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CEO leadership and board decision processes in family-controlled firms: comparing family and non-family CEOs

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Abstract This study examines the impact of board decision processes on board task performance in family firms, contingent upon the presence of a family or a non-family CEO. Bridging insights from behavioral research on boards and the upper echelons perspective, it is suggested that influence of board decision processes on performance benefits from different aspects of CEO attributes. To the extent that family and non-family CEOs exhibit different cognitive frames, it is hypothesized that board processes contribute differently to board task performance, depending on whether a family or a non-family CEO is at the helm. An empirical analysis of a sample of Italian family firms provides support for two hypothesized effects: Use of knowledge and skills is more beneficial for board task performance under a non-family CEO; cognitive conflict is more beneficial under a family CEO. Contrary to expectations, the effects of effort norms do not differ between the two settings. This study contributes to research on both boards and family firms; new opportunities for advancements are discussed.

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1 Introduction

Research on family firms has recently begun to explore the role of board behaviors in an attempt to overcome mixed findings from research based on board demographic characteristics (Bammens et al. 2011). Building on the model of Forbes and Milliken (1999), published studies explicitly relate board task performance (i.e., the degree to which boards succeed in performing their tasks) to board decision processes, such as the use of knowledge and skills, cognitive conflict and effort norms.

Though these behavioral studies have shed light on board behaviors, some aspects warrant further examination. By applying standard models of board behaviors, scholars generally predict that higher levels of board processes naturally and directly translate into better decision outcomes regardless of CEO competence or personal characteristics. Implicit in this perspective is the assumption that boards are constituted by equally powerful and influential individuals with similar goals and attributes. Nonetheless, it is generally accepted that CEOs exert a major influence over boards (Mace 1986), beginning with the preparation and submission of

strategic proposals to board meetings. Thus, it is reasonable to expect that CEO leadership will affect board behaviors and performance pertaining to strategic issue processing. In this regard, drawing from the upper echelons theory (Hambrick 2007), scholars of family firms acknowledge that CEO identity (i.e., family vs. non-family) constitutes a major distinction in corporate leadership, explaining corporate strategy and performance differentials among family firms (Miller et al. 2013). To the extent that family and non-family CEOs exhibit different cognitive frames, it is reasonable to expect that board behaviors and performance pertaining to strategic issue processing vary depending on CEO identity.

Based on these considerations, this study examines how the impact of board processes on task performance is moderated by family versus non-family CEOs. This inquiry is important for two reasons. First, while existing research has found that higher levels of board processes are conducive to better decision outcomes (Forbes and Milliken 1999), the conditions under which these decision processes are more or less effective remain to be examined. Under what conditions do decision-making processes really make a difference, and what causes their effects to be stifled? This inquiry may explain why early behavioral research reports mixed findings, with some studies reporting, for instance, a positive impact (Zattoni et al. 2015) and others reporting a negative impact (Minichilli et al. 2012) of cognitive conflict on board task performance. The second reason for such an inquiry concerns the role of context and behavior. Wright et al. (2014) note that scholars in family firms have only recently begun to recognize the role of context and that how behaviors vary across family firm settings is far from being understood. By examining board processes under family and non-family CEOs, this inquiry can help explain how behaviors can be conducive to positive outcomes in different contexts.

Overall, this article proposes that the effects of board decision processes are influenced by CEO identity. Whereas previous research maintains that higher levels of board processes naturally and directly enhance board task performance, this study posits that board processes have varying effects on board performance contingent upon whether a family or non-family CEO operates the firm.

We test this idea using a sample of 104 Italian family firms surveyed in 2004. The empirical findings support the hypothesized effects: depending on CEO identity, decision processes exhibit varying effects on task performance. The use of knowledge and skills is especially beneficial under a non-family CEO, while cognitive conflict is particularly beneficial when a family CEO manages the business. Contrary to expectations, the effects of effort norms do not vary significantly in these two settings.

This article makes several contributions to the existing research on boards and family firms. First, while scholars generally focus on the relative importance of demography versus behaviors (Forbes and Milliken 1999), this study proposes that integrating both perspectives improves the understanding of board task performance; thus, it illuminates the influence of CEOs on board behaviors pertaining to decision making. Second, by showing that the relation between decision processes and decision outcomes changes according to the governance context, this study answers recent calls to examine the linkages between behavior and context (Wright et al. 2014). Furthermore, the study advances behavioral research on family firm boards by outlining how factors that are idiosyncratic to family firms, such as CEO affiliation with the family, represent valuable conceptual bases for new theories and for advancing conceptual models of board behaviors. Finally, this study contributes to family firm research on the role of CEO identity by infusing behavioral insights on the role of CEOs in the strategy and performance of family businesses.

2 Theoretical background

An excellent literature review by Bammens et al. (2011) extensively examines the research on family firm boards, concluding that the bulk of these studies have yielded inconclusive evidence on whether boards make significant contributions to firm performance. Bammens et al. (2011) outline how an excessive reliance on board composition may explain these mixed results; these scholars call for new behavioral research on decision-making processes as an alternative and potentially fruitful avenue for advancing our understanding of family firm boards.

This commentary lies at the core of one of the most important and debated issues in management research, i.e., whether valuable inferences can be derived by examining observable structural characteristics, such

as board composition, or whether direct observations of behaviors and decision-making processes are needed to understand board contributions to corporate outcomes.

Among early scholars, Pfeffer (1983) originally proposed that processes and behaviors account for little variation in outcomes and may thus be overlooked; a demographic approach is preferable because of its parsimony and data collection feasibility. Along the same lines as the demographic view, upper echelons theory (Hambrick and Mason 1984) has suggested that behaviors and psychological attitudes can be effectively captured by demographic proxies, such as age, tenure, affiliation and background, to predict corporate outcomes.

Challenging this view, Pettigrew (1992) noted how "great inferential leaps are made from input variables, such as board composition, to output variables, such as board performance, with no direct evidence on the processes and mechanisms which presumably link the inputs to the outputs" (1992: 171). Hence, Pettigrew (1992) called for explicit examination of board processes, giving rise to an emerging behavioral perspective (Knight et al. 1999; Smith et al. 1994). Within this behavioral stream of research, Forbes and Milliken (1999) drew from the work group literature to develop a cognitive model of boards and suggested that board task performance (i.e., the degree to which boards succeed in performing their tasks) depends on three decision processes: the use of knowledge and skills, cognitive conflict and effort norms. "Use of knowledge and skills" refers to the extent to which directors' unique knowledge and expertise is actually used in board discussions. "Cognitive conflict" refers to the presence of content-related disagreements among board members. "Effort norms" refer to the shared belief among board members that they are expected to devote considerable time and energy to board tasks. These three processes were selected from the body of literature on teams, as they address the specificities of boards characterized as "large, elite and episodic decision-making groups that face complex tasks pertaining to strategic issue processing" (Forbes and Milliken 1999: 492).[1]

This behavioral research has begun to shed light on the decision processes of family firm boards. Bettinelli (2011) finds that, in family firm boards, outside directors are perceived as more cohesive and committed than are inside directors. Other scholars (e.g., Kellermanns and Eddleston 2004) examine the antecedents of cognitive conflict in different contexts; Zona (2015) examines how board decision-making processes are influenced by board ownership and generational stages; Zattoni et al. (2015) examine how board processes change in family versus non-family firms and empirically extend their analysis to show their consequences for performance.

The demographic and behavioral perspectives are generally considered two distinct, or even competing approaches. However, the global evidence shows that both behavioral studies and demographic research offer valuable inferences about decision outcomes. For example, behavioral scholars demonstrate that board processes improve board task performance (Zattoni et al. 2015; Zona and Zattoni 2007); at the same time, demography-based research draws from the upper echelons perspective (Hambrick and Mason 1984) to demonstrate that CEO identity explains corporate strategy and performance differentials among family businesses (e.g., Miller et al. 2013).

Thus, integrating the two dimensions, i.e., board demography and processes, may lead to more insightful predictions of board task performance (Ilgen et al. 2005). Governance research recognizes that CEOs exert a major influence on boards (Mace 1986). In addition, research on the upper echelons notes that CEO cognitive "construals" (Hambrick 2007), as proxied by demographic characteristics, may explain how CEOs interpret reality, the opportunities they can envisage and the strategic views they are able to elaborate on and propose in board meetings, thus influencing decision-making outcomes. As a result, the ability of board decision processes to produce

[1] Alternative models of work groups for corporate decision making have been developed (e.g., Hambrick 2007; Carmeli et al. 2008). Hambrick (1994, 1995, 2007) proposed the concept of behavioral integration for TMTs. This model is appropriate for TMTs constantly working for their firm and captures the extent to which top executives engage in bilateral interactions with the CEO rather than working together as a team (see Hambrick 2007: 336). This model differs from boards of directors whose activities more immediately reflect the cognitive task performed by task forces. See Jackson (1992) for a discussion. Given the specific properties of boards, Forbes and Milliken (1999) explicitly draw from Jackson (1992) (Forbes and Milliken 1999: 492).

effective decisions seems to be contingent on CEOs' cognitive frames and personalities.

Leveraging insights from behavioral (Forbes and Milliken 1999) and family firm research based on upper echelons theory (Hambrick and Mason 1984), this study suggests that integrating the behavioral and demographic perspectives expands our understanding of board decision making and performance. Drawing from family firm research, it accepts that CEO identity represents a significant factor affecting decision making (Miller et al. 2013). Thus, board processes contribute to strategy making, and they do so depending on *CEO's personal attributes*: *Effective decision making flowing from board decision processes will be magnified or mitigated, depending on CEO identity*.

3 Hypothesis development

3.1 The use of knowledge and skills on family firm boards: family versus non-family CEOs

The use of knowledge and skills refers to the board's ability to tap into the knowledge and skills available to it and to apply these assets to its tasks (Forbes and Milliken 1999: 495). It relates to the behavioral dimension of social integration, which captures a group's ability to cooperate (Cohen and Bailey 1997). In particular, the use of knowledge and skills refers to the process by which members' contributions are coordinated. When this process is working well, each board member has an opportunity to infuse his/her unique and specialized knowledge and expertise into board discussions; directors build upon each other's contributions and seek to combine their insights in creative, synergistic ways (Forbes and Milliken 1999: 496). Therefore, high levels of "Use of knowledge and skills" are beneficial to all family firms.

The appointment of a non-family CEO generally corresponds to an upgrade in knowledge, competence and managerial expertise. Non-family CEOs can introduce superior managerial skills, which may not be available in the limited pool of family member candidates (Miller et al. 2013, 2014). Indeed, "the employment of a non-family manager helps family firms to grow their knowledge base. It increases a family firm's ability to identify and pursue profitable business opportunities" (Block 2011: 10; Chirico 2008).

However, the job of a non-family CEO is complex. The extant research acknowledges that in the presence of a non-family CEO, the family can impose the pursuit of non-pecuniary benefits and the minimization of threats to socioemotional wealth, which may prove detrimental to decision-making outcomes and performance (Stockmans et al. 2015; Stafford et al. 1999). Despite the formal appointment of a non-family CEO, family members may continue to exercise a disproportionate influence, well beyond their competence or expertise (Berrone et al. 2012; Schulze et al. 2003), *such that the potential implicit in the CEO's professional skills is stifled*. In such cases, rather than infusing his/her knowledge and managerial expertise into vibrant and relentless strategic action, a non-family CEO may be called on to devote a major part of his/her (limited) cognitive resources to managing relations with the family, explaining the rationale behind putting economic goals before family goals and curbing familial influence. Thus, the mere presence of a non-family CEO per se does not guarantee that she/he can effectively manage the business based on his/her competence.

The use of knowledge and skills involves the distinctiveness of board members' roles, tasks and responsibilities (Forbes and Milliken 1999). As outlined above, this process captures the degree of coordination among directors. According to Forbes and Milliken (1999), on boards in which this process functions at a high level, the most knowledgeable members have the most influence over decision making, and important inputs are not withheld; directors recognize and "respect each-others' expertise" (1999: 496), such that the influence of each member remains within his/her domain of competence. There is a clear and unambiguous division of labor such that tasks and responsibilities are assigned primarily on the basis of competence and skills (Forbes and Milliken 1999). Overall, these effective coordination behaviors are especially beneficial when a non-family CEO operates the business because she/he has the opportunity to immediately and freely infuse his/her managerial input into board decision making: The use of knowledge and skills ensures the distinctiveness and effective integration of board members' input and mitigates the familial influence, curbing the pursuit of non-economic goals and allowing the exploitation of the full potential inherent in the

competence and managerial skills of a professional non-family CEO.

By contrast, under low use of knowledge and skills, board members with considerable competence and expertise (in this case, the non-family CEO) find it difficult to infuse their unique, valuable knowledge into the decision-making process. Family members—despite their limited expertise or incompetence—claim to have a voice in all decisions and to significantly influence decision outcomes. Overall, the board is far less likely to disentangle family interests from those of the business, and the potential inherent in the managerial skills of a non-family CEO dwindles. Under very low levels of "*Use of knowledge and skills,*" a non-family CEO may be called to manage complex relations with invasive family members in an attempt to curb their excessive influence; such engagement may divert a CEO's (limited) cognitive resources away from business management to the detriment of performance.

It is worth noting that greater use of knowledge and skills is beneficial under both CEO identity conditions, i.e., this process is also useful when a family CEO manages the business. However, governance research acknowledges the unique and superior managerial competence of non-family CEOs (e.g., Chirico 2008; Chrisman et al. 2004; Hall and Nordqvist 2008; Kellermans et al. 2008; Stockmans et al. 2015; Upton and Heck 1997; Vandekerkhof et al. 2015), suggesting a greater contribution to effective strategy making when his/her skills are used in decision making (i.e., when the use of knowledge and skills is high).

In sum, the use of knowledge and skills captures the board's ability to use the CEO's unique competence and expertise. This ability will be especially beneficial when a *non-family CEO* operates the business because of his/her superior managerial competence and professional expertise. Thus, a hypothesis follows:

Hypothesis 1 The use of knowledge and skills is associated with a higher level of board performance under a non-family CEO than under a family CEO.

3.2 Cognitive conflict on family firm boards: family versus non-family CEOs

Cognitive conflict refers to "task-oriented differences in judgment among group members" (Forbes and Milliken 1999: 494). Jehn defines cognitive conflict as "disagreements about the content of the task being performed, including differences in viewpoints, ideas and opinions" (Jehn 1995: 258). Because boards perform complex cognitive tasks, directors "are likely to characterize issues differently and to hold different opinions about what the appropriate responses to these issues are" (Forbes and Milliken 1999: 494).

Cognitive conflict differs from the use of knowledge and skills. Whereas the use of knowledge and skills refers to the process by which members' contributions are coordinated, "cognitive conflict refers to the content of members' contributions" (1999: 495–496) and "is concerned with the *presence* of issue-related disagreement among members" (1999: 494). On boards with high levels of cognitive conflict, directors openly express their divergent viewpoints and content-driven disagreements with their fellows.

Cognitive conflict makes two valuable contributions to effective decision making: (1) It helps overcome strategic inertia and foster change because "disagreement and critical investigation on the board may require CEOs to explain, justify and possibly *modify their positions* on important strategic issues and to *entertain alternative perspectives and courses of actions*" (1999: 494). Indeed, the expression of disagreement enables directors to "generate strategic alternatives during board meetings" (1999: 492). (2) It engenders the usage of "critical and investigative interaction processes" (1999: 494) and a more accurate and objective analysis of available information, resulting in "the more careful evaluation of alternatives" (1999: 494).

Cognitive conflict may be beneficial for all family firm boards; however, as we shall argue below, it will be particularly beneficial when a family CEO manages the business. The first argument regards a peculiar vulnerability of a family CEO, i.e., his/her relatively reduced orientation toward change and innovation.[2] This bias relates to the first benefit of cognitive conflict

[2] Family CEOs may be innovative, especially in the early years following the foundation of a family business. However, extant research acknowledges that "although founders of family firms often base their firm on innovative ideas, over time they may lose their entrepreneurial edge" (Kellermans et al. 2008: 5; see also Salvato 2004). This study does not explore new family businesses, investigating instead established medium to large family firms. The theory and findings are thus limited to this context.

identified above. It has been argued that the presence of a family CEO "may determine more conservative strategic decisions" (Binacci et al. forthcoming), strategic inertia (Chirico and Nordqvist 2010) and cautious R&D strategies (Gomez-Mejia et al. 2014). There are three reasons for such phenomena. First, from a purely financial viewpoint, family CEOs are overinvested in the firm that they manage, which discourages risky investments (Huybrechts et al. 2012). By contrast, for a non-family CEO, a relatively small proportion of his/her financial wealth is tied to the firm (i.e., from a financial viewpoint, they are more diversified, as agency scholars suggest), which favors the undertaking of risky initiatives. Second, beyond purely financial considerations, a family CEO is far more concerned with the protection of socioemotional wealth, leading to a preference for conservative actions over risky ventures (see Gomez-Mejia et al. 2007). Third, from a cognitive perspective, family CEOs have limited exposure to the external environment, as most of their professional experience lies within the family business. Long tenure also breeds cognitive rigidity, which limits the ability to envision new opportunities and encourages the preservation of the status quo (Hambrick and Fukutomi 1991); indeed, it has been shown that long tenures stifle creativity and innovation (Kellermanns and Eddleston 2004) and that CEOs with long tenures tend to conform to industry norms (Finkelstein and Hambrick 1990). Extant research indicates that family CEOs exhibit far longer tenures than non-family CEOs (James 1999), leading to stronger cognitive constraints (Gomez-Mejia et al. 2003) and a commitment to the status quo at the expense of innovation and change (Hambrick and Fukutomi 1991). Given these conditions, cognitive conflict on boards will be especially beneficial under a family CEO, as this process favors questioning the status quo, enhances creativity and the adoption of innovative plans and fosters change and innovation, thus alleviating the limited orientation of family CEOs toward change and innovation. By expressing their divergent viewpoints, directors open up new perspectives and novel pathways outside the cognitive boundaries of family CEOs.

A second argument concerns the comprehensiveness and rationality of decision making and relates to the second benefit associated with cognitive conflict. As outlined above, higher levels of cognitive conflict also bring about a deeper, more rational and more careful evaluation of alternatives. This benefit is especially valuable for family CEOs. Indeed, family CEOs tend to make decisions "by intuition" (Block 2011) rather than by objective rational analysis; they tend to apply solutions that worked well in the past, with limited objective assessment of their validity within evolving business environments (Zahra 2005). By contrast, "non-family CEOs make decisions based on logic and rational analysis" (Block 2011: 11); they "rely on their years of formal training to make *rational* decisions" (Hall and Nordqwist 2008: 54). Indeed, appointing a non-family CEO aims to "provide objectivity and rationality to an emotional milieu" (Upton and Heck 1997: 252). As a result, the plans and proposals that a non-family CEO submits for board discussion are likely to have already been exposed to an in-depth analysis based on logic and rationality: The contribution of greater cognitive conflict—while still positive—may be reduced. By contrast, when a family CEO operates the business, greater cognitive conflict will make a major contribution, fostering further objective analysis and rational, in-depth examination.

In sum, cognitive conflict can benefit all family firms, but it will be especially beneficial when a family CEO is at the helm: It helps counteract a relatively reduced propensity toward change and innovation and fosters more rational, comprehensive analyses. Thus, a hypothesis follows:

Hypothesis 2 Cognitive conflict is associated with a higher level of board performance under a family CEO than under a non-family CEO.

3.3 Effort norms on family firm boards: family versus non-family CEOs

Effort norms refer to the level of effort that board members put toward their tasks. These norms ensure directors' preparation, participation and analysis (Forbes and Milliken 1999). Effort norms include time devoted "to do the homework necessary for understanding the company's problems" (1999: 494) and attention or "mental engagement" before, during, and after meetings.

Under high levels of effort norms, directors adequately prepare for board meetings. By collecting and analyzing information, they can help a CEO better grasp the company's problems, identify key drivers in

complex managerial issues, identify significant signals about competitive dynamics early and expand the horizon of strategic decisions by autonomously scanning the environment to pinpoint novel avenues for growth. Overall, boards characterized by high levels of effort norms help fill informational voids in strategy making. But while effort norms are beneficial to all boards, they will be especially so when a firm is operated by a family CEO.

The extant research on family firms acknowledges that family CEOs generally relate and exchange information with a relatively restricted pool of individuals, such as family members, employees at the same firm, and—eventually—managers at other family firms (Dyer 1989; Block 2011). Directors' assistance in gathering, ordering, processing and interpreting information may be especially valuable for these CEOs. By contrast, non-family CEOs are generally more openly oriented toward the external environment: For example, non-family CEOs have been shown to generally exchange information with many people outside the firm, such as former classmates who are executives at other (often large) organizations or consultancy firms (Block 2011). Sonfield and Lussier (2009) show that the appointment of non-family CEOs is often accompanied by an increase in the use of outside assistance. As a result, when non-family CEOs elaborate strategic plans and proposals to be submitted to board meetings, they are more likely to extensively and accurately frame all information-related aspects than are family CEOs. Thus, board contributions to information processing will be relatively less pronounced when a non-family CEO is at the helm.

It is worth noting that CEOs benefit from information systems in place, especially in larger family firms. However, scholars of upper echelons theory (Hambrick and Mason 1984) emphasize that individuals at the top do make a difference in information processing (Hambrick 2007). Specifically, strategy making results from interactions between top executives and the CEO, and such interactions are central for effective decision outcomes (Hambrick 2007). All else equal, the limited openness of family CEOs to external information sources may result in a relatively reduced emphasis on environmental scanning, information gathering, analysis and processing (as well as reduced pressure on top executives to do so). In other words, compared with a non-family CEO, a family CEO is more likely to be easily and immediately satisfied with information processing, reducing the quality of information submitted to boards. This tendency renders board effort norms far more beneficial to board task performance.

In sum, effort norms will make a greater contribution to board task performance when a family CEO manages the business. When these CEOs are at the helm, greater efforts by directors in gathering, ordering, and processing information and preparing for the meeting can be salient in improving decision making because family CEOs are vulnerable to information shortcomings due to their limited sources for information exchange. Thus, a third hypothesis follows:

Hypothesis 3 Effort norms are associated with a higher level of board performance under a family CEO than under a non-family CEO.

4 Methods

4.1 Sample and data collection

The sample for this study consists of 104 family firms whose CEOs responded to a survey that was sent to Italian firms in 2004. Targeting large manufacturing firms, following Dun and Bradstreet, 1100 family firms were identified according to two criteria: (1) two or more directors had a family relationship (Anderson and Reeb 2004) and (2) family members owned a substantial portion of the voting stock (Gomez-Mejia et al. 2003). Regarding this second aspect (i.e., family ownership), all family firms in our sample are members of the Osservatorio Università Bocconi (OUB), which represents family businesses in Italy and requires that its members have at least 25 % family ownership if the firm is publicly traded and 50 % family ownership if the firm is a private company. The OUB's "family-controlled" designation is confirmed by the Italian Chamber of Commerce. The sample is consistent with studies that have adopted the same target firms and examined the impact of family versus non-family CEOs in Italy (e.g., Miller et al. 2013).

We selected the CEO as the key respondent. The items related to board processes were directly drawn from an article by Forbes and Milliken (1999). To ensure the highest possible response rate, we followed

the steps suggested by previous survey research. First, we performed an in-depth pretest (Fowler 1993) to streamline the questionnaire, making it more appealing and facilitating completion. The pilot study provided cues for improving the questionnaire, such as reducing the number of pages (to a four-page maximum) to increase the response rate, revising unclear/misleading sentences, adding subheadings and changing the order of the items. Second, our requests for participation emphasized the need for further research on boards of directors and attempted to engage respondents' natural interest in the topic. Third, we used multiple response formats to reduce response bias and distributed the items to measure each construct throughout the survey. Finally, we carefully worded questions to minimize social desirability bias using input from the pilot interviews.

The 104 respondents represent a response rate of 9.5 %, which is similar to "the 10.12 % rate typical for studies which target executives in upper echelons" (Geletkanycz 1997: 622; see also Koch and McGrath 1996; McDougall and Robinson 1990). This rate is also similar to surveys completed by CEOs of family firms in Spain (Cruz et al. 2010) and to the 10.3 % response rate obtained in the survey of the Arthur Andersen Center for Family Business, which has been used in several academic journal articles on family firms (Schulze et al. 2003). To examine nonresponse bias, we collected data for companies in the target sample. A Kolmogorov–Smirnov test showed no significant difference between respondents and nonrespondents on various dimensions, such as firm size, performance, CEO tenure, CEO age and gender.

4.2 Dependent variable

Board performance on the service task was measured by a four-item scale developed based on previous studies (Forbes and Milliken 1999). The first item asks the executive to rate the overall value of board assistance to the CEO. The second item asks about the extent to which the board provides effective support in making long-term strategic decisions. The third item asks about the board's contributions to the ongoing implementation of corporate strategies. The last item asks about the extent to which the board actively advances and promotes new strategic initiatives. The response format consisted of a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The Cronbach's alpha of the scale was .78.

4.3 Independent variables

The data for our independent variables, *use of knowledge and skills*, *cognitive conflict* and *effort norms*, are drawn from surveys completed by the CEO and assessed on a five-point Likert scale. The items were averaged to create composite scores.

The use of knowledge and skills was measured drawing on the four items suggested by Forbes and Milliken (1999) and reported by McGrath et al. (1995). The survey asked about the respondent's degree of agreement with the following items: (1) task delegation on the board represents a good match between assigned responsibilities and board members' personal knowledge and skills; (2) directors are aware of each other's areas of expertise; (3) a clear division of labor exists among directors; and (4) information flows accurately and quickly among directors. The Cronbach's alpha for this scale was .77.

Cognitive conflict was measured using the multi-item scale developed by Jehn (1995) and suggested by Forbes and Milliken (1999). The items assessed the degree to which the respondents agreed that there were frequent conflicts and disagreements about the following items: (1) differing interests among various stakeholders, such as shareholders, employees, customers and the local community; (2) major decisions; (3) how the board should work; and (4) how to pursue the firm's goals. The Cronbach's alpha for this scale was .80.

Effort norms were measured using the scale developed by Wageman (1995), as suggested in Forbes and Milliken, to assess group norms. Using a five-point Likert scale, the survey asked the respondents about the degree to which they agreed with the following items: (1) directors search for their own information on firm-related issues; (2) directors are available when needed; (3) directors devote the time needed to complete the assigned task; and (4) directors actively participate during meetings. The Cronbach's alpha was .76.

Family CEO We included a dummy variable, *Family CEO*, which equals 1 when a family CEO operates the business and zero when a non-family CEO is at the helm.

4.4 Control variables

We included several control variables, as described below. Unless otherwise noted, the information was obtained from the Italian CERVED database, which provides data extracted directly from annual reports. *Firm size* was measured as the logarithmic transformation of total assets. Other measures (e.g., total sales) yielded similar results. We included this variable because firm size affects administrative complexity and, in turn, the difference in productivity between family and non-family CEOs (Lin and Hu 2007). *Firm performance* (measured as the firm's ROA) and *industry performance* (measured as the firm's industry mean ROA) were included as controls because executives' focus on effective decision making changes based on both of these variables (Cyert and March 1963). *Industry regulation* was measured by a survey item asking the CEO to rate the degree of regulation in the firm's industry on a five-point Likert scale. We included this control variable because scholars of upper echelons theory suggest that CEOs can have a significant impact on decision outcomes in high-discretion contexts, that is, in less regulated industries (Hambrick 2007). However, scholars in the field of board capital suggest that boards make significant contributions in regulated industries by connecting the board and corporation with other institutional constituencies (Hillman and Dalziel 2003). *Leverage* and *firm growth* were measured as the debt to equity ratio and as the 3-year average growth in total sales, respectively; these controls were included because they constrain and shape strategic decisions and performance. *Publicly traded* (a dummy variable that equals 1 for publicly traded firms) was included as a control because private and publicly traded firms have different financial policies, impacting decisions and performance (Meoli et al. 2013; Schulze et al. 2003). *Firm age*, measured as the number of years that had passed since the firm was founded, was included as it influences proactiveness, i.e., the firms' efforts to seize new opportunities and anticipate future market demands (Naldi et al. 2007), which represents a key source of performance for many family firms (De Massis et al. 2014). *Board size*—measured as the number of board members—was included as a control because board size affects team collective action (Wincent et al. 2010) and corporate outcomes (Zona 2015). *Outsider ratio* was measured as the number of non-executive directors to the total number of directors; we controlled for this variable because behavioral research acknowledges that a greater portion of outside board members, as they only meet episodically during board meetings, may crate interaction difficulties, negatively affecting use of knowledge and skills and, hence, board task performance (Forbes and Milliken 1999). *CEO tenure*, measured as the number of years since the CEO's appointment, has been included as a control because tenure influences the CEO's commitment to the status quo and, hence, his/her proclivity toward innovation and change (Hambrick and Fukutomi 1991). *CEO duality* (a dummy variable that equals 1 for firms in which the CEO also serves as the board chair; 0 otherwise) was included because scholars suggest that it may impact decision-making outcomes and performance (Braun and Sharma 2007). *CEO ownership*—measured as the percentage of firm equity held by the CEO—was included because it impacts CEO power and the degree of influence over decision making at the top, and it can be associated with a CEO reduced propensity to take on venturing risk and innovation initiatives (Jensen and Meckling 1976; Gomez-Mejia et al. 2007). *Board diversity* was measured by asking the CEO to rate (on a five-point Likert scale) the degree to which the directors had diverse (1) functional backgrounds (e.g., sales, finance, and accounting), (2) industry backgrounds (e.g., chemical, mechanical and banking), (3) educational backgrounds (e.g., engineering, business administration, economics and law), (4) ages and (5) personal traits (i.e., personal leadership and decision styles). This variable was measured as the average of the CEO's ratings of these items. Board diversity controls for the effects of heterogeneous directors profiles on decision-making outcomes and performance (Singal and Gerde 2015; Forbes and Milliken 1999). *Board capital breadth* was measured by asking the CEO to assign directors into each of the following categories: management in this firm or in other firms, law, business consulting, accounting, finance, academic research, politics (including local politics), public institution management and other. We then summed the number of categories for which at least one director qualified. Forbes and Milliken (1999) propose controlling for board human capital, as it can influence the stock of knowledge available to directors. *Percentage of family directors* was measured as the ratio of family member

to the total number of directors and was included to control to account for the family's direct influence on decision making (Miller et al. 2014).

4.5 Construct validity of perceptual measures and tests for common method bias

Our study is based on a single respondent. We conduct multiple tests to ascertain that our results are not biased by this single-respondent design. Using the approach of Cruz et al. (2010), we examined the convergent and discriminant validity of the perceptual measures. The model including the four latent constructs was an excellent fit (CFI = .952; RMSEA = .046). In addition, we also conducted a Chi-square difference test between the unconstrained model and the constrained model with an inter-factor correlation set to 1.0 and repeated this test for each pair of constructs; all tests were significantly different from zero ($p < .001$), providing evidence of discriminant validity. Furthermore, we confirmed that the confidence intervals (2 standard errors) around the correlation estimate between two factors did not contain 1.0. We also perform a test for inter-rater agreement using a small set of double respondents ($n = 22$): The ICC test showed no significant differences in ratings between the two responding groups. Finally, we examined the relation between board task performance and archival data on firm performance: If our dependent variable is accurately captured by our survey, we should observe a correlation between board service performance and subsequent-year firm performance. This analysis showed that our measure of board task performance significantly and positively impacts subsequent-year performance measures, such as ROA, ROE and ROS. Finally, we note that behavioral research on decision processes, especially on family firm boards, extensively relies on a single respondent because of the difficulty of collecting these kinds of data from directors and top executives (Forbes and Milliken, 1999; Hambrick 2007). In this regard, a single respondent is also accepted in leading research (e.g., Cruz et al. 2010).

5 Results

Table 1 provides the means, standard deviations and bivariate correlations for all variables. Variables on board processes have been centered to attenuate collinearity. Among the correlations, the percentage of family directors is positively correlated with Family CEO.[3]

Table 2 reports the regression results. We used multiple ordinary least squares (OLS). Collinearity tests showed that the regression results were not affected by multicollinearity: The maximum VIF value equals 4.21, with a tolerance of 0.23; the mean VIF value equals 1.96. All of these values are well below the accepted threshold of 10 for VIF values and above .10 for tolerances.

Table 2, Model 1, includes the control variables and the direct effects of board processes. The results show that cognitive conflict ($b = .359$; $p < .01$) and effort norms ($b = .868$; $p < .001$) both enhance task performance, consistent with predictions by Forbes and Milliken (1999). Use of knowledge and skills does not exert a significant main effect on task performance ($b = .263$; $p =$ n.s.).

Table 2, Model 2, includes the interaction term between use of knowledge and skills and the dummy variable of Family CEO. The coefficient of the interaction term is negative and significant ($b = -.719$; $p < .01$), providing support for Hypothesis 1. Figure 1 depicts the interaction effect: The effect of the use of knowledge and skills is stronger under non-family CEOs (i.e., the slope is steeper) than under a family CEO. In addition, Fig. 1 shows that when levels of use of knowledge and skills are very low, the level of board performance under a non-family CEO is lower than that of a family CEO. This result is consistent with our argument: When family influence becomes very strong (i.e., very low levels of use of knowledge and skills), a non-family CEO may devote a major portion of his/her (limited) cognitive resources to manage relationships with family members, greatly stifling the board contribution to strategy making. This result is also consistent with previous evidence based on the demographic characteristics of boards (Miller et al. 2014).

Table 2, Model 3, includes the interaction between cognitive conflict and family CEO: The interaction term is positive and significant ($b = .652$; $p < .01$),

[3] Even with a high portion of family members, non-family CEOs influence decision processes, not as much through power exercise but rather through the different cognitive frames and information/topics they bring to board discussions.

Table 1 Descriptive statistics

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1.	Board task performance	3.45	1.06										
2.	Effort norms	3.25	0.63	0.61**									
3.	Cognitive conflict	2.74	0.76	0.21*	−0.05								
4.	Use of knowledge skills	3.99	0.78	0.43**	0.49**	−0.14							
5.	Family CEO	0.59	0.49	−0.06	−0.19	−0.15	−0.08						
6.	Firm size	16.77	1.77	0.16	0.07	−0.01	−0.04	−0.21*					
7.	Industry performance	1.96	2.33	−0.14	−0.26	0.04	−0.13	0.14	−0.14				
8.	Industry regulation	2.77	1.57	0.17	0.06	0.16	−0.11	0.01	−0.02	−0.10			
9.	Leverage	3.00	5.21	−0.08	−0.02	−0.06	−0.02	−0.05	0.03	0.04	0.07		
10.	Publicly traded	0.27	0.47	0.11	0.05	−0.15	−0.07	0.02	0.21*	−0.14	−0.01	−0.18	
11.	Firm age	45.81	30.49	−0.15	−0.11	0.05	−0.06	−0.11	0.04	0.05	0.02	0.16	−0.12
12.	Firm performance	3.38	19.85	0.11	−0.11	0.07	−0.05	−0.03	0.56**	0.11	−0.05	−0.04	−0.15
13.	Firm growth	0.02	0.12	−0.11	−0.08	0.03	−0.03	0.06	0.04	0.23*	−0.06	0.05	−0.07
14.	Board size	6.54	3.13	−0.12	−0.12	−0.12	−0.15	−0.09	0.21*	−0.11	−0.09	−0.09	0.58**
15.	Outsider ratio	0.43	0.32	−0.06	−0.02	−0.19	−0.20*	−0.04	0.23*	0.02	0.00	−0.09	0.50**
16.	CEO tenure	19.21	14.44	−0.04	−0.07	0.01	−0.09	0.25**	−0.05	0.14	−0.03	0.13	−0.15
17.	CEO duality	0.31	0.46	−0.07	−0.11	−0.05	−0.10	0.35**	−0.09	0.12	0.14	−0.02	0.01
18.	CEO ownership	0.18	0.28	−0.07	−0.11	−0.18	0.03	0.45**	−0.14	0.17	0.06	0.08	−0.10
19.	Board diversity	3.49	0.73	0.20*	0.3**1	−0.10	0.31**	−0.11	0.13	−0.09	0.09	−0.02	0.26**
20.	Board capital breadth	2.18	1.18	0.09	−0.01	−0.09	−0.13	−0.05	0.25*	0.01	−0.12	−0.01	0.46**
21.	Percentage of family directors	0.54	0.16	−0.12	−0.03	0.00	−0.07	0.33**	−0.29**	0.17	0.06	0.03	−0.26**

	Variables	11	12	13	14	15	16	17	18	19	20
1.	Board task performance										
2.	Effort norms										
3.	Cognitive conflict										
4.	Use of knowledge skills										
5.	Family CEO										
6.	Firm size										
7.	Industry performance										
8.	Industry regulation										
9.	Leverage										
10.	Publicly traded										

Table 1 continued

	Variables	11	12	13	14	15	16	17	18	19	20
11.	Firm age										
12.	Firm performance	0.03									
13.	Firm growth	0.07	0.30**								
14.	Board size	0.12	−0.13	−0.07							
15.	Outsider ratio	0.10	−0.13	−0.04	0.52**						
16.	CEO tenure	0.10	0.07	0.07	−0.24*	−0.19					
17.	CEO duality	−0.16	0.09	0.07	−0.12	0.01	0.41**				
18.	CEO ownership	−0.15	0.09	0.03	−0.20*	−0.18	0.38**	0.52**			
19.	Board diversity	0.12	−0.05	0.07	0.21*	0.16	−0.17	−0.10	0.05		
20.	Board capital breadth	0.09	0.10	−0.10	0.50**	0.52**	−0.22*	−0.05	−0.02	0.24*	
21.	Percentage of family directors	−0.07	−0.02	0.01	−0.31**	−0.28**	0.25*	0.21*	0.25*	−0.27**	−0.21

Sig levels: * $p < .05$; ** $p < .01$

providing support for Hypothesis 2. Figure 2 depicts the interaction effect, showing that the effect of cognitive conflict on board task performance is stronger under a family CEO (greater slope). In addition, Fig. 2 also shows that when levels of cognitive conflict are very low, the level of board task performance is lower under a family CEO. This result is consistent with the idea that an absence of cognitive conflict is especially detrimental in the presence of strong social ties (i.e., in the presence of a family CEO rather than a non-family CEO) because such a decision environment is frequently characterized by groupthink (see Forbes and Milliken 1999), leading to very poor task performance.

Table 2, Model 4, includes the interaction between effort norms and family CEO. The interaction term is not significant ($b = -.292, p =$ n.s.). Hence, Hypothesis 3 is not supported. The main results do show that effort norms exert a positive effect on board task performance (see effort norms in Model 1), but there is no evidence that their effect differs across the two settings.

6 Discussion

This article suggests that in the realm of family firms, the effects of board decision processes on task performance are contingent upon CEO identity and change depending on whether a family or a non-family CEO is at the helm. The empirical findings show that the use of knowledge and skills is more beneficial to firms with a non-family CEO, and cognitive conflict is more beneficial to firms with a family CEO. Contrary to expectations, the effects of effort norms do not change significantly across the two settings. This study makes several contributions to the extant bodies of literature on boards of directors and on family firms.

First, this study contributes to behavioral research on boards. By showing that the effects of board decision-making processes are contingent upon CEO identity, it relaxes the implicit assumption underlying much behavioral research on boards, that is, that boards are constituted by equally powerful members and that—when examining the consequences of board processes on task performance—the personal characteristics of influential team members, such as the CEO, can be overlooked. This study clarifies that each decision process addresses different aspects of CEOs'

Table 2 Regression results. Dependent variable: Board task performance

	Model 1	Model 2	Model 3	Model 4
Intercept	3.702**	2.764*	4.249***	3.534**
	(2.998)	(2.255)	(3.504)	(2.932)
Firm size	−0.017	0.021	−0.042	−0.011
	(−0.280)	(0.379)	(−0.709)	(−0.196)
Industry performance	0.024	0.018	0.031	0.025
	(0.876)	(0.651)	(1.062)	(0.890)
Industry regulation	0.109*	0.082^{+}	0.094^{+}	0.103*
	(2.251)	(1.731)	(1.890)	(2.117)
Firm leverage	−0.002	−0.002	−0.004	−0.001
	(−0.144)	(−0.135)	(−0.277)	(−0.061)
Publicly traded	0.394*	0.246	0.328^{+}	0.371^{+}
	(2.026)	(1.279)	(1.671)	(1.876)
Firm age	−0.003	−0.004	−0.004	−0.003
	(−1.020)	(−1.418)	(−1.314)	(−1.064)
Firm performance	0.011*	0.008*	0.011*	0.011*
	(2.596)	(2.022)	(2.607)	(2.584)
Firm growth	−0.983	−0.858	−0.908	−1.004
	(−1.490)	(−1.381)	(−1.342)	(−1.568)
Board size	−0.042	−0.056*	−0.045^{+}	−0.048
	(−1.531)	(−2.007)	(−1.802)	(−1.634)
Outsider ratio	−0.148	−0.085	−0.136	−0.079
	(−0.437)	(−0.265)	(−0.410)	(−0.219)
Percentage of family directors	−0.577	−0.542	−0.675^{+}	−0.585
	(−1.663)	(−1.421)	(−1.933)	(−1.646)
CEO tenure	0.006	0.007	0.004	0.006
	(0.869)	(1.070)	(0.570)	(0.900)
CEO duality	−0.187	−0.172	−0.159	−0.186
	(−0.814)	(−0.883)	(−0.744)	(−0.809)
CEO ownership	−0.217	−0.203	−0.109	−0.221
	(−0.468)	(−0.489)	(−0.255)	(−0.480)
Board diversity	−0.033	0.064	−0.006	−0.019
	(−0.263)	(0.557)	(−0.047)	(−0.147)
Board capital breadth	0.130	0.137^{+}	0.153^{+}	0.136
	(1.534)	(1.687)	(1.889)	(1.631)
Family CEO	0.320	0.374	0.281	0.356
	(1.420)	(1.646)	(1.530)	(1.409)
Use of knowledge and skills	0.263	0.698***	0.263	0.277
	(1.541)	(3.414)	(1.600)	(1.593)
Cognitive conflict	0.359**	0.394***	0.064	0.386**
	(2.931)	(3.778)	(0.475)	(3.338)
Effort norms	0.868***	0.938***	0.824***	1.084**
	(4.852)	(5.365)	(4.853)	(3.364)

Table 2 continued

	Model 1	Model 2	Model 3	Model 4
Int.: Use knowledge and skills × family CEO		−0.719**		
		(−2.764)		
Int.: cognitive conflict × family CEO			0.652**	
			(3.328)	
Int.: effort norms × family CEO				−0.292
				(−0.827)
R-sq	0.573***	0.619***	0.620***	0.577***
Change *R*-sq		0.046**	0.047**	0.004
F-stat	13.702***	16.943***	19.064***	14.650***

Sig levels: $^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

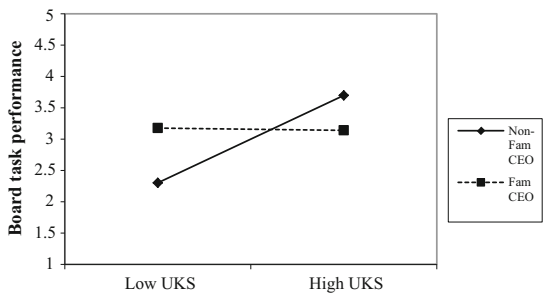

Fig. 1 Interaction effect. Use of knowledge and skills × family CEO

cognitive frames. Bridging insights from upper echelons theory and its idea that demography proxies for differences in CEOs' cognitive frames, it outlines that *board decision-making processes are to be understood and examined in reference to CEOs' personal attributes*. Thus, whereas previous research on board processes generally accepts that higher levels of decision processes naturally and immediately translate into better performance regardless of board composition (Forbes and Milliken 1999; Zona and Zattoni 2007; Minichilli et al. 2009; Zattoni et al. 2015), this study suggests that the effects of board processes depend on CEO identity. While this study focuses on one specific CEO trait, i.e., affiliation with the family, future research may further explore this topic by examining board processes in reference to other CEO characteristics or by considering the interactions between board processes and alternative leadership structures, such as the role of the chair or the appointment of co-CEOs (Miller et al. 2014).

Second, this study contributes to research on boards by proposing a combination of the demographic and behavioral perspectives as a means to enhancing the understanding of board functioning and performance. Much research in management and governance conceives of the behavioral and demographic approaches as alternative and competing perspectives. This is reflected in the extensive reliance on the input–process–output (I–P–O) framework (Steiner 1972; McGrath 1984), which presumes that input variables (team composition) affect team processes which in turn affecting team outcomes. It was originally designed to explore the relative impact of behaviors and demography via mediation effects. Scholars have adopted this framework extensively (e.g., Smith et al. 1994; Knight et al. 1999; Zattoni et al. 2015), and Forbes and Milliken (1999) draw on this view to develop their model.

This study adopts a different perspective by leveraging advancements in the literature on work groups. Specifically, organization behavior research on teams has recently moved beyond the I–P–O framework. It has been argued that the I–P–O framework is insufficient for characterizing teams (Ilgen et al. 2005). As Ilgen et al. state: "the I–P–O framework tends to suggest a linear progression of main effect influences, proceeding from one category (I, P, or O) to the next. However, much of the recent research has moved beyond this. Interactions have been documented between various inputs and processes (I × P)" (Ilgen et al. 2005: 520) to impact performance (see Ilgen et al. 2005 for a review). Whereas mediating I–P–O models consider processes and demography as competing predictors of task performance, an interacting

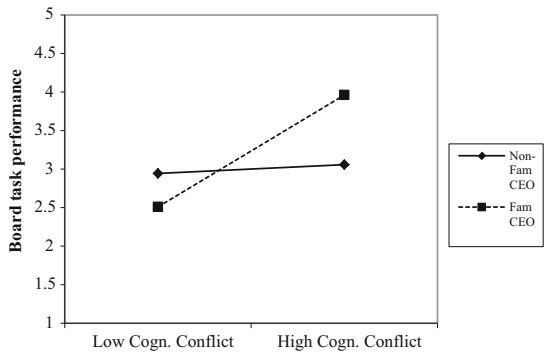

Fig. 2 Interaction effect. Cognitive conflict × family CEO

(I × P) framework responds to a different research issue: Whether and how the effects of decision processes on decision outcome change contingent on team demographic characteristics.

Thus, this study draws from the interacting (I × P) framework and proposes the integration of demographic and behavioral aspects of boards as a means to advance inquiry on board task performance. Consequently, *rather than fully embracing one of these two perspectives or arguing that one of the two views is the better approach, this study draws from both approaches and suggests that a greater understanding of board task performance can be derived by integrating insights from both perspectives*. The results show that team composition characteristics (e.g., differences in CEO identity) alter the extent to which board decision processes are conducive to good decision making. In other words, the effects and consequences of processes can only be ascertained with reference to the personal attributes of influential team members, such as the CEO.

One final comment regards the implications of the findings for firm performance. This study explores the joint effects of board processes and demography on task performance. Future studies may examine the extent to which or the conditions under which these effects translate into better firm performance by examining moderation-mediation effects.

Beyond the contribution to general research on boards, our study also contributes to research on family firms. First, the forefront of this research seeks to unveil the role of context in shaping behaviors (Wright et al. 2014). Some scholars have begun to explore this topic in the realm of family firms. For example, Gomez-Mejia et al. (2014) show that the presence of institutional investors alters the governance context of the firm, shaping decisions on R&D. While context has been recognized as an important factor in understanding organizational functioning (see the contributions in Wright et al. 2014), scholars of family firms have paid relatively less attention to how behaviors change across settings. Our study contributes to this research stream by demonstrating that board behaviors are conducive to better decisions contingent on CEO identity. *It provides conceptual arguments and empirical evidence that the relation between behaviors and outcomes changes in different governance contexts*. In other words, while team members may engage in more intense interactions to achieve effective decisions, their outcome is not invariant across contexts: Higher levels of cognitive interactions translate into different outcomes contingent upon the characteristics of influential actors. This contribution is especially salient because decision making in family firms is affected at all levels by relations with influential individuals. This study can be extended to decision-making arenas beyond the board, such as decisions in firms with varied ownership structures.

Second, this study contributes to research on board processes in family firms. Published studies have recently begun to explore board behaviors and decision-making processes (Bammens et al. 2011; Bettinelli 2011; Kellermanns and Eddleston 2004; Zona 2015; Zattoni et al. 2015). These studies tend to focus on the *antecedents* of board processes, and little evidence exists on the effects of board processes on performance in family firms. One exception is Zattoni et al. (2015): These scholars examine the antecedents of board processes.[4] Although they also extend their work by examining the effects of board processes on performance in family versus non-family firms, they do so empirically. Importantly, they adopt the standard I–P–O approach to mediation effects. As a result, to date, no theory exists that explicitly considers whether specificities (e.g., family vs. non-family CEOs) produce novel findings on the process-performance relation that are unique to the family firm literature.

[4] Zattoni et al. (2015) examine family influence as an antecedent to board processes and explore the effect of family involvement on board task performance only empirically by testing for a mediation effect.

Our study fills this gap and contributes to behavioral research by showing that *one idiosyncratic family firm factor (i.e., a family vs. non-family CEO) is an important element in determining the effects of board decision-making processes and provides a significant conceptual basis to theoretically advance behavioral models of boards*.

In this regard, scholars in the field of family firms have begun to develop new domain-specific theories and perspectives, such as the socioemotional wealth view (Gomez-Mejia et al. 2011), to distinguish between family and non-family firms. Findings from this study can be used to investigate the behavioral implications of socioemotional wealth (Berrone et al. 2012). For example, one component of the socioemotional wealth construct is the family members' enjoyment in exercising power and authority in the business. This study outlines how use of knowledge and skills relates to that specific aspect of the socioemotional wealth construct. Future studies may seek to connect other components of socioemotional wealth, such as power, social ties, emotions and trans-generational change (see Berrone et al. 2012), to the social–psychological processes, to discover how socioemotional concerns influence, or are influenced by, decision-making processes.

Third, this study contributes to family firm research on CEO identity. Over time, this research has produced mixed findings about whether a family or a non-family CEO is better suited to managing a business. Specifically, Miller et al. (2013) find that non-family CEOs outperform family CEOs in large firms. Our study complements and expands this research finding. Specifically, our behavioral interacting (I × P) model does not exclude—in principle—the possibility of the reverse, i.e., that a *family CEO* (backed by very effective and active board support, i.e., high cognitive conflict) may outperform a non-family CEO whose board does not work well. In other words, infusing behavioral insights from research on CEO identity may expand our understanding of the conditions for CEO effectiveness. On a related issue, a recent work by Miller et al. (2014) examines board influence over the CEO as reflected in co-CEO leadership structures. This study provides further behavioral evidence for that stream of research: First, the empirical findings provide additional evidence that a reduced influence of family members over a non-family CEO is beneficial to board performance; second, this study enriches the picture of board influences on CEOs by highlighting other complementary aspects, such as cognitive conflict and effort norms. Hence, this study suggests that an explicit examination of board behaviors can enhance understanding of board contributions to performance among family and non-family CEOs. Future studies may further explore such issues: For example, research on family versus non-family CEOs may apply the logic developed in this study to examine interactions between CEOs and TMT decision processes, such as behavioral integration.

7 Limitations

This study is not devoid of limitations. First, our findings are limited and apply to large Italian firms. Hence, further explicit examinations are needed to explore whether the results are consistent across countries and across different family firm size clusters. Second, we have examined one aspect of board decision-making processes, as identified by Forbes and Milliken (1999); however, different processes may also be examined. Future studies may expand the range and types of processes and behaviors affecting decision outcomes by including, for instance, cohesiveness, relationship conflict and additional aspects of social integration. Third, our study is based on a single respondent: While we have successfully performed all tests required to mitigate concerns regarding common method bias, the findings refer to CEO perceptions of board decision processes and task performance. Future studies may improve and consolidate these findings by examining decision-making processes from multiple respondents. Fourth, data on board processes are very difficult to collect, and this study is based on survey data collected in 2004: Future studies may replicate this study to ascertain the consistency of the results over time. Fifth, we have distinguished between family firms with family and non-family CEOs, yet we have not considered the heterogeneity of family firm ownership structures. In addition, recent work on family firms acknowledges that co-CEO leadership may shape decision outcomes. Future studies may also expand research in this domain by exploring whether the relations envisioned in this study change depending on the firm's ownership structure or co-CEO leadership structures.

8 Conclusion

Research on family firms has recently moved toward addressing process-related aspects of decision making. The specificities of family firms provide valuable opportunities to explore the implications of decision processes for broader organizational contexts. By leveraging differences between family and non-family CEOs, this study goes beyond the traditional juxtaposition of board demographics and processes and shows that integrating these views helps improve our understanding of the ultimate sources of decision outcomes. Findings show that cognitive conflict is particularly beneficial for board task performance under a non-family CEO, while the use of knowledge and skills is especially beneficial under a non-family CEO. These findings have significant implications for theory and practice.

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