributions to the international business and CEO narcissism literatures.

Introduction

CEO narcissism is particularly relevant in explaining international business (IB) decisions. Leaders of multinational enterprises (MNEs) must deal with the liability of foreignness, liability of outsidership and management of a multiplicity of complex market entry and operation activities under uncertainty (Håkanson and Kappen, 2017; Johanson and Vahlne, 2009). In this challenging environment, the provision of knowledge of relevant alternatives and their associated probabilities is limited. CEOs' cognition – 'how they think and make sense of contexts and decisions' (Maitland and Sammartino, 2015: 736) – is constrained and they make bounded rational decisions (Aharoni, Tihanyi and Connelly, 2011; Maitland and Sammartino, 2015). CEOs' personality traits, such as narcissism, play an important role in decision-making in general (Chatterjee and Hambrick, 2011; Hoskisson *et al*., 2017), and foreign direct investment (FDI) risk-taking decisions in particular (Buckley *et al*., 2016), which in turn may have performance consequences.

However, despite the leadership literature that links CEO narcissism to firm risk-taking and performance (Cragun, Olsen and Wright, 2020; Grijalva *et al*., 2015), examinations of CEO narcissism in the IB arena have been theoretically unclear and insufficiently empirically tested. Only

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a few studies examine the role of CEO narcissism in firm internationalization, with merely one focusing on FDI (Fung *et al*., 2020) and none on MNE performance variance. This reflects the literature on FDI decisions more broadly being 'silent about the role of managerial cognition or biases as a source of variation' (Nielsen, Asmussen and Weatherall, 2017: 77), despite the long tradition of the behavioural-based internationalization process model that rests on the assumptions of MNE managers in terms of their cognitive limitations of foreign markets and risk-aversion (Johanson and Vahlne, 2009). Accordingly, recent studies have called for more research to consider the characteristics of CEOs – including narcissism – as predictors of MNE strategy and performance (Buckley *et al*., 2016; Chittoor, Aulakh and Ray, 2019; Contractor *et al*., 2019).

Furthermore, understanding CEO narcissism in the setting of Asian emerging market MNEs (AEMNEs) is particularly important, considering that Asia constitutes a distinctive and fast-growing economic system shaped by its culture (Redding, Bond and Witt, 2014; Whitley, 1992; Witt and Redding, 2013). The outward FDI by AEMNEs has grown rapidly over the past decades. Although collectivistic cultures in general value relational harmony and downplay the importance of the self, CEO narcissism, for example in South Korea, has been a prevalent phenomenon in recent years (Yoo, 2016; Yook and Lee, 2020). Narcissistic CEOs at Korean MNEs have influenced corporate activities and performance through bold business restructuring, large mergers and acquisitions, extensive R&D and unrelated diversification (Kang and Cho, 2020; Yoo, 2016). Also, Asian business systems have unique features, most notably the dominance of business groups (BGs), which may influence the effects of CEO narcissism even further. BGs are 'interorganizational networks of semi-autonomous firms bound through multiplex ownership, buyer–supplier, director interlock, and/or social ties' (Holmes *et al*., 2018: 135). In Korea, more than 80% of gross domestic product was generated by chaebols, a Korean-style BG, in 2012 (Holmes *et al*., 2018). Chaebols have not only played a significant role in the socioeconomic landscape of the domestic economy (Carney *et al*., 2018; Chang and Hong, 2000), but also in firms' internationalization and in the relationship between internationalization and firm performance (Gaur *et al*., 2019; Kim, Kim and Hoskisson, 2010), with many Korean MNEs being affiliated with chaebols. Because BG affiliation (BGA) has both benefits and costs, its effects on affiliates' strategy and performance continue to be debated, although much of the literature has not explicitly concerned MNEs (for reviews, see Carney *et al*., 2018; Holmes *et al*., 2018; Khanna and Yafeh, 2007).

Accordingly, this study aims to examine the performance effects of CEO narcissism in the context of AEMNEs, with a focus on FDI risk-taking and BGA as the key mechanisms. Our theoretical arguments integrate the contextual reinforcement model of narcissism (Campbell and Campbell, 2009) and the cushion hypothesis (Hsee and Weber, 1999). More specifically, we put forth FDI risk-taking as a novel mediating mechanism and MNEs' BGA as a novel moderating mechanism through which CEO narcissism affects the volatility of AEMNE performance (i.e. global performance variance).

Based on an empirical analysis of 149 South Korean MNEs led by 295 CEOs from 2006 to 2016, our study establishes FDI risk-taking and BGA as key mechanisms through which CEO narcissism influences performance in AEMNEs. The findings highlight the intriguing and complex role of CEO narcissism in the IB context. We contribute to the understanding of MNE strategy and performance as part of the literature on IB in the emerging economy context and to the narcissism literature as part of the broader literature on CEO personality traits.

Theoretical background

Narcissism and the contextual reinforcement model

Narcissism is a multifaceted personality trait and there are intense debates about its core features (Jauk and Kanske, 2021; Krizan and Herlache, 2018; Miller *et al*., 2017). Jauk and Kanske's (2021) review shows an emerging consensus, that is, two forms of narcissism – grandiose narcissism and vulnerable narcissism – have common cores of self-importance and entitlement. With grandiose narcissism, individuals have inflated self-views, crave for affirming recognition and engage in bold, attention-getting behaviours; meanwhile vulnerable narcissism manifests in anxiety, emotional instability and fragile self-esteem, but has a hidden feeling of grandiosity (Miller *et al*., 2011; Rohmann, Brailovskaia and Bierhoff, 2019). Although the grandiose and vulnerable

narcissistic features are generally unrelated in the general population, research shows that those high in grandiosity can fluctuate between grandiose and vulnerable states, thus grandiose narcissism can be accompanied by vulnerable aspects (Hyatt *et al*., 2018; Jauk *et al*., 2017; Rogoza *et al*., 2018). Narcissism has received significant attention in the leadership research (for reviews, see Braun, 2017; Campbell *et al*., 2011; Fatfouta, 2019; Grijalva *et al*., 2015; O'Reilly and Chatman, 2020; Ouimet, 2010). Because grandiose narcissism, compared to vulnerable narcissism, is considered to have a critical impact on organizations and people, most studies focus on grandiose narcissism and its effects on organizational outcomes.

Given our research focus, we respond to Cragun, Olsen and Wright's (2020) call to draw on the theoretical lens from personality theory to understand the decision-making of narcissistic CEOs. Cragun, Olsen and Wright (2020) highlighted the relevance of the extended agency model of narcissism (Campbell and Foster, 2007). Building on this model, Campbell and Campbell (2009) further developed the contextual reinforcement model, a model that we shall apply in our analysis. The extended agency model addresses narcissistic grandiosity specifically, focusing on boldness and agency. It is built on the idea that narcissistic self-enhancement is more evident in domains involving agency or agentic concerns (e.g. power, status, extraversion) rather than communal concerns (e.g. caring, emotional warmth). It views narcissism as a self-regulatory system serving to construct, maintain, and enhance the overbearing self-view of narcissists by employing tactics that include inter-personal skills (e.g. social confidence, charm), intra-psychic strategies (e.g. fantasies of power, self-serving bias) and inter-personal strategies (e.g. self-promotion, game-playing) (Campbell and Foster, 2007; Rohmann, Brailovskaia and Bierhoff, 2019).

Campbell and Campbell's (2009) contextual reinforcement model focuses on contexts where using these tactics is likely to pay off. It identifies two zones – emerging and enduring. The former refers to short-term contexts. It is in this zone that the benefits outweigh the costs for both the narcissists and the people who interact with them. Thus, positive aspects of narcissism are most evident – including likeability, emergent leadership, resource extraction from environment and resilience to negative feedback; and those interacting with narcissists experience excitement and high relationship satisfaction. The latter concerns situations involving continuing relationships and long-term consequences. It is in this zone that narcissists are less functional given their low levels of commitment and accommodation; and those interacting with narcissists have a more negative experience, including psychological control, aggression and volatile leadership performance.

Narcissism and leadership

Grandiose narcissism motivates leadership emergence. Narcissists actively seek leadership positions to promote their self-enhancement and fulfil their need for superiority and admiration (Campbell *et al*., 2011; Grijalva *et al*., 2015; O'Reilly and Chatman, 2020). They have the attributes (e.g. extraversion, charisma, dominance, high self-esteem) that lead followers to perceive them as leaders. The meta-analysis by Grijalva *et al*. (2015) shows positive effects of narcissism on leadership emergence. Campbell and Campbell (2009: 226) see this being in line with the contextual reinforcement model because '[l]eadership emergence is the quintessential emerging zone outcome'.

The influence of narcissism on effective leadership is complex and this has implications for organizational outcomes. On the one hand, the attributes that propel narcissists to become leaders also precipitate them to impress their followers, superiors and peers; and bring progress to their organizations. As leaders, they excel at inspiring followers through their visions and bold, confident, yet humble appearance (O'Reilly and Chatman, 2020); seducing followers to achieve set goals (Ouimet, 2010). They hire lower-status, younger and less experienced top management team (TMT) members, who will be more deferential and dependent on them (Chatterjee and Pollock, 2017). They manage upward by flattering superiors, which allows them to further personal interests (Chatterjee and Pollock, 2017). They also favour the appointment of new board directors who have similar narcissistic tendencies as themselves, and will therefore be more likely to support their decisions (Zhu and Chen, 2015b). On the other hand, narcissists' obliviousness to the needs of others and tendency for self-serving and manipulative acts are widely seen as reasons behind their counterproductive work behaviour (Fatfouta, 2019;

Judge, Piccolo and Kosalka, 2009). Additionally, their need for acclaim means that they may spend significant time enhancing their public image rather than undertaking effective leadership activities, for example mentoring (Lovelace *et al*., 2018; Resick *et al*., 2009). Grijalva *et al*.'s (2015) meta-analysis found no linear relationships between narcissism and observer-reported leadership effectiveness ratings. Thus, the paradoxical nature of narcissism (grandiose narcissism accompanied by vulnerable traits) means the link between narcissism and leadership effectiveness is not straightforward. This also conforms to the contextual reinforcement model on the benefits and costs of the narcissistic leaders in the enduring zone, because leadership effectiveness tends to be observed over time.

CEO narcissism and strategic risk-taking

The characteristics of CEO narcissism, representing both a motivational and a cognitive frame (Chatterjee and Hambrick, 2007), link it to risk-taking decisions. First, associated with self-serving needs – 'the need for acclaim and the need to dominate others' (Chatterjee and Pollock, 2017: 703), narcissistic CEOs align strategic choices of the organization with their own search for the novel, dramatic and supreme (O'Reilly and Chatman, 2020; Wales, Patel and Lumpkin, 2013). In pursuit of grandiosity, they prefer risky actions so as to draw the public's attention, while overlooking resource constraints, ignoring dissent and differing opinions, and rushing into decisions (Engelen, Neumann and Schmidt, 2016; Hiller and Hambrick, 2005; Kashmiri, Nicol and Arora, 2017; She *et al*., 2020). Second, narcissists' grandiose sense of self-belief in the superiority of their ideas and judgement lead them to make risky decisions (Campbell, Goodie and Foster, 2004; Chatterjee and Pollock, 2017; O'Reilly and Chatman, 2020). Third, stemming from their dominance orientation and hunger for power, narcissistic CEOs are more likely to engage in managerial empire building to exert strategic influence over a range of stakeholders, including followers, superiors and peers, as explained above.

Empirical studies tested the positive impact of CEO narcissism on risk-taking and revealed supporting evidence in the examination of mergers and/or acquisitions (Aktas *et al*., 2016; Chatterjee and Hambrick, 2011; Ham, Seybert and Wang, 2018; Zhu and Chen, 2015a), internationalization (Agnihotri and Bhattacharya, 2019; Fung *et al*., 2020; Oesterle, Elosge and Elosge, 2016; Zhu and Chen, 2015a), banks' policies (Buyl, Boone and Wade, 2019), R&D (Gerstner *et al*., 2013; Ham, Seybert and Wang, 2018) and spending (Ingersoll *et al*., 2019; Zhu and Chen, 2015b) (see Table 1). However, studies also found the insignificant effect on risk-taking in spending (Chatterjee and Hambrick, 2011; Ham, Seybert and Wang, 2018) and internationalization in high-risk countries (Oesterle, Elosge and Elosge, 2016). Cragun, Olsen and Wright's (2020) meta-analysis also fails to find a statistically significant relationship.

This mixed evidence may be due to the insufficient attention paid to the vulnerable aspects that accompany grandiose narcissism.[1] Aabo and Eriksen (2018) argue that narcissists' fragile self-esteem means that their superiority is precarious, and their positive self-view/self-esteem needs reinforcement by others, which predicts the risk-averse behaviour of narcissistic CEOs. They thus explored and found the non-linear relationship between CEO narcissism and risk-taking. Aabo, Hoejland and Pedersen (2021) further develop this line of argument. However, instead of exploring the non-linear relationship, they consider the moderation effects of 'narcissistic supply' and base their arguments on prospect theory (Kahneman and Tversky, 1979) in relation to social aspiration levels (Greve, 1998). According to prospect theory, decision-makers tend to be risk-assertive when they fail to attain an aspiration level and risk-averse when the attainment is reached. An individual's social aspiration level can be linked to how they perceive their self-achievement relative to the crowd. With a large crowd, that is abundant narcissistic supply in a firm, the fragility of a narcissistic CEO's self-esteem is reinforced, hence they are risk-averse. With a small crowd, that is inadequate narcissistic supply in a firm, they are risk-assertive. 'Narcissistic supply' therefore moderates CEOs' risk-taking. Aabo, Hoejland and Pedersen (2021) empirically showed that, in the full sample, CEO narcissism is negative and statistically insignificant, however, it turns significantly positive once narcissistic supply is controlled for. Building on Aabo, Hoejland and Pedersen (2021), we control for 'narcissistic supply' in empirical analysis.

[1]We are grateful to a reviewer for the insightful suggestions on this point and the related references.

Table 1. Summary of main quantitative studies linking CEO narcissism to risk-taking and firm performance

Study	Sample	Outcome indicator **Risk-taking**	Key findings
Aabo and Eriksen (2018)	475 US listed manufacturing firms, 2010–2014	Stock return volatility	∩, a moderate degree of CEO narcissism – as compared to a very low or a very high level of CEO narcissism – is associated with an increase in corporate risk-taking
Aabo, Hoejland and Pedersen (2021)	281 non-financial S&P firms, 2006–2015	Stock return volatility	±, conditional on narcissistic supply
Agnihotri and Bhattacharya (2019)	*218 Indian firms, 2010–2015*	*Internationalization*	*Growth in degree of internationalization (DOI): +*
Aktas *et al*. (2016)	Firms in SDC US Mergers and Acquisitions Database, 2002–2006	M&A deal initiation	+ (acquirer CEO)
Buyl, Boone and Wade (2019)	92 US banks, 2006–2008	Riskiness of policies	+
Chatterjee and Hambrick (2007)	111 CEOs in the largest US public computer hardware and software firms, 1992−2004	Acquisitions	Number: +Size: +
Chatterjee and Hambrick (2011)	152 CEOs in the largest public US computer hardware and software firms, 1992−2006	The sum of spending on R&D, capital expenditures and acquisitions	n.s., but moderated by capability cues
Fung *et al*. (2020)	*Chinese listed firms, 2007–2017*	*FDI*	*FDI dummy: +* *Number of foreign subsidiaries: +*
Gerstner *et al*. (2013)	US headquartered pharmaceutical firms, 1980–2008	Adoption of radical new technology	Number of new strategic initiatives in biotech[a]: +
Ham, Seybert and Wang (2018)	S&P 500 companies, 1992–2015	Spending on R&D, capital expenditures and acquisitions	Spending on R&D: + Spending on capital expenditures: n.s.Spending on acquisitions: +
Ingersoll *et al*. (2019)	S&P 1500 companies, 1992–2014	The sum of spending on R&D, capital expenditures and acquisitions	+
Oesterle, Elosge and Elosge (2016)	*31 largest German manufacturing firms, 2004–2013*	*Internationalization*	*Growth in DOI: +* *Growth of the share of foreign sales in high-risk countries: n.s.*
Zhu and Chen (2015a)	*300 public companies from 1995 Fortune 500 list, 1997–2006*	Acquisition	Total value of all acquisitions/total sales: + when moderated by CEO's prior experience
		Internationalization	*Ratio of foreign sales to total sales: +*
Zhu and Chen (2015b)	292 public companies from 1995 Fortune 500 list, 1998–2006	The sum of spending on R&D, capital expenditures and acquisitions	+

Table 1. (Continued)

		Performance	
Buyl, Boone and Wade (2019)	92 US banks, 2006–2014	Hazard of performance recovery	The higher is pre-shock CEO narcissism, the slower its post-shock recovery to pre-shock ROA levels
Chatterjee and Hambrick (2007)	*111 CEOs in the largest public US computer hardware and software firms, 1992–2004*	*Firm performance variance/extremeness* Performance fluctuation	*Extremeness Performance measured by ROA: +* *Performance measured by shareholder returns: +* Fluctuation Performance measured by ROA: + Performance measured by shareholder returns: n.s.
Engelen, Neumann and Schmidt (2016)	41 US high-tech firms listed in the S&P 500 Index, 2005–2007	Shareholder value	n.s. but + when interact with Entrepreneurial Orientation and Market Concentration/Market Dynamism
Ham, Seybert and Wang (2018)	S&P 500 companies, 1992–2015	ROA and operating cash flows	−
Kim (2018)	South Korean state-owned enterprises, 2009–2014	ROA	+
Olsen, Dworkis and Young (2014)	Fortune 500 companies, 1992–2009	Earnings per share (EPS) and stock price	+
Patel and Cooper (2014)	392 CEOs of companies in COMPUSTAT, June 2005–June 2010	Buy–hold return (BHAR) (July 2007–June 2008) and unsystematic return (June 2005–June 2010)	− on performance at crisis onset + on post-crisis performance
Peterson, Galvin and Lange (2012)	126 software and hardware technology firms in the mid-western USA	ROA	CEO narcissism related to performance through the mediation of servant leadership and organizational identification
Petrenko *et al*. (2016)	S&P 500 firms, 2007 and 2012	ROA, Tobin's Q and market value added (MVA)	ROA: − conditioning on CSR Tobin's Q: − conditioning on CSRMVA: −
Reina, Zhang and Peterson (2014)	97 CEOs in US computer hardware and software firms	ROA	CEO narcissism, moderated by organizational identification, related to performance through the mediation of TMT behavioural integration
Uppal (2020)	217 Indian automobile and automobile ancillary firms, 2010–2015	*Firm performance variance in ROA*	∩
Wales, Patel and Lumpkin (2013)	173 high-tech manufacturing firms in the mid-western USA	*Firm performance variance in sales*	+

Note: n.s., non-significant.

[a] Includes formations of biotech alliances, acquisitions of biotech companies and launches of organic biotech R&D projects.

CEO narcissism and firm performance

The effect of CEO narcissism on firm (financial) performance can be both positive and negative. Firms led by narcissistic CEOs may enjoy performance gains due to market orientation, resource commitment and organizational change. First, in pursuit of attention and praise, narcissistic CEOs pay significant attention to market information, which makes them more aware of opportunities towards which they respond with competitive aggressiveness (Kashmiri, Nicol and Arora, 2017). As a result of bold initiatives that they take, narcissistic CEOs can quickly build market positions relative to rivals, resulting in successful financial performance (Chatterjee and Hambrick, 2007; Chatterjee and Pollock, 2017). Second, narcissistic CEOs' lack of concern for resource constraints makes them 'likely to be organizational resource "hogs" who take possession of whatever resources are accessible' (Wales, Patel and Lumpkin, 2013: 1047). Their attempt to commit resources may lead to gains if resources are deployed effectively. Third, evidence in the socio-personality literature shows that narcissists tend to display high approach motivation and little avoidance orientation (Campbell, Goodie and Foster, 2004; Foster and Trimm, 2008; Krizan and Herlache, 2018). Given their agentic concerns, narcissistic CEOs are not afraid of substantial organizational change and bold repositioning moves, which again has potential positive effects on firm financial performance, especially in dynamic situations (Patel and Cooper, 2014).

This side of the arguments has received empirical support. Kim (2018) and Olsen, Dworkis and Young (2014) found the positive association between CEO narcissism and firm performance. Reina, Zhang and Peterson (2014) also presented similar evidence, albeit under the boundary conditions of servant leadership and organizational identification. Patel and Cooper (2014) showed that CEO narcissism is linked to higher abnormal returns at the onset of the crisis. Engelen, Neumann and Schmidt (2016) confirmed that CEO narcissism joins forces with entrepreneurial orientation in enhancing firm performance in highly concentrated and dynamic markets.

It is equally possible that the manifestations of CEO narcissism in market orientation, resource commitment and organizational change may lead to performance loss. Despite their focus on information flows, narcissistic CEOs may be selective in information absorption (Kashmiri, Nicol and Arora, 2017). The selected information that informs the decision-making of narcissists may not be based on inputs from other people (given their lack of regard for others) or even some of their own experience (given their difficulty in learning from negative feedback) (Campbell, Goodie and Foster, 2004, Study 3). Following from agency theory, CEOs are agents, and they pursue their own interests which are not always aligned with those of the principals. Therefore, bold initiatives made by narcissistic CEOs serve their self-enhancement, but may be made based on inaccurate assessment of full information. This can result in wrong decisions, missed opportunities to reverse the wrong decisions and inactions to hedge against potential threats, thus causing performance loss (Patel and Cooper, 2014). Second, narcissists' enthusiasm in garnering control over resources can be detrimental to firms when resources are misallocated (Wales, Patel and Lumpkin, 2013). This is plausible, as narcissists' low levels of avoidance motivation means that they are less likely to act as 'a careful steward of organizational resources' (Patel and Cooper, 2014: 1530). Petrenko *et al*. (2016) argue that narcissistic CEOs divert resources from economic to new non-economic projects, such as corporate social responsibility (CSR), to fulfil their needs for attention and image reinforcement. These projects add a new dimension in their empire-building, but potentially negatively affect performance. Third, although organizational change can bring firms opportunities, its performance consequence depends on many factors including motivation to change and capability to change (Greve, 1998). As mentioned above, narcissistic CEOs' motivation to change is related to their agentic concerns, which may not be aligned with firms' financial performance. Their inflated self-view of their own capabilities may colour their perceptions and behaviours (Jauk and Kanske, 2021; Krizan and Herlache, 2018; O'Boyle *et al*., 2012), negatively affecting leadership effectiveness and causing performance loss.

Empirical evidence has been supportive of this conjecture. Ham, Seybert and Wang (2018) found firms led by narcissistic CEOs experiencing lower performance. Patel and Cooper (2014) showed lower abnormal returns associated with CEO narcissism in the post-crisis phase. Petrenko *et al*. (2016) found CEO narcissism interacting with CSR practices negatively affects performance.

Buyl, Boone and Wade (2019) found CEO narcissism slows down banks' post-shock recovery to pre-shock performance levels.

Straddling both sides of the arguments, studies have examined the impact of CEO narcissism on firm performance variance. Chatterjee and Hambrick (2007) and Wales, Patel and Lumpkin (2013) identified a positive relationship for American firms. Although Uppal (2020) proposes a nonlinear effect of CEO narcissism, the findings for Indian firms show a positive association within the sample range.

Hypothesis development

CEO narcissism and FDI risk-taking

FDI risk-taking can be understood as a process consisting of entries in and across multiple foreign markets with different risk profiles in high-risk countries (Håkanson and Kappen, 2017). Building on Allen and Pantzalis's (1996) conceptualization of the structure of MNE networks, FDI risk-taking has two dimensions: *breadth* (number of foreign countries) and *depth* (volume of FDI in a host country). FDI depth and breadth decisions are interdependent (Håkanson and Kappen, 2017) and can be captured using an entropy measure (Hitt, Hoskisson and Kim, 1997). Restricted by resource constraints, managers must take a holistic approach on FDI risk-taking by looking at the combination of breadth and depth; and their decisions may be a tradeoff between breadth and depth. Unlike in a gradualist process associated with either breadth or depth, the frequency and wavelength of a cycle alternating risk-taking breadth and depth will increase, causing an increase on aggregate. Our approach thus extends recent studies about CEO narcissism in IB that focus on either the breadth or the depth of internationalization, not both dimensions (Agnihotri and Bhattacharya, 2019; Fung *et al*., 2020; Oesterle, Elosge and Elosge, 2016; Zhu and Chen, 2015a).

FDI risk-taking can be considered as an 'emerging zone'. According to Campbell and Campbell (2009: 227), the unstable or constantly evolving contexts can be seen as 'emerging rather than enduring zones because they present new contexts on a rapid basis'. Following the prediction of the contextual reinforcement model that narcissism has positive outcomes in emerging zones, we propose the positive relationship between CEO narcissism and FDI risk-taking in high-risk countries.

Two lines of reasoning grounded in the social–personality literature underscore such a relationship. For the self, to fulfil their image as bold explorers of new pathways and their search for the novel, dramatic and supreme (Braun, 2017; Campbell, Goodie and Foster, 2004; Krizan and Herlache, 2018), narcissistic CEOs may have a particularly elevated desire for risky FDI projects. The high level of uncertainty and information asymmetry in challenging environments makes it difficult to objectively assess risks and take rational decisions. Narcissistic CEOs, as the agents of MNEs undertaking FDI, have many reasons and many opportunities to be opportunistic and self-interested in risk-taking (Brunzel, 2021). Bold FDI moves offer potential for global status (Agnihotri and Bhattacharya, 2019; Fung *et al*., 2020), real options for flexibility that are domestically unavailable (Fung *et al*., 2020) and a publicly visible route for gaining excessive admiration, acquiring power and prestige, and achieving empire-building (Oesterle, Elosge and Elosge, 2016).

In terms of leadership, narcissistic CEOs in the emerging zone are likely to be perceived favourably by their peers and followers (Campbell and Campbell, 2009; Campbell and Foster, 2007). Three studies by Nevicka *et al*. (2013) showed that, although individuals were aware of their negative features, narcissistic leaders are still preferred in an uncertain environment. Feeding off the uncertainty and information asymmetry, narcissistic CEOs would employ their self-regulatory system and the associated tactics to draw peers and followers to the potential benefits of high-risk FDI projects, such as high returns and first-mover advantages (Buyl, Boone and Wade, 2019; Patel and Cooper, 2014).

In view of the paradoxical nature of narcissistic personality, we recognize the potential of a negative relationship between CEO narcissism and strategic risk-taking stemming from the vulnerable aspects of grandiose narcissism. We again turn to the socio-personality and the broad psychology literature for evidence of risk-taking associated with vulnerable narcissism. Buelow and Brunell's (2018) review reveals that, although such research is sparse, studies show that vulnerable narcissism, like grandiose narcissism, is associated with risk-taking behaviours such as aggressive driving and compulsive buying. They conclude that '[o]verall, narcissists may engage in riskier

behaviours due to the potential for immediate gains at the expense of long-term negative outcomes, and any experience of negative outcomes may not be enough for the individual to learn a safer strategy in the future' (p. 237). In light of the evidence, we posit that, to protect their fragile self-esteem and to cover up self-doubt, the vulnerable aspects of grandiose narcissism would propel narcissistic CEOs to be risk-takers (Brunzel, 2021). This is also aligned with the contingent self-esteem hypothesis (Kuchynka and Bosson, 2018), which argues that narcissists mask their fragility behind an exaggerated positive self. Accruing evidence in the socio-personality research has found that fragile self-esteem is contingent on achievements in agentic domains (Kuchynka and Bosson, 2018). Thus, it is plausible to expect that narcissistic CEOs, driven by their agentic concerns, take advantage of uncertainty and information asymmetry in the high-risk environment, which leads them to pursue risky FDI.

H1: CEO narcissism is positively associated with MNEs' FDI risk-taking.

CEO narcissism, FDI risk-taking and global performance variance

The upper echelons theory holds that a CEO's personal disposition translates into managerial decisions through their leadership, which ultimately influences firm performance (Hambrick and Mason, 1984). Thus, an important research stream that examines the channels through which CEOs' personal attributes impact on firm performance is to consider firm strategy as a mediating factor (the second research stream in Liu, Fisher and Chen's, 2018 review). In the same vein, we consider FDI risk-taking as a mediator.

How an MNE's overall FDI activities (often termed 'multinationality') impact performance has received extensive attention (for reviews and meta-analysis, see Kirca *et al*., 2011, 2012; Marano *et al*., 2016; Nguyen and Kim, 2020; Yang and Driffield, 2012). FDI helps MNEs create new revenue streams through resource acquisition, cost reduction, efficiency improvement and network opportunities (Ding, McDonald and Wei, 2021). FDI can also improve performance by acting as a real options facilitator that provides growth options, switching options or put-type contraction or abandonment options within the MNE networks of subsidiaries, so that the MNE can take advantage of upside opportunities or reduce downside risk (Aabo, Pantzalis and Park, 2016). In comparison to domestic firms, FDI grants MNEs real options to react flexibly to market and environmental uncertainty. However, associated with FDI activities is increased exposure to institutional, financial and macroeconomic risks. There is also increased complexity in organization structure and management systems, which increases coordination and governance costs and the risk of losing strategic control (Hitt *et al*., 2006). The theoretical debates have led to extensive empirical searching for the linear and non-linear relationships between multinationality and MNE performance.

In view of the theoretical debates and empirical evidence, we posit that FDI in high-risk countries is associated with extreme performance of MNEs. High-risk FDI opens up the potential for high returns (Buckley *et al*., 2018), which may deliver extreme positive performance. However, the costs associated with FDI projects in high-risk countries can also be significant. The ambiguity and complexities of local regulatory frameworks pose a threat to MNEs' proprietary intellectual assets, encourage competitors' opportunism and increase transaction costs of local subsidiaries (Castaldi *et al*., 2019; Gaur *et al*., 2019). Ill-judged decisions on local operations and management may imperil the survival of these subsidiaries and cause significant losses to the MNE. Thus, FDI risk-taking may deliver extreme negative performance. Taken together, the potential for extreme positive and extreme negative performance outcomes indicates large performance variance (Chatterjee and Hambrick, 2007).

Performance variance is the quintessential 'enduring zone' outcome because it is observed over time and depends on CEOs' working relationships with their peers and followers. Following the contextual reinforcement model that both benefits and costs associated with CEO narcissism are pronounced in this zone (Campbell and Campbell, 2009), it is plausible that FDI risk-taking by narcissistic CEOs may result in MNEs experiencing high performance variability. Taking these arguments together with the discussions in the above sections on CEO narcissism and firm performance and CEO narcissism and FDI risk-taking, we hypothesize that CEO narcissism is positively associated with FDI risk-taking, which results in large performance variance.

H2: FDI risk-taking positively mediates the positive association between CEO narcissism and MNEs' global performance variance.

The moderating effects of BGA

BGs have three defining features: network structure, director interlocks and internal markets, which have implications for MNE strategy and performance (for reviews, see Carney *et al*., 2011, 2018; Holmes *et al*., 2018; Khanna and Yafeh, 2007). First, although affiliates are not part of strict hierarchies, they are attached more closely to each other than between standalone firms through business and social networks (Carney *et al*., 2018; Khanna and Rivkin, 2001). Second, BGs often have complex corporate governance mechanisms, consisting of interlocking directors and multiple power centres. Many of the directors of affiliates are family members of the controlling shareholders (Aggarwal, Jindal and Seth, 2019; Purkayastha, Manolova and Edelman, 2018). Third, affiliates can utilize internal markets within the BG for business operations, which allows them access to resources including capital, labour, knowledge, raw materials and intermediate products (Gaur and Kumar, 2009; Khanna and Yafeh, 2007).

The role of BGA in risk-taking is theoretically complex. On the one hand, BG-related benefits could facilitate risk-sharing (Khanna and Yafeh, 2005). If an investment opportunity seems risky, affiliates that belong to the same BG may invest jointly or provide cheaper (than market rate) finance through the internal capital market, consequently spreading the risk between group members (Khanna and Yafeh, 2007). BGA thus fulfils an insurance function, allowing affiliates to weather higher risks and secure high-risk, high-return opportunities (Castaldi *et al*., 2019). Risk-sharing confers strategic dynamism in affiliates and incentivizes them to move out of their comfort zone and become risk-takers (Chittoor, Aulakh and Ray, 2019; Gaur *et al*., 2019). On the other hand, BGA could limit the CEO's ability to undertake risky moves if decisions require vetting by a broader group of decision-makers in the BG. Accordingly, the literature has examined the link between BGA and risk-taking. The review of Wu, Wei and Wang (2021) shows overall positive effects of BGA on internationalization.

In the context of Asian business systems, risk-taking of affiliates is reinforced further, in line with the 'cushion hypothesis' which argues that individuals in socially collectivist cultures are more likely to take risks compared to those in socially individualist cultures (Hsee and Weber, 1999). This reasoning centres around the principle that, in socially collective countries, family or other in-group members, such as BG affiliates, readily step in to help out those who encounter losses after making risky choices. Therefore, collectivism acts as a cushion against possible losses. This hypothesis has received empirical support in the existing literature (e.g. Czerwonka, 2019; Fan and Xiao, 2006; Illiashenko, 2019).

Building on the 'cushion hypothesis', we posit that BGA further increases narcissistic CEOs' proclivity to pursue FDI risk-taking. First, in the context of BGs, the motivational elements of narcissism fuel narcissists to undertake even more risky strategies to stand out and attain positive acclaim from their BG peers. Key characteristics of BGs, including the interconnected network structure and director interlocks, offer CEOs of affiliates formal and informal mechanisms to network with each other. In such a setting, their strategic decisions influence and are influenced by their social and professional relationships (Tang, Mack and Chen, 2018). As the strategies of individual CEOs are visible to each other, FDI offers a means for narcissistic CEOs to gain reputation within the BGs (Mukherjee, Makarius and Stevens, 2018). From the resource perspective, BGA allows for more risk-taking. The BG provides a 'cushion' of resources, including increased availability of internal network resources (Gaur and Kumar, 2009; Khanna and Rivkin, 2001; Purkayastha, Kumar and Lu, 2017; Purkayastha, Manolova and Edelman, 2018). Also, BGA, especially when connected to family ownership and interlocking directorships, may increase CEOs' social capital. As many of the directors of affiliates are family members of the controlling shareholders, if the CEOs are family members or being recruited on the basis of connections with the controlling families, which is often the case in the Asian context such as South Korea (Lee and Gaur, 2013), this arrangement gives the CEOs and the directors a similar social background. Zhu and Chen (2015b) show that CEO narcissism leads to more risk-taking when directors are more favourably disposed towards the CEO.

H3: The positive association between CEO narcissism and MNEs' FDI risk-taking is strengthened when the MNE is affiliated with a BG.

On the performance front, BGA may moderate the extreme outcomes of narcissistic CEOs' risk-taking. From the resource perspective, BGA can be expected to weaken the positive effect of FDI risk-taking on global performance variance. The network structure and shared internal markets in BGs facilitate affiliates' access to tangible resources, including financial resources in the form of cross-shareholding and dividends, loans and shared creditworthiness and labour resources through sharing recruitment, training and job transfers at both junior and senior levels (Belenzon and Tsolmon, 2016; Chang and Hong, 2000). BGs also formalize and stabilize channels for information exchange and experience sharing (Gaur *et al.*, 2019; Lamin, 2013). These internal systems buffer BG members from external market failures. BGA also provides intangible resource benefits, such as BGs' superior visibility and reputation (Mukherjee, Makarius and Stevens, 2018; Wu, Wei and Wang, 2021). Affiliates can signal their credibility in business transactions based on the group's reputation, which is often greater than that of their own individually. BGA imposes on affiliates the responsibility of other group members, consequently, high-performance affiliates may have to absorb the losses of underperforming ones, while surplus resources of affiliates may be transferred to other affiliates. Therefore affiliates, in comparison to standalone firms, can better absorb operational and commercial risks in international ventures and match resources to smooth out the performance variability associated with FDI risk-taking (Kim, Kim and Hoskisson, 2010; Purkayastha, Kumar and Lu, 2017). Consequently, the effects of FDI risk-taking on global performance variance can be attenuated through MNEs' internal resource transfers.

It is possible that BGA exacerbates the positive effect of FDI risk-taking on global performance variance. For example, the network structure and director interlocks promote rent-seeking and tunnelling, which means controlling shareholders moving profits from firms in which they have low cash-flow rights to those in which they have high cash-flow rights. This causes some affiliates to be better placed than others in exerting influence across interconnected firms and negotiating favourably to support their strategic initiatives (Gaur *et al.*, 2019; Holmes *et al.*, 2018; Khanna and Rivkin, 2001). Therefore, BGA may make performance effects associated with FDI risk-taking stronger or weaker. However, as shown by Khanna and Yafeh (2005: 311), 'group-affiliated firms exhibit significantly lower profit volatility' in the emerging markets, including South Korea. We therefore hypothesize the negative moderating effects of BGA.

H4: The positive association between MNEs' FDI risk-taking and MNEs' global performance variance diminishes when the MNE is affiliated with a BG.

Based on our above discussions of the hypotheses, we propose the conceptual model in Figure 1.

Methodology

Data, sample and variables

We collected data on Korean MNEs that are publicly traded on the Korean Stock Exchange (KSE) and undertook outward FDI during 2006–2016.[2] In line with the data-compiling methods of previous studies on Korean MNEs (Chung *et al.*, 2015; Gaur *et al.*, 2019), we collected data from multiple sources, including: (1) financial and accounting information from the databases of KISLINE[3] and KISVALUE[4]; (2) FDI information from the Korean Ministry of Strategy and Finance (KMSF) database and the Korea Listed Companies Association (KLCA); and (3) the archives of each firm's annual reports in the Korea Information Service (KIS) and Data Analysis, Retrieval and Transfer System (DART) of the Korea Financial Supervisory Service.

We identified CEO information – such as age, gender, overseas experience and education – from the Korea Listed Companies TMT Directory, KISLINE and *Maekyung* Company Yearbooks. We generated a narcissism index for each CEO based on data from: (1) the Korea Listed Companies TMT Directory from the KLCA; (2) KISLINE from the Korea Investors Service; (3)

[2]This is the most comprehensive sample for which we could collect complete information about CEO narcissism.

[3]https://www.kisline.com/

[4]https://www.kisvalue.com/web/index.jsp

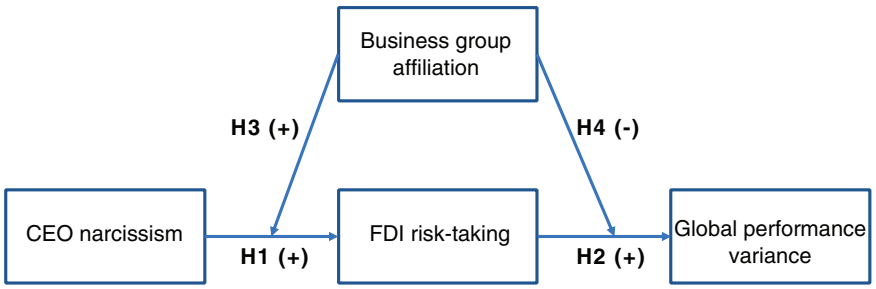

Figure 1. The proposed model [Colour figure can be viewed at wileyonlinelibrary.com]

Maekyung Company Yearbooks from *Maeil Business Newspaper*; (4) each firm's annual reports digitalized and provided by KIS and DART; and (5) each CEO's interview records. The interview transcripts (conducted by journalists or financial analysts) were provided by Korean news media companies, including *The Chosun Ilbo*, *Dong-A Ilbo*, *JoongAng Ilbo*, *Hankook-Ilbo*, *Hankyoreh*, *Kyunghyang Shinmun*, *Kukmin Ilbo*, *Maeil Business Newspaper*, *Korea Economic Daily* and *Herald*, among others.

We obtained business group information from the Korea Fair Trade Commission (KFTC). We identified high-risk countries based on country risk data obtained from the *International Country Risk Guide* (ICRG), which has been used widely in prior empirical research (e.g. Brockman, Rui and Zou, 2013; Lu *et al*., 2014). After merging all the data from multiple sources (see Table 2) to construct variables at firm, industry, business group and country level, and removing missing values, our final sample includes 149 Korean MNEs led by 295 CEOs.[5] The longitudinal panel dataset contains 1,462 firm-year observations.

In line with existing studies that link CEO characteristics to risk-taking and firm performance (e.g. Adams and Jiang, 2017; Delgado-García, De La Fuente-Sabaté and De Quevedo-Puente, 2010; Hsu, Chen and Cheng, 2013), we include control variables of CEO demographic variables and firm-level variables. All the variables except CEO narcissism are described in Table 2, and the CEO narcissism index is discussed in the Appendix.

Statistical modelling

In order to reduce the likelihood of reverse causality, the dependent variable was measured at t, the mediating variable at t−1 and the independent variable at t−2. To lessen the possibility of omitted variables, we introduced industry and year fixed effects to account for the potential impact of unobserved industrial heterogeneity and time variations. Industry dummies are defined at the two-digit level.

To address sample selection bias, we adopted the Heckman two-step procedure (Bascle, 2008; Heckman and Navarro-Lozano, 2004). We first estimated a probit model to predict whether CEO narcissism would be included by using an instrumental variable. Following the common practice of employing an instrument that is the 'sector average' of the variable that needs to be instrumentalized (e.g. Birhanu, Gambardella and Valentini, 2016), we computed the average of CEO narcissism for each sector. This instrument is valid when it meets two main requirements: relevant (correlated with the potentially endogenous variable in the first stage) and exogenous (not correlated with the error term of the second-stage generalized least squares regression) (Murray, 2006). Second, the non-selection hazard (i.e. the inverse Mills ratio) generated by the first-stage model was included in the second stage, which was estimated following the procedures suggested by Muller, Judd and Yzerbyt (2005) to test the simultaneous mediation and moderation effects.

We used PROCESS macro version 3.4.1 developed by Hayes (2017) for empirical analysis. The macro is a regression path modelling tool that studies the mediation model and the moderated mediation model by using model #4 and model #58 of PROCESS, respectively. It has recently been used in social sciences, business and

[5]In cases of multiple CEOs in one MNE, we distinguished representative CEOs at the headquarters based on annual reports and company websites.

Table 2. Variable descriptions

Variable	Description
Dependent variable: MNE's global performance variance	Following previous studies (Brockman, Rui and Zou, 2013; Chatterjee and Hambrick, 2007), for each year we first calculated the industry average return on assets (ROA) at the five-digit industry level. ROA is the ratio of net income to total assets. Industrial classification follows the Korean Standard Industrial Classification code. We then computed the absolute difference between an MNE's ROA and the annual industry average. We focus on deviations from central ROA tendencies in the industry, because this approach addresses the concern that performance is driven by industry effects, in addition to firm-specific factors (Hawawini, Subramanian and Verdin, 2003; Makino, Isobe and Chan, 2004).
Mediating variable: FDI risk-taking	Applying the approach of Allen and Pantzalis (1996) to FDI risk-taking, we measure FDI risk-taking breadth by the number of high-risk countries that an MNE selected as FDI locations; and FDI risk-taking depth by the volume of FDI in these high-risk countries. We use the entropy measure that takes into account the two dimensions (Hitt, Hoskisson and Kim, 1997; Robins and Wiersema, 2003):FDI risk-taking$_t$= $\sum_{i=1}^{N} P_{it}\ln(\frac{1}{P_{it}})$ where P_{it} is FDI share in the ith high-risk host country undertaken by the MNE in year t and $\ln(\frac{1}{P_{it}})$ is the weight to the ith country. We identified high-risk countries based on country risk data obtained from the ICRG. ICRG contains 12 different factors for country risk, with high values implying low risk (range 0–12). Using the mean score of 12 factors, we ranked the countries to determine a list of countries that faced high levels of risk. A host country in year t is classified as high risk if its ICRG score is below the mean score of that year.
Moderating variable: Business group affiliation (*BGA*)	This is a binary variable, taking the value 1 if an MNE is affiliated with one of the 30 largest chaebols in the KFTC list of the largest Korean BGs; and 0 otherwise (Kim, Kim and Hoskisson, 2010).
Control variables:	
CEO age	CEO age is measured in years. Older CEOs are more likely to have more international experience, which may impact FDI risk-taking and global performance variance (Chittoor, Aulakh and Ray, 2015; Oesterle, Elosge and Elosge, 2016; Zhu and Chen, 2015a).
CEO gender	CEO gender corresponds to 1 for male CEOs and 0 for female CEOs. There can be other types of gender, but officially Korea uses the concept of a binary gender (male vs female). As we use the secondary data, in our study the gender was coded as binary. Some firms' organizational culture may be salient of sexism (Chattopadhyay, George and Shulman, 2008). Female CEOs have higher levels of task and emotional conflicts with their employees and/or board members. This may affect their decision-making and subsequently impact FDI risk-taking and global performance variance.
CEO overseas experience	CEO overseas experience was measured by a CEO's formal work experience (in years) outside of Korea. Prior work and educational experiences can affect CEOs' interests, cognitive abilities and global orientation, thereby equipping them to better recognize opportunities in the global market and reduce their risk perception (Bouquet, Morrison and Birkinshaw, 2009; Chittoor *et al.*, 2015; Garcia-Garcia, Garcia-Canal and Guillen, 2017). Therefore, CEOs' overseas work and education experience can influence FDI risk-taking and MNEs' global performance variance.
CEO overseas education	CEO overseas education was measured by a CEO's formal education (in years) outside of Korea. See above for rationale for inclusion.
Firm age	Firm age is measured by the logarithm of age of the firm (in years) after its initial establishment. The inclusion of all firm-level variables follows existing studies (e.g. Bouquet, Morrison and Birkinshaw, 2009; Chang and Rhee, 2011; Garcia-Garcia, Garcia-Canal and Guillen, 2017; Nadkarni and Herrmann, 2010; Oesterle, Elosge and Elosge, 2016; Zhu and Chen, 2015a, 2015b). They capture the resources that MNEs could leverage to handle complicated international operations and benefit from economies of scale and scope.
Firm size	Firm size is measured by the logarithm of the number of total employees. See above for rationale for inclusion.
R&D intensity	R&D intensity is measured by the ratio of R&D expenditure to total sales.
Depth of international experience	Depth of international experience is measured by the logarithm of the number of years since the MNE first established a foreign subsidiary in a particular country (x) added by one, that is ln(1+x).
Breadth of international experience	Breadth of international experience is measured by the logarithm transformation of the number of countries an MNE had operations in by a given year (x) added by one, that is ln(1+x). In turn, it is expected to affect FDI risk-taking and global performance variance.

management, and health sciences research and is preferred to Baron and Kenny's (1986) procedure (Hayes, 2015; Park *et al*., 2018). We ran the mediation model to examine H2 and the moderated mediation model to examine H3 and H4. Following the suggestions of previous literature (e.g. Zhao, Lynch and Chen, 2010), we adopted a 95% confidence interval with the bootstrapped sample equalling 10,000. The bootstrap confidence interval (*Boot CI*) is considered to be superior to the Sobel test (Hayes, 2015). If the Boot CI does not contain zero, we can infer support for the moderated mediation effect.

Results

Table 3 reports descriptive statistics and a correlation matrix. An examination of correlations indicates that multicollinearity is not a severe problem.

Table 4 first presents results for the mediation model with *global performance variance* as dependent variable, *CEO narcissism* as independent variable, *FDI risk-taking* as mediator and all control variables as covariates. In Model 1, where FDI risk-taking is the dependent variable, CEO narcissism is positive and significant ($\beta = 0.067$, p = 0.000), thus supporting H1. This finding is in line with the only study on CEO narcissism and FDI (Fung *et al*., 2020). In Model 2, where global performance variance is the dependent variable, the indirect effect of CEO narcissism on global performance variance is positive and significant [a×b = 0.441, Boot SE = 0.218, 95% Boot CI = (0.012, 0.845), p = 0.043]. The standardized indirect effect of CEO narcissism on global performance variance, which is obtained by path a, indicates that one standard deviation increase in CEO narcissism produces an increase of 1.102 standard deviations on global performance variance through the indirect effect of FDI risk-taking. As the direct effect is statistically insignificant at the 10% level ($\beta = 3.160$, p = 0.109), there exists only the mediation effect (a×b). Thus, this is a full mediation model, supporting H2. This finding is different from the only study of a mediation model of CEO narcissism on global performance variance (Wales, Patel and Lumpkin, 2013), which supports a partial mediation model through entrepreneurial orientation.

Table 5 presents results for the moderated mediation model by including an additional moderator, BGA. Model 1 shows the direct positive effect of CEO narcissism ($\beta = 0.038$, p = 0.003) on FDI risk-taking. The moderation effect of BGA on the CEO narcissism and FDI risk-taking relationship is positive [$a_3 = 0.034$, SE = 0.015, 95% CI = (0.005, 0.063), p = 0.024] with a 95% CI excluding zero, thus supporting H3. In Model 2, the moderation effect of BGA on the relationship between FDI risk-taking and global performance variance is negative and significant ($\beta = -29.300$, SE = 13.560, 95% CI = [−55.878, −2.722], p = 0.031). This finding indicates the indirect effect of CEO narcissism on global performance variance through FDI risk-taking being moderated by BGAs. Thus, H4 is supported. We ran 10,000 bootstrap samples for percentile bootstrap CIs by using PROCESS model #58 and find that the index of moderated mediation, that is the difference between conditional indirect effects, is 1.614 [Boot SE = 0.544, Boot CI = (0.566, 2.730), p = 0.003]. Moreover, the indirect effect of BGA in Model 1 is 0.422 [Boot SE = 0.206, Boot CI = (0.019, 0.834), p = 0.041] and the indirect effect of BGA in Model 2 is −1.192 [Boot SE = 0.595, Boot CI = (−2.148, −0.021), p = 0.045]. These results provide further evidence supporting BGAs' moderating effects in the moderated mediation model. Figures 2 and 3 graphically illustrate the interaction effects for H3 and H4, respectively.

Finally, in relation to control variables, Tables 4 and 5 show fairly consistent findings. CEO gender, overseas education, firm size, R&D intensity, breadth of international experience and depth of international experience all have a significantly positive impact on FDI risk-taking (Model 1). CEO age and depth of international experience[6] have a positive impact, but CEO overseas experience, firm size and R&D intensity have a significantly negative impact on global performance variance (Model 2). It is worth emphasizing the importance of controlling for 'narcissistic supply'. As mentioned above, we followed Aabo, Hoejland and Pedersen (2021), controlling for 'narcissistic supply' by adding the interaction term *CEO narcissism* × *Firm size* in our estimations. Although this term is statistically insignificant in Model 1, it is negative and significant in Model 2 in both Tables 4 and 5. The first set of results is at odds with

[6]The variable is statistically significant in Table 4, but marginally insignificant in Table 5.

Table 3. Descriptive statistics and correlations

Variables		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	CEO age	56.63	9.27												
2	CEO gender	0.96	0.24	0.15*											
3	CEO overseas experience	5.45	5.55	0.10*	0.03										
4	CEO overseas education	5.21	3.52	0.11*	0.06*	0.05									
5	Firm age	4.59	0.87	0.09*	0.04	0.27*	0.07*								
6	Firm size	9.91	2.09	0.00	0.08*	0.06*	0.00	0.05							
7	R&D intensity	2.22	2.06	0.07*	0.02	0.01	−0.03	0.05	0.44*						
8	Breadth of international experience	1.87	0.45	−0.05	−0.07*	0.03	−0.04	0.09*	0.20*	0.18*					
9	Depth of international experience	2.40	0.27	−0.04	−0.08*	0.04	−0.02	0.08*	0.07*	0.14*	0.49*				
10	CEO narcissism	0.06	0.65	−0.03	0.01	−0.04	−0.05	0.10*	0.13*	0.19*	0.23*	0.23*			
11	BGA	0.71	0.46	0.10*	0.21*	0.10*	0.08*	0.11*	0.09*	0.10*	0.24*	0.19*	0.17*		
12	FDI risk-taking	0.79	0.36	0.17*	0.26*	0.02	0.25*	0.06*	0.17*	0.17*	0.49*	0.45*	0.19*	0.20*	
13	Global performance variance	28.58	44.13	0.07*	−0.06*	−0.16*	−0.03	−0.04	−0.01	−0.05	0.04	0.06*	0.04	−0.7*	0.12*

Notes: CEO age, CEO overseas experience, CEO overseas education and firm age measured in years. CEO gender: 1 for male CEOs; 0 for female CEOs. Firm size: the logarithm of the number of total employees. R&D intensity: the ratio of R&D expenditure to total sales. Depth of international experience measured by the logarithm transformation of the number of years since the MNE first established a foreign subsidiary in a particular country-year (x) added by one, that is ln(1+x). Breadth of international experience measured by the logarithm transformation of the number of countries an MNE had operations in by a given year added by one. BGA: 1 = MNE affiliated with one of the 30 largest Korean chaebols; 0 = MNE not affiliated with one of the 30 largest Korean chaebols. For the measures of CEO narcissism, FDI risk-taking and global performance variance, see detailed discussion in the text.
*$p < 0.05$.

Table 4. Results of the mediation model analysed by PROCESS macro

	Model 1 (DV: mediator)			Model 2 (DV: global performance variance)		
	FDI risk-taking			ROA extremeness		
	β	SE	p	*β*	SE	p
CEO age (year)	0.000	0.001	0.757	0.268	0.131	0.042
CEO gender	0.199	0.020	0.000	−7.194	5.756	0.212
CEO overseas experience (year)	0.000	0.001	0.920	−1.186	0.222	0.000
CEO overseas education (year)	0.004	0.001	0.001	−0.374	0.373	0.316
Firm age (log of year)	0.005	0.005	0.310	−2.243	1.435	0.118
Firm size (log of total employee number)	0.011	0.002	0.000	−1.420	0.683	0.038
R&D intensity	0.005	0.002	0.019	−1.235	0.634	0.052
Breadth of international experience (log)	0.765	0.018	0.000	8.121	7.590	0.285
Depth of international experience (log)	0.079	0.027	0.004	13.469	7.637	0.078
CEO narcissism × Firm size	−0.003	0.003	0.281	−1.371	0.817	0.094
Inverse Mills ratio	−0.049	0.026	0.060	0.221	0.104	0.034
Industry dummy		Included			Included	
Year dummy		Included			Included	
CEO narcissism	*0.067*	*0.013*	*0.000*	*3.160*	*1.970*	*0.109*
BGA	*0.020*	*0.009*	*0.035*	*−7.137*	*2.652*	*0.007*
FDI risk-taking				*20.138*	*7.355*	*0.006*
Constant	−0.498	0.057	0.000	−6.170	16.251	0.704
R^2	3.818			3.210		

Note: N = 1,462.
Unstandardized coefficients reported; standard errors in parentheses. Two-tailed test.

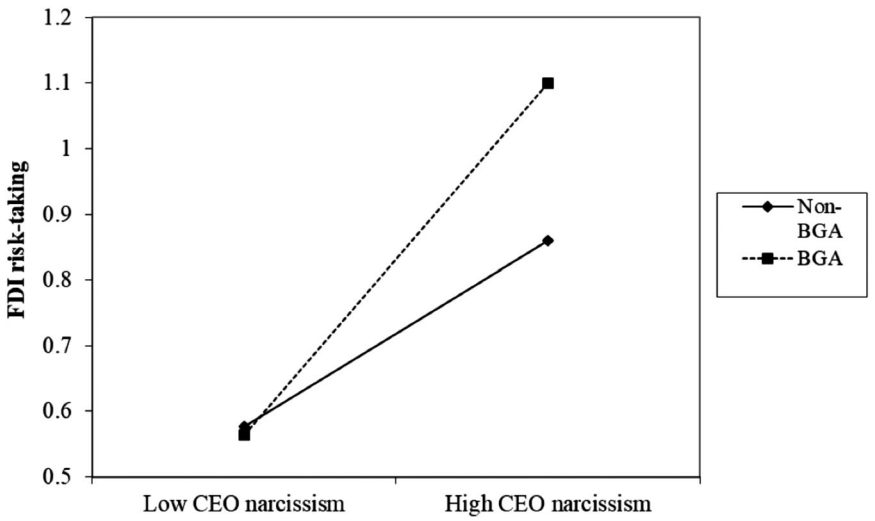

Figure 2. The impact of the interaction between CEO narcissism and BGA on FDI risk-taking

those of Aabo, Hoejland and Pedersen (2021), suggesting that within the context of Korean MNEs, narcissistic CEOs' risk-taking is not significantly influenced by internal narcissistic supply. However, as performance is the quintessential enduring zone outcome, observed over time, internal narcissistic supply somewhat moderates narcissistic CEOs' non-risk-taking decisions, helping to smooth performance variability.

We also conducted robustness checks using sales-based measures for dependent variables and replacing ICRG data with POLCON data to identify high-risk host countries. We also substituted the mean values with the median values of ICRG

Table 5. Results of the moderated mediation model analysed by PROCESS macro

	Model 1 (DV: mediator)			Model 2 (DV: global performance variance)		
	FDI risk-taking			ROA extremeness		
	β	SE	p	*β*	SE	p
CEO age (year)	0.000	0.000	0.765	0.259	0.132	0.050
CEO gender	0.198	0.020	0.000	−6.848	5.777	0.236
CEO overseas experience (year)	0.000	0.001	0.922	−1.186	0.222	0.000
CEO overseas education (year)	0.004	0.001	0.001	−0.356	0.374	0.341
Firm age (log of year)	0.005	0.005	0.308	−2.221	1.435	0.122
Firm size (log of total employee number)	0.011	0.002	0.000	−1.437	0.684	0.036
R&D intensity	0.005	0.002	0.019	−1.251	0.635	0.049
Breadth of international experience (log)	0.765	0.018	0.000	8.232	7.592	0.478
Depth of international experience (log)	0.078	0.027	0.004	12.501	7.759	0.107
CEO narcissism × Firm size	−0.003	0.003	0.261	−1.404	0.818	0.086
Inverse Mills ratio	−0.048	0.026	0.065	0.213	0.105	0.043
Industry dummy		Included			Included	
Year dummy		Included			Included	
CEO narcissism	*0.038*	*0.013*	*0.003*	*3.157*	*1.977*	*0.111*
BGA	*0.020*	*0.009*	*0.039*	*−12.905*	*9.790*	*0.188*
CEO narcissism × BGA	*0.034*	*0.015*	*0.024*			
FDI risk-taking				*40.946*	*15.548*	*0.009*
FDI risk-taking × BGA				*−29.300*	*13.560*	*0.031*
Constant	−0.495	0.057	0.000	−10.969	17.606	0.533
R^2	4.090			3.525		

Note: N = 1,462.
Unstandardized coefficients reported; standard errors in parentheses. Two-tailed test.

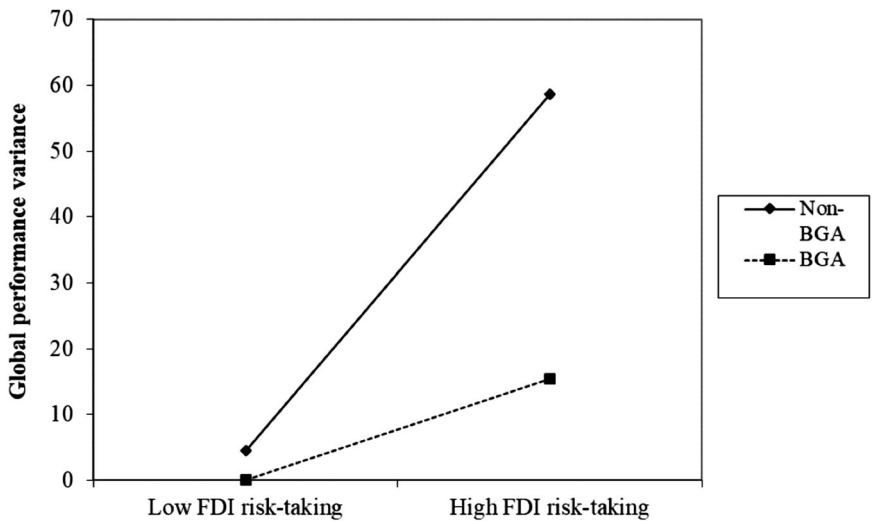

Figure 3. The impact of the interaction between FDI risk-taking and BGA on global performance variance

and POLCON to determine high-risk host countries. All estimation results were qualitatively similar to Tables 4 and 5.[7]

[7]Due to space constraints, these results are not presented here but are available upon request.

Discussion and conclusion

Theoretical contribution and practical implications

This study examines FDI risk-taking and BGA as key mechanisms through which CEO

narcissism influences performance in the context of AEMNEs. We based our theoretical logic on integrating the contextual reinforcement model of narcissism (Campbell and Campbell, 2009) and the cushion hypothesis (Hsee and Weber, 1999). Our results show that FDI risk-taking is an important mediator of the performance effects of CEO narcissism in the context of AEMNEs. In addition, our results provide evidence of BGA as a moderator of the influence of CEO narcissism on FDI risk-taking and global performance variance: it reinforces the positive effect of CEO narcissism on FDI risk-taking while attenuating the negative effect of FDI risk-taking on global performance variance. In the following we shall discuss the implications of our findings to future research and practice.

On the theoretical side, taken together, our findings advance understanding of the complex role of CEO narcissism in AEMNEs, which offers important contributions to both CEO narcissism and IB literatures as elaborated below. While there has been substantial research attention on the concept of CEO narcissism (Cragun, Olsen and Wright, 2020) and an acknowledgement that contextual conditions may influence the consequences of CEO narcissism, such considerations have been very limited in the FDI and MNE literatures. Yet the context of FDI in MNEs brings imperative aspects that have implications for the role of CEO narcissism. Therefore, an important theoretical contribution of this study is to bring attention to contextual factors that influence the role of CEO narcissism in the context of FDI and MNEs. Our findings of CEO narcissism and global performance variance, mediated by FDI risk-taking, are in line with the view that CEO narcissism induces increased risk-taking (Buyl, Boone and Wade, 2019; Chatterjee and Hambrick, 2007; Cragun, Olsen and Wright, 2020), which we further link to increased variance in global performance. The risk-taking attitude of narcissistic CEOs increases the global performance variance of MNEs, as narcissistic CEOs' cognitive and motivational framework influences their decision-making and ultimately results in MNEs experiencing more volatile performance. However, the context plays an important role – as demonstrated by BGAs – as a moderator of the effects.

Furthermore, the study shows the importance of theorizing on the effects of CEO narcissism in the Asian emerging market context, where business systems have unique features in terms of the considerable influence of BGs. Our findings show that integrating the context of BGs can help to understand how BGs function as a 'cushion' – extenuating the influence of CEO narcissism on FDI risk-taking, and through internal resource transfer attenuate the extreme effects on AEMNE performance variance. Despite the general recognition of BGs being an important context affecting strategy and performance (Holmes *et al*., 2018), this has not received much attention in CEO narcissism research. At best, it has featured as a control variable in Agnihotri and Bhattacharya (2019), who examined Indian firms' internationalization and contend that 'their influence on narcissistic tendencies of CEOs could also be examined in future studies' (p. 912). We show the importance of the interplay of narcissism with BGA in influencing the impact of CEO narcissism, which contributes by highlighting an important boundary condition of narcissism in the Asian emerging market context.

This paper offers implications for managerial practice. There are both bright and dark sides associated with dark CEO traits such as narcissism (Judge, Piccolo and Kosalka, 2009). Narcissistic CEOs of MNEs are more likely to engage in high-risk FDI strategies, which likely result in more global performance variance. If the board prefers a moderate risk-taking approach in FDI, they may want to select CEOs who are less narcissistic or put in place corporate governance processes and procedures that curb CEO risk-taking tendencies. Interestingly, in a BG context, narcissistic CEOs – though even more likely to engage in risk-taking FDI strategies – have less impact on MNE global performance variance, which may be preferred by firms that have a preference for persistent profitability instead of high volatility (Wales, Patel and Lumpkin, 2013).

Limitations and suggestions for future research

It is important to consider the limitations of our study when interpreting and generalizing the results. First, we followed previous studies in using publicly available, unobtrusive measures to operationalize CEO narcissism (Buyl, Boone and Wade, 2019; Chatterjee and Hambrick, 2007, 2011; Zhu and Chen, 2015a, 2015b). Although this has been the most frequently used and most validated measurement type for CEO narcissism, it has notable limitations (see Cragun, Olsen and Wright, 2020

for a detailed discussion). For example, one of our indicators of CEO narcissism, a CEO's use of first-person singular pronouns in interviews, may include interview bias – since the interviews could have different objectives and institutional contexts at different times. Also, our approach does not depict potential sub-dimensions of CEO narcissism. Future studies using direct measures or neuroscience methods may help reaffirm our findings. For example, a significant majority of social–personality research uses long-established measures – narcissistic personality inventory and hypersensitive narcissism scale (Campbell *et al.*, 2011; Jauk *et al.*, 2017; Krizan and Herlache, 2018). Jauk and Kanske (2021) also called for the use of neuroscience to understand narcissism.

Second, we addressed endogeneity and causality issues by using statistical remedies as suggested in the literature (Bascle, 2008; Reeb, Sakakibara and Mahmood, 2012), such as including CEO-level and firm-level control variables, industry and year fixed effects, instrumental variables and time-lagged variables. However, we acknowledge that establishing cause and effect is a challenge in any non-experimental research (Harvey, 2017; Reeb, Sakakibara and Mahmood, 2012), and that statistical remedies only provide a partial solution. Theoretically, upper-echelon theory (Hambrick and Mason, 1984) conceptualizes CEO traits as partial predictors of organizational outcomes. Accordingly, our theoretical logic is based on the assumption of at least some level of managerial discretion in FDI decisions. Yet it should be noted that the causal relationships of upper-echelon theory can be complex. Hambrick and Mason (1984: 197) note that CEOs may be chosen specifically because they have the desirable temperament 'to carry out actions hoped for by the board of directors or other controlling parties'. Therefore, in line with Hambrick and Mason's (1984) recommendations, interpretation of the results should be tempered by careful attention to complex causalities of CEO traits. Future research may incorporate potential antecedents of CEO narcissism, for instance in terms of the firm's and industry's historical risk profiles and the board's characteristics, which help to shed further light on the causalities. Furthermore, direct comparisons across multiple countries or regions could help to highlight the general and context-specific mechanisms of CEO narcissism in IB, while also helping to further establish causality (Reeb, Sakakibara and Mahmood, 2012). Last but not least, rich qualitative studies may help to further identify the behavioural mechanisms behind our hypothesized associations while shedding additional light on the causalities.

Finally, our research setting is based on Korean MNEs. Although Asian emerging economies share such features as strong BGs and collectivist culture, there may be important differences. The institutional setting should be kept in mind when comparing our results with those derived in other emerging market contexts, such as India (Uppal, 2020). Additionally, although our findings align and extend those obtained in Western contexts (Chatterjee and Hambrick, 2007; Wales, Patel and Lumpkin, 2013), BGs are less prevalent in the Western context. Nevertheless, our study paves the way for other studies examining the unique boundary conditions in the context of Asian emerging markets and encourages scholars to consider how similar contingencies might be identified theorizing about the impact of CEO narcissism in the context of Western MNEs.

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