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Article — Published Version

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Journal of Business Ethics

Provided in Cooperation with:

Springer Nature

Suggested Citation: Ernst, Fabian; Bendig, David; Puechel, Lea (2024) : Religion in Family Firms: A Socioemotional Wealth Perspective on Top-Level Executives with Perceived Religiosity, Journal of Business Ethics, ISSN 1573-0697, Springer Netherlands, Dordrecht, Vol. 194, Iss. 3, pp. 707-730, <https://doi.org/10.1007/s10551-023-05606-7>

This Version is available at:

<https://hdl.handle.net/10419/315223>

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Religion in Family Firms: A Socioemotional Wealth Perspective on Top-Level Executives with Perceived Religiosity

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Received: 10 June 2022 / Accepted: 18 December 2023 / Published online: 10 February 2024
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Abstract

The extent and mechanisms through which religion intertwines with decision-making processes in family firms remain inadequately understood. Family firm owners, driven by their commitment to ethical business practices and the safeguarding of their socioemotional wealth, actively seek cues to inform their decision-making processes. This research demonstrates that, among these guiding cues, top-level executives' perceived religiosity emerges as a relevant factor. Building upon the socioemotional wealth perspective and conducting a longitudinal analysis based on listed family firms between 2009 and 2018, our findings reveal a positive association between family voting rights and the presence of board members perceived to be religious. Furthermore, this relationship is less pronounced if family firms operate in industries with high research and development intensity. Our study confirms that boards with high shares of religiously perceived directors are positively associated with the appointment of chief executive officers perceived to be religious during succession events. We thereby present a unique perspective that acknowledges perceived religiosity as a micro-level constituent shaping board membership and successor selection. This investigation captures the intricate interplay between religion and family firms under a socioemotional wealth umbrella, offering important insights to the family business ethics discourse. Our research also offers practical implications for board and leadership diversity management in family firms.

Keywords Family firms · Socioemotional wealth · Religious managers · Board of directors · Chief executive officer · Religious diversity

Introduction

Diversity within family firm boards has recently been associated with substantial digital transformation and growth (PwC, 2023), yet diversity in these boards remains limited (Mubarka & Kammerlander, 2022). This lack of diversity can be attributed to the desire to foster trust within the family coalition and promote a shared ethical understanding among leaders (PwC, 2023; Sorenson & Milbrandt, 2023), which results in using cognitive filters' and values' in executive decision-making (Carpenter et al., 2004). Although existing board diversity measures focus on observable variables (e.g., gender), deeper-level variables like religion and spirituality could also play a role in fostering this predominantly homogeneous leadership paradigm. After all, religious diversity has

generally been acknowledged as one aspect of workplace and leadership diversity (Corrington et al., 2020; Gebert et al., 2014), despite remaining empirically undetected in family firm literature thus far (Anglin et al., 2023; Astrachan et al., 2020; Carpenter et al., 2004; Gebert et al., 2014). If we understand the implicit mechanisms through which religiosity enters family firm businesses, knowledge gained in this domain holds promise for cultivating diverse leadership within family firms, particularly in terms of the intricate facet of religion as a deeper-level variable. We aim to fill this gap by empirically exploring family firms' leadership perceived religiosity through the lens of socioemotional wealth (SEW), a framework particularly prone to illuminate tacit family firm processes.

For well-discussed reasons, religion as a diversity dimension is not widely reported in the US (Alewell & Rastetter, 2020), and yet, it still somehow enters and affects business choices due to its nature as an informal variable (Migheli, 2022). A growing body of research recognizes that religious and spiritual concerns are an important denominator

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of business choices (Alewell & Rastetter, 2020; Alshehri et al., 2021; Gebert et al., 2014; Shen & Su, 2017) as well as ethical work practices (Fathallah et al., 2020). To illustrate, following a period of misconduct, firms are more likely to choose chief executive officers (CEOs) with degrees from religiously affiliated universities (Connelly et al., 2020). Studies have, however, yielded incoherent empirical knowledge regarding the impact of religion on family business operations, thus leaving a significant gap in understanding how religiosity integrates into the fabric of family firms (Astrachan et al., 2020; Reck et al., 2022; Shen & Su, 2017), particularly due to the elusive character of religion (Alshehri et al., 2021). Despite this vagueness, one salient understanding remains: By virtue of their controlling power, family members can more readily and effectively integrate their spirituality or religiosity than other stakeholders (Astrachan et al., 2020; Fang et al., 2013; Pieper et al., 2020; Sorenson & Milbrandt, 2023), especially when members participate in strategic decision-making through voting rights (Smith & Rönnegard, 2016).

Family firms maintain strong identities and are value-driven, with a pronounced desire for ethical behavior (Astrachan et al., 2020). Personal religious beliefs are observable and closely linked to perceived ethical behavior (Connelly et al., 2020; Parboteeah et al., 2008); individual religiosity could therefore potentially be used by family firm members as a favorable cue during choice processes of board members and succession events. Religion, defined as “any shared set of beliefs, activities, and institutions premised upon faith in supernatural forces” (Iannaccone, 1998, p. 1466), is a source of orientation for values and beliefs upon which family firm identity and business behavior can be based (Abdelgawad & Zahra, 2020). Albeit it is not directly visible (Gebert et al., 2014), family firm members rely on those disclosed elements of an otherwise invisible identity, henceforth called perceived religiosity.

This study aims to reveal why perceived religiosity could play such an important role in family business behavior by looking for explanations within SEW, one mechanism through which family members weave out non-economic worth (Chen et al., 2022; Gomez-Mejia et al., 2007, 2010), assuming that family firms do not focus solely on maximizing financial returns, but also aim to protect their affective endowment. For example, succession choices have previously been attributed to differences in family members’ SEW considerations (Minichilli et al., 2014). Drawing from SEW literature (e.g., Chen et al., 2022; Gomez-Mejia et al., 2010) and religiosity in family businesses (e.g., Astrachan et al., 2020), we conceive the relationship between family firms and religion as one way to conserve SEW. We empirically investigate how the family coalition’s relative power as a shareholder in a family firm, as proxied by family voting rights, affects perceived board and CEO religiosity.

We also consider industry research and development (R&D) intensity as a contingency factor, given that an environmental push for innovation may influence decision-making and appetite for risk (e.g. Jiang et al., 2015).

This paper responds to the call for more research on the intersection of family business, SEW, and religion (Cruz, 2013; Lu et al., 2021; Madison & Kellermanns, 2013; Paterson et al., 2013; Shen & Su, 2017) by investigating (1) the relationships between family voting rights and perceived board religiosity as well as perceived board religiosity and CEO religiosity during succession events; (2) other external and contextual determinants of the relationship between family voting rights and perceived board religiosity, namely, industry R&D intensity; and (3) how and why religion weaves itself into family firm business mechanisms. We rely on a cross-industry sample of more than 900 firm-year observations of US listed family firms between 2009 and 2018. Our findings indicate that stronger family voting rights have a positive relationship with board members’ perceived religiosity, and this relationship is attenuated by the industry’s R&D intensity. By extension, board members’ perceived religiosity positively affects the CEO’s perceived religiosity in succession events.

Our work advances three research strands: (1) religiosity in connection with SEW in family firms, (2) micro-level components of successor choice in family firms, and (3) boundary conditions of religiosity in family firms. Family firm and SEW literature has proposed that SEW and religiosity are related (Vazquez, 2016). We contribute to this stream by empirically showing manifestations of this relationship through perceived board and CEO religiosity. The SEW literature further seeks greater knowledge about the mechanisms underlying the relationship between family governance and religion (Astrachan et al., 2020; Chen et al., 2022; Shen & Su, 2017). We fill this research gap by showing that perceived religiosity plays a role in family business practices through its impact on successor choice. We complement dynastic succession research (Cai et al., 2019; Connelly et al., 2020; Damaraju & Makhija, 2018) by empirically unveiling another antecedent of successor choice: perceived religiosity among board members (Lu et al., 2021). We further show that industry R&D intensity serves as a boundary condition for the relationship between family voting rights and the presence of board members with perceived religiosity, thereby explaining the numeric differences of individuals perceived as religious in family firms. On the practical side, the empirical evidence of how religion weaves itself into succession mechanism contributes to the debate on the integration of religion as a dimension in diversity management (Alewell & Rastetter, 2020; Bendig & Ernst, 2023). Our study suggests that leaders’ increased awareness and sensitivity to the influence of their religiosity on business decisions can foster ethical management

competencies and promote ethical alignment among employees within family firms (Beugelsdijk & Klasing, 2016; Fathallah et al., 2020).

Theory and Conceptual Background

Family Firms, the Socioemotional Wealth Perspective, and Religion

Theoretically deriving the underlying reasons for family firms' distinct behavior, Gomez-Mejia et al., (2007, 2011) introduced the seminal SEW perspective. SEW prescribes that family firms tend to focus on "non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gomez-Mejia et al., 2007, p. 106). Berrone et al., (2012, p. 259) pointed to "gains or losses in SEW [as] the pivotal frame of reference that family-controlled firms use to make major strategic choices and policy decisions." Building on Gomez-Mejia et al.'s (2007) initial SEW concept and research from the social sciences, Berrone et al. (2012) proposed that SEW is likely a multidimensional construct. They consequently introduced the FIBER scale, comprising "family control and influence, identification of family members with the firm, binding social ties, emotional attachment of family members, and renewal of family bonds to the firm through dynastic succession" (Berrone et al., 2012, p. 259). These SEW dimensions are helpful because they reflect families' different values on some affective outcomes compared to others (Debicki et al., 2016), leading to family firm heterogeneity (Li & Daspit, 2016), including board members' different choices. In fact, family firm behavior depends on the degree of family involvement in governance and the types of SEW objectives (Li & Daspit, 2016). Although one approach to understanding family firm behavior—namely, SEW—has been established (Gomez-Mejia et al., 2007, 2011), the manifestation of SEW in family firms remains only partially understood (Chen et al., 2022; Chrisman & Patel, 2012; Chua et al., 2012; Li et al., 2021; Ng et al., 2019).

Meanwhile, religion as a formative influence in family firms in interplay with SEW has attracted growing attention (e.g., Barbera et al., 2020; Shen & Su, 2017). Religious identity has been described as one key source of SEW, which lends support to the idea that religion could also lead to differences in family firms. Yet, the mechanisms underlying the relationship between family governance and religion (Astrachan et al., 2020; Barbera et al., 2020; Shen & Su, 2017) should be clarified. Knowledge about the relationship between religion and family business behavior is just starting to develop, but further research in this area has

been in demand for some time (Cruz, 2013; Fathallah et al., 2020; Madison & Kellermanns, 2013; Paterson et al., 2013; Pieper et al., 2020). This research gap is closely related to a second one seeking to understand the antecedents of successor choice, particularly of top-level executives (Smith et al., 2021), through micro-level analysis (Lu et al., 2021). Exploring these two interconnected lacunae, as in the present paper, may offer valuable insights for theorizing about family firms. Table 1 summarizes the results of previous work and presents insights into the research questions, methodological approaches, key findings, and remaining research gaps.

When deconstructing SEW and understanding its psychological underpinnings, several similarities between SEW-led and religious behavior become apparent: a high (need for) social capital (Granqvist, 2014, for religion; Berrone et al., 2012, Chen et al., 2022, and Sorenson & Milbrandt, 2023, for SEW), a high sense of shared civic responsibility for altruistic or recognition purposes (McGuire et al., 2012, and Monsma, 2007, for religion; Chen et al., 2022, and Li et al., 2015, for SEW), the creation of intergenerational wealth (Keister, 2008, for religion; Habbershon & Pistrui, 2002, for SEW), and resilience and empowerment (Pieper et al., 2020, for both religion and SEW). Just as there are mixed results on family firms and ethical behavior (e.g., Vazquez, 2016), the results on religiosity and ethical behavior are mixed (e.g., Parboteeah et al., 2008). This underscores the need for more research.

Successor Selection and Perceived Religiosity

Management and ethics literature does not offer a cohesive picture of religious beliefs' effects on individual behavior (Alshehri et al., 2021). When considering only its positive impact, people perceive religiosity as an indicator of more ethical behavior (Alshehri et al., 2021; Connelly et al., 2020; Hungerman, 2014) and greater spiritual capital, referring to human and social capital, and devotion to a mission (Abdelgawad & Zahra, 2020). Furthermore, religious people tend to be more empathetic (Markstrom et al., 2010), report higher feelings of love and compassion (Smith, 2008), are less impulsive (Francis, 1992), and promote the conservation of social order (Schwartz, 1992). Activating guilt on an emotional basis could explain why religious priming leads to ethical behavior (Sulaiman et al., 2022). Hence, ethical decision-making processes can result from, among other integral factors, an individual's religiosity in private, in public, and in the workplace (Singhapakdi et al., 2000). Differences in ethical judgment can also occur between religiously perceived leaders. Current knowledge relates these differences to the principle of relativism among managers, which is a person's belief about whether moral principles should be followed irrespective of circumstances (Oumlil & Balloun, 2009) and different views of God (hope, fear, and balanced)

Table 1 Key literature on the intersection among SEW, religion, and succession mechanisms in the family firm context

Topic	Articles	Methodological approach(es)	Research question	Key findings	Identified research gap
Key literature on SEW, succession, and religious characteristics	Cui et al. (2015)	Quantitative empirical	Conclusive evidence of advantages of diversity? (inferred)	Religion influences a firm's position on workforce diversity and corporate social responsibility concerning diversity initiative investment	Identify (dis-)advantages of diversity impact; establish an empirical relationship between distinct religious affiliations of top management teams and their firms' diversity engagement
	Damaraju & Makhija (2018)	Quantitative empirical	What is the role of caste/religion in CEO selection in India? (inferred)	Caste/religion relates to CEO selection (i.e., as a form of information or positive discrimination)	Investigate the effects of caste/religion on CEO compensation
	Lu et al. (2021)	Quantitative empirical	What is the relationship between CEO traditionalism, personality characteristics, and successor choice? (inferred)	Family firm founders' religiosity is conducive to their succession intention	Understand micro-foundations (e.g., CEO individual characteristics) in relation to intrafamily succession
Key literature on family firms, SEW, and religion	Abdelgawad and Zahra (2020)	Quantitative empirical	What is the role of religious identity in strategic renewal in privately held founder family firms? (inferred)	Religious identity determines family firms' spiritual capital	Conditions that make religious identity beneficial for the family; understand the connection among religion, performance, and SEW; research how the family imbues the firm with religiosity; integrate SEW and firm performance into religiosity in family firms
	Minichilli et al. (2014)	Quantitative empirical	How do family owners' concerns about protecting their SEW endowment relate to the relationship between CEO succession and financial performance? (inferred)	Outside, non-family CEO choice represents mechanisms through which SEW and financial concerns are balanced	Analyze larger and longitudinal datasets; theorize along FIBER dimensions; understand characteristics that lead to successor choice
	Reck et al. (2022)	Qualitative empirical	How does employees' identification with a family firm shape internal ethical decision-making processes? (inferred)	Identity processes influence how employees cope with ethical situations	Understand aspects of identity in family firms and ethical behavior better
Key literature on family firms and religion	Barbera et al. (2020)	Qualitative empirical	"How did a single, multigenerational business family successfully enact their religious values in their business?" (p. 661)	Religious values enhance family cohesion, are manifested in leadership style, and are transmitted through intergenerational succession	Clarify the processes through which ethical behavior and religious values are associated in family firms; advance with quantitative study

Table 1 (continued)

Topic	Articles	Methodological approach(es)	Research question	Key findings	Identified research gap
	Jiang et al. (2015)	Quantitative empirical	"Do family firms with religious founders have less risk than other family firms?" (p. 260)	Firms in China that adhere to Western religions invest less in fixed and intangible assets and have less leverage. Contributions to the literature on religion and risk-aversion	Understand the link between religiosity and investment behavior in studies outside the Chinese context; map out the channels through which religiosity comes into effect
	Pieper et al. (2020)	Quantitative empirical	"How does religiosity affect family business goals?" (p. 759)	Higher religiosity leads to short-term and long-term goal orientation. Greater effect on and greater variance in the long term	Explore how to employ accurate measures of religiosity; account for effects on business activities; show how religiosity impacts other organizational stakeholders
	Shen and Su (2017)	Quantitative empirical	"Will SEW affect succession in interaction with religion?" (p. 151)	"(Firms with religious founders have higher intentions for ownership succession and management succession, more intangible assets, longer firm age, larger firm size, and higher return on equity, and are more leveraged than firms without religious founders." (p. 156)	Explain the relationship between religion and succession outside of the Chinese context
	Sorenson and Milbrandt (2023)	Qualitative empirical	"How do family business owners strengthen family social capital?" (p. 702)	Family firm owners use family faith to sustain and establish ethical norms as well as social capital	Research the role of family faith in promoting family business ethics with a quantitative approach

(Alshehri et al., 2021). Yet religious individuals also tend to be more risk-averse (Miller & Hoffmann, 1995) and less innovative (Bénabou et al., 2015) than non-religious people. Bendig and Ernst (2023) observe a correlation between the prevalence of religious directors on corporate boards and a decrease in both the filing and citation of digital patents.

The manifestation of religion in individuals is multidimensional. However, “most of these dimensions are variants of cognitive (knowing), affective (feelings), and behavioral (doing) components” (Parboteeah et al., 2008, p. 389). Parboteeah et al. (2008) found that affective and behavioral components were linked to individuals’ willingness to justify unethical behavior, while the cognitive component did not reveal differing results; meanwhile, belief in church authorities revealed more ethical behavior while belief in religion did not. Hence, the behavioral aspect of religion, as measured in this research, is particularly important when understanding ethically favorable behavior. It also elaborates on the idea that behavior is perceivable and allows family members to identify micro-characteristics on which board member choice can be based (Connelly et al., 2020). Religiosity as perceived through behavior may more readily identify identical interests, make moral behavior more predictable, and help establish goal alignment (Pieper et al., 2020).

“Recognizing that social psychological approaches can provide greater understanding of the human nature behind SEW phenomena” (Jiang et al., 2018, p. 141), the observation that perceived religiosity can be a marker in decision-making processes has been previously explained through several different approaches: attribution theory (Jiang et al., 2018; Weiner, 1985), developed to explain perceptions of responsibility; expectancy theory (Li et al., 2015), asserting the perceived probability that perceived religiosity in successors will lead to a positive outcome; social trust theory (Qiu et al., 2022), suggesting a mechanism in decision-making processes favors moments of trust; and image theory (Connelly et al., 2020), which is the idea that, in decision-making events, schematic knowledge structures help choose the best-fitting option according to value, trajectory, and strategy. Likely, all of these social psychological explanations influence family coalitions’ decision-making and lead to all but the same outcome: a greater number of religiously perceived top personnel in family firms.

Interplay of Family Coalitions and Board Members’ Perceived Religiosity

One of the most important stakeholder groups in a firm is the board of directors, which “monitor[s] managers on behalf of shareholders” (Hillman & Dalziel, 2003, p. 384). Choosing board members carefully is important

for the family’s link to the business, but also for family shareholders, because board features may affect both firm and social performance (Tenuta & Cambrea, 2022) and can set the tone for overall ethical behavior (Di Miceli da Silveira, 2022).

Previous research has discussed the link between ethical and faith-based values. This section provides a brief overview of religious individuals’ tendency toward ethical and risk-averse behavior. First, religious managers are expected to behave more ethically than their non-religious counterparts, while family firms want to ensure that they are not “perceived by others as behaving unethically or against the best interests of the community” (Adams et al., 1996, p. 161). The public perceives ethical behavior positively, and founding families are “quite sensitive about the external image they project to their customers, suppliers, and other external stakeholders” (Berrone et al., 2012, p. 262). Therefore, family firms may perceive any public condemnation as particularly harmful (Westhead et al., 2001). Grullon et al. (2010) demonstrated that a religious environment prevents corporate misbehavior among firms. Firms in religious geographies are “less likely to backdate options, practice aggressive earnings management, and be the target of class action securities lawsuits” (Grullon et al., 2010, p. 1). Moreover, Du (2013) indicated that religiosity is positively related to firms’ tendencies to engage in philanthropic giving. Sorenson and Milbrandt (2023) found that family businesses attend to community outreach and care.

Religious managers are also generally less likely to engage in risky behavior that could negatively affect the SEW of the owner family. Cai et al. (2019) investigated earnings management risks, Callen and Fang (2015) focused on stock price crash risk, Ma et al. (2020) explored accounting risks, Amin et al. (2021) studied workplace incidents risks, and Connelly et al. (2020) examined risks for corporate misconduct. All these studies found a negative relationship between the level of religiosity, either at the firm or individual level, and the propensity to take undesirable risks. Taken together, a board’s composition and behavior can affect the family’s SEW.

Although employing family members on the board of directors is considered a successful strategy to protect a family’s SEW, family coalitions may also endorse non-family board members if such directors behave consistently with the expectations of the founding family. Board members and CEOs perceived to be religious could be considered an aspect of SEW flow, meaning that the hiring of religiously perceived CEOs and board members can be adjusted to maintain and create SEW as a stock (Chua et al., 2015; Gómez-Mejía et al., 2007).

To fully understand the effect of religiosity, we refer to the five FIBER scale dimensions – namely, “family control

Socioemotional wealth dimensions		Relationship with perceived board religiosity
F	Family control and influence	<i>No or very limited relationship between perceived board religiosity and family control and influence.</i>
I	Identification of family members with the firm	
B	Binding social ties	
E	Emotional attachment	Expectation, that perceived board religiosity results in ethical and risk-averse behavior, thereby strengthening families' identification with the firm, building up social ties, and increasing their emotional attachment.
R	Renewal of family bonds	
		<i>No or very limited relationship between perceived board religiosity and renewal of family bonds.</i>

Fig. 1 Overview of the five FIBER scale items (Berrone et al., 2012) and role of perceived board religiosity in families' SEW considerations

and influence, identification of family members with the firm, binding social ties, emotional attachment of family members, and renewal of family bonds to the firm through dynastic succession" (Berrone et al., 2012, p. 259). Figure 1 offers an overview of the five SEW dimensions based on Berrone et al.'s (2012) work and highlights which of the five dimensions are particularly important as a mechanism of the relationship between family voting rights and board religiosity as well as which dimensions are less of a mechanism and more of an assumption.

Perceived religiosity here acts as a proxy for the identification of characteristics connected to the three middle dimensions (i.e., identification of family members with the firm, binding social ties, emotional attachment). These three dimensions describe the dominant coalition's "willingness" to pursue SEW (Swab et al., 2020), thereby referring to active practices through which SEW can be secured. We posit that the mechanisms in these three dimensions particularly connect the occurrence of religious board members with family ownership, as religious board members likely strengthen a family's identification with the firm, enhance binding social ties, and protect the family's emotional attachment to the firm. We posit that family coalitions favor board members with perceived religiosity, because "religion is significantly negatively (positively) associated with expense ratio (asset utilization ratio), the positive (reverse) proxy for owner-manager agency costs" (Du, 2013, p. 1). The readiness for social trust, as an informal mechanism in social systems, appears

higher due to this association (Lu et al., 2021; Qiu et al., 2022).

Concerning the first (family control and influence) and last (renewal of family bonds to the firm through dynastic succession) FIBER scale dimensions, we posit that the presence of religious board members may not serve any protective or destructive purpose but positions the family's "ability" through which the dominant coalition acts and controls. However, this does not imply that the family is willing to do so (Swab et al., 2020). We follow recent research (Swab et al., 2020) positioning these two dimensions less as a mechanism and more as a core assumption suggesting that these must exist for families to exert control over SEW concerns. Hence, we expect the tendency of families to have religious executives on their boards to be stronger when their equity ownership allows them to substantially impact the board's composition. Taken together, we conclude that having religious executives on a board can help families protect their SEW.

We propose that the family owner's choice of board members is influenced by the perceived probability that selecting religious individuals will lead to a positive outcome for SEW and that strong family ownership tends to place higher values on such outcomes (Li et al., 2015). Therefore, we posit:

Hypothesis 1 Family voting rights are positively associated with a higher presence of board members with perceived religiosity.

Moderating Role of an Industry's R&D Intensity on the Relationship Between Family Voting Rights and Perceived Board Religiosity

Previous research underscores the relevance of boundary conditions for strategic decision-making (Carpenter et al., 2004; Cooper et al., 2014; Eroglu & Hofer, 2014; Feng et al., 2017; McNamara et al., 2008; Sharfman, 1991) and that particularly industry conditions affect firm outcomes (Carpenter et al., 2004). We expect that the main relationship put forth in this research, based on changes in micro-level leadership characteristics (Lu et al., 2021), could also be impacted by occurrences within the surrounding industry. Moreover, those industry characteristics—in this case, industry R&D intensity—are expected to play a role in the relationship between family voting rights and board religiosity that are contrary to those characteristics often connected with religious individuals.

Interestingly, previous research describes religious individuals as risk-averse (e.g., Jiang et al., 2015). R&D investment goes toward intangible assets and has uncertain payoffs, which is difficult to unite with risk-averse religious individuals (Jiang et al., 2015). Insular and non-pluralistic religious family identities can turn into behavioral rigidity, leading to the rejection of innovative developments (Abdelgawad & Zahra, 2020; Gilbert, 2005). Analogously, when it comes to top personnel's opportunity-seeking behavior, in countries with prevailing Christian values, international market entry modes tend to be less opportunistic (Li, 2008) and show lower investment rates (Hilary & Hui, 2009). Indeed, Shen and Su (2017) described religious firm founders as potentially risk-averse, preferring succession inside the family or at least successors they can trust. Recent research further indicates that CEOs who attended a religious college tend to take fewer risks; this effect is even stronger in firms with board members pre-exposed to religion (Chen et al., 2023). Studies uniformly show that firms located in religious geographies or employing religious CEOs are generally less prone to risky behaviors related to investments and tend to emphasize business ethics as a corporate priority (Jiang et al., 2015).

Uniting the SEW perspective with religion, we propose that industry R&D intensity weakens the relationship (Hypothesis 1) because religiosity is associated with limited innovation focus (Bénabou et al., 2015) and with values such as social capital, traditionalism, and security (Saroglou et al., 2004). On one hand, due to the contingency relationship (Carpenter et al., 2004), an industry with greater R&D intensity should attract a smaller share of individuals with perceived religiosity. On the other hand, family firms operating in an industry characterized by greater R&D intensity might prioritize leaders with risk-positive behavior over those with perceived religiosity. Therefore, we posit:

Hypothesis 2 The positive relationship between family voting rights and the share of board members with perceived religiosity is attenuated by greater industry R&D intensity.

The Board–CEO Relationship: Influence of Perceived Religiosity During Succession Events

CEO succession in family firms is more than a business decision because of the possible implications on family members' SEW (Minichilli et al., 2014). Interestingly, CEO succession from outside the firm origin shows a performance advantage when the CEO is socio-demographically and socio-psychologically similar to incumbent executives (Georgakakis & Ruigrok, 2017; Zajac & Westphal, 1996). Board members appoint CEOs similar to themselves in terms of social caste (Damaraju & Makhija, 2018). Especially when the family's role and their wish to create a family dynasty are strong, a CEO's "role and behavior can be viewed as reflection of the family's goals" (Lu et al., 2021, p. 228). Value congruence must therefore be particularly high (Lu et al., 2021). Considering perceived religiosity as a proxy for value congruence, we expect to see a positive relationship between a board of directors with higher perceived religiosity and religious CEOs, as the board of directors is also responsible for initiating and conducting CEO succession if required (Pitcher et al., 2000). Executives' decisions might be biased in this regard (Carpenter et al., 2004) according to attribution, expectancy, and social trust theory.

Another reason for biased choice lies in sociopolitical considerations. Most prominently, board members utilize governance structures to ensure oversight control. For example, boards establish appropriate reporting cycles and remuneration structures. Board members can also prevent potential operational issues by appointing CEOs whom they expect to minimize unlawful and unethical behavior. As previously elucidated, religiosity is generally associated with more ethical and risk-averse behavior. Specifically, Connelly et al. (2020) showed that religious CEOs are less likely to engage in corporate misconduct while Cai et al. (2019) demonstrated that religious CEOs less often participate in earnings management. Considering the social psychological and sociopolitical mechanisms, we anticipate that religious board members are more likely to appoint religious CEOs during succession events. Therefore, we posit:

Hypothesis 3 In family firm succession events, board members' perceived religiosity is positively related to the appointment of CEOs also perceived as religious.

Data and Methods

Sample

For our analysis, we created a sample of all family firms from the S&P 500 index between 2009 and 2018. This index constitutes an appropriate context for our study due to its common application in longitudinal family firm research (Anderson & Reeb, 2003a, 2003b, 2004; Jaskiewicz et al., 2017) and the availability of high-quality financial data to construct rigorous control variables. The time period allows us to start our sample after the 2008 financial crisis to mitigate potential biases related to this outlier period (Lins et al., 2013). We also cover ten years, which is in line with other longitudinal family firm studies (Chrisman & Patel, 2012; Dyer & Whetten, 2006). Finally, to ensure timeliness, we chose 2018 as the last year for our sample as it was the most current data available when we commenced the data collection.

We followed Anderson and Reeb (2003a, 2003b, 2004) to consider two data points to identify the family firms: the founding family's managerial involvement in the company and their equity ownership. When analyzing differences across family firms, we did not apply any minimum ownership threshold for including firms in our sample. We posit that founding families can significantly influence firms' operations even with limited fractional ownership (Gomez-Mejia et al., 2011). A broad family firm definition ensured a heterogeneous sample of companies with varying degrees of family ownership. Of the 745 constituents listed in the S&P 500 for at least one year between 2009 and 2018, we identified 259 family firms following the abovementioned approach. However, we could not obtain sufficient data points for 112 of these, leaving a total of 147 family firms and 986 firm-year observations for our analysis.

Measures

Family Voting Rights

We manually collected family voting rights information from proxy statements and annual reports to approximate the relative power of a given family coalition. In cases where voting rights were dispersed across relevant family shareholders and therefore not easily identifiable (e.g., due to changed surnames after marriages), we conducted desktop research to identify all family shareholders. We then divided the number of family members' shares by all outstanding shares to construct the fractional score (Villalonga & Amit, 2006) between 0 and 1. Family voting

rights is an appropriate indicator for the power of a family coalition in a family firm as shareholder voting rights are associated with direct control over a firm, including the ability "to elect and dismiss the board of directors" (Smith & Rønnegard, 2016, p. 468).

Board Members' and CEOs' Perceived Religiosity

A precise definition of "religiosity" is difficult to establish due to the inherent subjectivity of religious practice and experience (Smith et al., 2021). Although the "definition and operationalization of [...] religion" (Smith et al., 2021, p. 3) will likely remain a long-term issue in management research, the objective of this study does not require us to measure the actual, multifaceted religious convictions of board members and CEOs in our sample. Connelly et al. (2020) clarified that religious individuals are considered more ethical by others (Bailey & Young, 1986; Gervais et al., 2011), regardless of whether their religious beliefs have been "explicitly stated" or "implied via an external indicator" (Connelly et al., 2020, p. 9). We posit that family coalitions cannot rely on explicit statements to assess the religiosity of executives because faith and religion are sensitive topics seldom discussed in the corporate context. Still, as outlined in our theory, executives exhibit observable clues that prompt family coalitions to perceive them as religious and ultimately judge them as "more moral, ethical, and trustworthy" (Connelly et al., 2020, p. 9).

To measure whether a given executive is perceived as religious, we built on two external behavioral indicators (Bendig & Ernst, 2023). First, we leveraged BoardEx and Bloomberg to identify the undergraduate university from which the respective executives graduated. We then used the publicly available Integrated Postsecondary Education Data System (IPEDS) to discern which universities are religiously affiliated (Cai et al., 2019; Connelly et al., 2020). For our second indicator, we "utilize[d] BoardEx to identify 'Other activities' of all board directors outside their professional careers" (Bendig & Ernst, 2023, p. 8). BoardEx aggregates leisure activities mostly from public sources, suggesting that this information is also readily available to family coalitions. To identify religious leisure activities, we used a dictionary with religious words to conduct an automated text analysis of all leisure activities, as has been previously done (Bendig & Ernst, 2023). If an executive graduated from a religiously affiliated university or participated in a religious leisure activity, we classified them as "perceived as religious." For the board of directors, we then calculated the share of directors perceived as religious. In line with previous research, we disregarded all firm-years for which we could not assess at least two-thirds of all board members (Jensen & Zajac, 2004; Zajac & Westphal, 1996).

Industry R&D Intensity

Numerous studies have leveraged R&D expenditures to quantify firms' appetite for innovation (Banker et al., 2011). To measure *industry R&D intensity*, we followed Osborn and Baughn (1990) and Saboo et al. (2016), dividing the aggregated R&D expenses in US dollars for each Standard Industrial Classification (SIC) code by the aggregated sales in US dollars for the same industry. Following prior research, "we set R&D expense to zero if it is missing or not reported" (Bansal et al., 2017, p. 7).

Succession Events

To test Hypothesis 3, we identified 126 CEO succession events for the family firms in our sample between 2009 and 2018 through BoardEx.

Control Variables

We controlled for *firm size*, as size often influences governance mechanisms (Bammens et al., 2008), *capital intensity* because resource allocations are related to strategic priorities in family firms (Patel & Cooper, 2014), *leverage ratio* due to its relationship with ownership and board characteristics in family firms (González et al., 2013), *firm performance* as top management team changes are related to prior performance issues (Finkelstein & Hambrick, 1996), and *firm age* due to its potential influence on the relationship between firm ownership and performance in family firms (Anderson & Reeb, 2003a, 2003b). Finally, to control for the religious environments of firms in our sample, we included the share of religious adherents in the US county housing the firm's headquarters, referred to as *community religiosity* (Callen & Fang, 2015; Hilary & Hui, 2009).

At the board level, we controlled for *board size* (Jaskiewicz & Klein, 2007), *board independence* (Jones et al., 2008), and *average age of the board* (Wilson et al., 2013), as these characteristics influence firm behavior in family firms (Daspit et al., 2018).

We winsorized all explanatory variables at the 1% level at both tails to eliminate outliers. We also lagged all variables by one year (Jeong & Harrison, 2017; Wassmer et al., 2017) to address potential simultaneity issues. Table 2 presents an overview of the variables, their operationalization, and their respective sources.

Methods

To test Hypotheses 1 and 2 (*family voting rights* and *board members' perceived religiosity*, moderated by *industry R&D intensity*), we chose a model relying on generalized estimating equations (GEE), which is a "widely used

statistical method in the analysis of longitudinal data [...], allowing for the correlation between repeated measurements on the same subject over time" (Cui, 2007, p. 209). For our GEE model, we specified a Gaussian distribution of the dependent variable with an identity link function. We specified an exchangeable correlation structure (grouped by firm) and robust standard error estimations and included year-fixed and industry-fixed effects. To test Hypothesis 3 (*board members' perceived religiosity* and *CEO's perceived religiosity*), we use a probit regression model following Connelly et al. (2020) with year-fixed effects.

Analysis and Results

Table 3 presents the descriptive statistics and bivariate correlations. We conclude that multicollinearity is likely not an issue. We find a mean variance inflation factor (VIF) of 1.19 and no VIF exceeding 2 (Henseler et al., 2015).

Family Voting Rights and Board Members' Perceived Religiosity

After introducing all control variables (Model 1, Table 4), we included our independent variable *family voting rights* (Model 2, Table 4) and subsequently our moderator variable *industry R&D intensity*, including its interaction term (Model 3, Table 4). In Model 2, *family voting rights* is positively associated with *board members' perceived religiosity* ($\beta = 0.12, p = 0.001$), supporting Hypothesis 1; this positive relationship is attenuated by *industry R&D intensity*, as indicated by the interaction term in Model 3 ($\beta = -1.46, p = 0.049$), supporting Hypothesis 2. Although only one reported control variable is statistically significant at the 5% level, 25 unreported industry control variables are statistically significant.

To further investigate the effect of *industry R&D intensity* on the relationship between *family voting rights* and *board members' perceived religiosity* (Hypothesis 3), we graphically plotted the marginal effect of our moderator variable in Fig. 2. We conducted a slope test (see Table 5), confirming that the slopes for high and medium values of *industry R&D intensity* are significantly different from zero ($p < 0.01$) while the slope for high values of *R&D intensity* is not.

Board Members' Perceived Religiosity and CEOs' Perceived Religiosity in Succession Events

To test whether *board members' perceived religiosity* is positively associated with the appointment of CEOs perceived to be religious in succession events (Hypothesis 3), we first ran a model with only control variables (Model 1, Table 6), then included the independent variable *board*

Table 2 Overview of variables and data sources

Variable	Description	Data source
(1) Family voting rights	Number of shares owned by the founding family or individual divided by the total number of shares	Annual reports & 10-K reports
(2) Board members' perceived religiosity	Proportion of board members perceived as religious based on undergraduate university and leisure activities for a given year	BoardEx and IPEDS
(3) CEO's perceived religiosity	Binary score for CEO indicating whether he/she graduated from a religiously affiliated university or participated in a religious leisure activity	BoardEx and IPEDS
(4) Industry R&D intensity	Industry-wide expenses for R&D divided by the industry-wide sales; industry is defined here by each Standard Industrial Classification (SIC) code	Compustat
(5) Firm size	Logarithm of number of employees	Compustat
(6) Capital intensity	Logarithm of value of property, plant, and equipment (PPE) divided by total assets	Compustat
(7) Leverage ratio	Sum of debt (long- and short-term) divided by shareholders' equity	Compustat
(8) Firm performance	Tobin's Q calculated as market value of equity divided by value of assets	Compustat
(9) Firm age	Duration since company's incorporation	Compustat
(10) Community religiosity	Proportion of religious adherents among all residents in the US county in which a firm's headquarters is located Hilary & Hui (2009)	ARDA
(11) Board size	Number of board members	BoardEx
(12) Board independence	Share of independent board members	BoardEx
(13) Average board age	Average age of all board members	BoardEx
(14) Non-family board members' perceived religiosity	Proportion of board members perceived as religious and not a member of the founding family, based on undergraduate university and leisure activities for a given year	BoardEx and IPEDS
(15) Financial performance	Return on assets (net income divided by assets), logarithm of revenue, and market share (firm sales divided by all sales in a given SIC code) in a given year	Compustat
(16) Firm R&D intensity	Company R&D expenses divided by company sales in a given year	Compustat
(17) CEO age	Number of years since CEO's birth	Compustat
(18) CEO salary	Salary, excluding bonus and stock options, in USD in a given year	Compustat

Variables 14–18 only included in complementary analyses of this study

ARDA association of religion data archives, IPEDS integrated postsecondary education data system

members' perceived religiosity (Model 2, Table 6). In Model 2, *board members' perceived religiosity* is positively associated with the appointment of CEOs also perceived as religious ($\beta = 3.42$, $p = 0.000$), supporting Hypothesis 3. We found only one reported control variable to be statistically significant at the 5% level, but three unreported year control variables are statistically significant.

Complementary Analyses

CEO's Perceived Religiosity and Financial Performance

As religiosity is related to financial performance, such as return volatilities (Hilary & Hui, 2009) and stock price crash risks (Callen & Fang, 2015), we assessed whether CEO's perceived religiosity is potentially related to the financial performance of family firms.¹ To test this

hypothesis, we utilized three indicators to measure the financial performance of the family firms in our sample: return on assets, logarithm of revenue, and market share. We further introduced the *age* (Peni, 2014) and *salary* (Chang et al., 2010) of the CEO as relevant control variables because prior research has established these CEO characteristics as relevant for firm performance. We introduced *R&D intensity* given its relationship with financial performance (Teirlinck, 2017), market value (Ehie & Olibe, 2010), and firm growth (Kancs and Siliverstovs, 2016). Table 2 presents the operationalization and sources of these additional control variables. Using a fixed-effects regression model with robust standard errors, we initially did not find any significant relationship between

¹ We would like to thank an anonymous reviewer for this hint.

Table 3 Descriptive statistics and bivariate correlation

Variables	Min	Mean	Max	S.D	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Family voting rights	0.00	0.18	1.00	0.25	1.00												
(2) Board members' perceived religiosity	0.00	0.19	0.71	0.14	-0.01	1.00											
(3) CEO's perceived religiosity	0.00	0.15	1.00	0.35	0.03	0.31***	1.00										
(4) Industry R&D intensity	0.00	0.03	0.20	0.06	-0.20***	-0.13***	0.00	1.00									
(5) Firm size	-1.41	2.76	5.83	1.42	0.14***	-0.05	0.10***	-0.23***	1.00								
(6) Capital intensity	-4.98	-1.41	0.50	1.24	0.05	-0.09***	-0.07***	-0.07***	0.29***	1.00							
(7) Leverage ratio	-9.90	0.62	18.71	2.10	0.09***	0.00	0.06*	-0.08**	0.01	0.03	1.00						
(8) Firm performance	0.85	2.28	8.19	1.41	0.05	-0.11***	-0.10***	0.30***	-0.05	0.13***	-0.05*	1.00					
(9) Firm age	0.00	24.7	55.00	14.23	0.00	0.12***	0.14***	-0.18***	0.26***	0.16***	0.10***	-0.14***	1.00				
(10) Community religiosity	0.33	0.5	0.74	0.10	-0.24***	0.24***	-0.04	-0.06*	-0.19***	0.12***	-0.08**	-0.07**	0.02	1.00			
(11) Board size	6.00	10.51	18.00	2.26	0.10***	-0.07**	0.05	-0.09***	0.35***	0.01	0.04	-0.12***	0.33***	-0.14***	1.00		
(12) Board independence	0.57	0.96	1.00	0.07	-0.09***	-0.11***	-0.04	0.08**	-0.10***	-0.01	-0.04	0.04	-0.05	-0.10***	0.03	1.00	
(13) Average age board	50.14	61.60	69.92	3.83	0.07**	0.17***	0.06**	-0.07**	0.13***	0.06*	0.04	-0.09***	0.23***	0.04	0.13***	-0.01	1.00

Explanatory variables are lagged by 1 year

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$ $n = 986$

Table 4 Empirical results for family voting rights & board members' perceived religiosity

	Model 1 Controls only		Model 2 IV & controls		Model 3 Full model	
	Coeff (St. Err.)	P-value (z-value)	Coeff (St. Err.)	P-value (z-value)	Coeff (St. Err.)	P-value (z-value)
Family voting rights			0.12*** (0.04)	0.001 (3.41)	0.15*** (0.04)	0.000 (4.04)
Industry R&D intensity					− 0.14 (0.26)	0.575 (− 0.56)
Family voting rights × Industry R&D intensity					− 1.46* (0.75)	0.049 (− 1.96)
Firm size	0.01 (0.01)	0.515 (0.65)	0.01 (0.01)	0.492 (0.69)	0.01 (0.01)	0.426 (0.80)
Capital intensity	− 0.02 (0.01)	0.250 (− 1.15)	− 0.02 (0.01)	0.198 (− 1.29)	− 0.02 (0.01)	0.186 (− 1.32)
Leverage ratio	− 0.00 (0.00)	0.141 (− 1.47)	− 0.00 (0.00)	0.164 (− 1.39)	− 0.00 (0.00)	0.195 (− 1.30)
Firm performance	0.00 (0.00)	0.926 (0.09)	0.00 (0.00)	0.953 (0.06)	0.00 (0.00)	0.959 (0.05)
Firm age	0.00 [†] (0.00)	0.082 (1.74)	0.00 [†] (0.00)	0.063 (1.86)	0.00 [†] (0.00)	0.071 (1.81)
Community religiosity	0.41* (0.17)	0.016 (2.42)	0.45** (0.16)	0.005 (2.82)	0.43** (0.15)	0.005 (2.80)
Constant	− 0.04 (0.11)	0.731 (− 0.34)	− 0.07 (0.11)	0.497 (− 0.68)	− 0.06 (0.10)	0.541 (− 0.61)
Chi ² a)	15.27		17.66		21.60	
Industry-fixed effects	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	147		147		147	
N	986		986		986	

Explanatory variables are lagged by one year and winsorized at the 1% level

IV independent variable

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

a) We include industry- and year-fixed effects in all of our models, resulting in a large number of control variables. Therefore, Chi² is not reported in STATA. The Chi² herein represents Wald-tests conducted on variables of interest exclusively

CEO's perceived religiosity and any of the three financial performance measures (Models 1a–c, Table 7). We then substituted our CEO's perceived religiosity measure with amended variables indicating whether the CEO is perceived as Evangelical Protestant, Mainline Protestant, or Catholic. To obtain the relevant data for these additional analyses, we manually classified all universities and leisure activities into one of the three denominational categories. We found no significant results for Mainline Protestants (Models 2a–c, Table 7) or Catholics (Models 3a–c, Table 7), but CEOs perceived as Evangelical Protestants are positively associated with all three financial performance measures (Models 1–3, Table 8).

Family Voting Rights and Non-family Board Members' Perceived Religiosity

As our main analysis confirmed a positive relationship between family voting rights and board members perceived to be religious, we tested whether this positive relationship holds when only considering non-family board members (see Model 1, Table 9). Family firms regularly appoint family members (Claessens et al., 2000), potentially biasing our assessment for board members' perceived religiosity. We followed a similar approach as previously outlined, but considered only board members who are not a member of the founding family. We also introduced *board members' perceived religiosity* as an additional control variable. When rerunning the GEE regression (as outlined in the main

Fig. 2 Marginal effect of industry R&D intensity on relationship between family voting rights and board members' religiosity

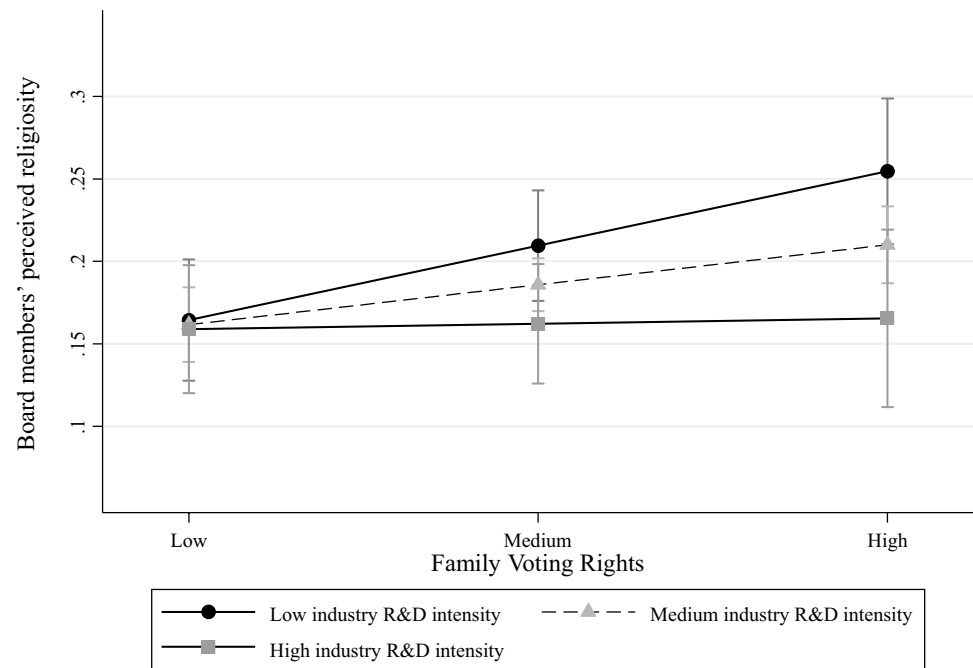


Table 5 Slope tests for industry R&D intensity

Family voting rights = FVR	Low FVR (Mean—1 SD)	Medium FVR (Mean)	High FVR (Mean+1 SD)
Low industry R&D intensity (Mean—1 SD)	0.1816745***	0.1816745***	0.1816745***
Medium industry R&D intensity (Mean)	0.0974136**	0.0974136**	0.0974136**
High industry R&D intensity (Mean + 1 SD)	0.0131528	0.0131528	0.0131528

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

analysis) with this new dependent variable, we obtained similar results as the main analysis, indicating that family voting rights are also positively associated with the share of non-family board members perceived as religious ($\beta = 0.08$, $p = 0.001$).

Additional Robustness Checks

We changed our regression model to a fractional logit regression (FLR) model (Model 2 in Table 9) optimized for fractional outcome variables (Villadsen & Wulff, 2021) and found significant results. Furthermore, we lagged all our explanatory variables by another year, producing similar results across all analyses (Model 3 in Table 9).

In addition, we mitigated potential omitted variable bias and selection bias in unreported models. We used Heckman (1979) selection models because “there can be unobservable firm characteristics that drive whether a firm experiences a succession event and the type of CEOs hired” (Connelly et al., 2020, p. 12). In the first-stage Heckman model, we included all relevant control variables and the *industry CEO succession ratio* as an exogenous variable to satisfy

the exclusion restriction. Following Connelly et al., (2020, p. 12), we posited that the “industry CEO succession ratio should not have a direct influence on the type of CEOs being hired.” We found a positive and significant coefficient for the industry CEO succession ratio in the first model ($\beta = 4.17$, $p = 0.000$). From this first-stage regression, we then calculated the inverse Mills ratio (IMR), which we integrated into our main regression model as an additional control variable. In this second-stage regression, the IMR is not significant ($\beta = -0.01$, $p = 0.884$), indicating that CEO succession events from our sample are likely not affected by selection bias.

We leveraged the two-staged least square (2SLS) approach (Angrist & Pischke, 2009) to test for potential omitted variable bias. We leveraged family cashflow rights as an instrument for our independent variable *family voting rights*. We argue that family cashflow rights have no direct effect on our dependent variable, making it a suitable instrument (Rossi, 2014). We further tested the suitability of our instrument by regressing it against our initial variable. We obtained significant values for our instrument ($\beta = 0.94$, $p = 0.000$) in the first stage and an increased

Table 6 Empirical results for board members' perceived religiosity

	Main analysis			Robustness checks		
	Model 1 Controls only		Model 2 IV & controls	Model 3 2-year lag		Model 4 Fixed effects
	Coeff (St. Err.)	P-value (z-value)		Coeff (St. Err.)	P-value (z-value)	
Board members' perceived religiosity			3.42*** (1.03)	2.08* (0.93)	0.025 (2.24)	4.86*** (1.16)
Firm size	−0.03 (0.10)	0.760 (−0.31)	−0.01 (0.10)	−0.03 (0.11)	0.778 (−0.28)	0.033 (2.16)
Capital intensity	−0.23† (0.14)	0.100 (−1.65)	−0.23† (0.13)	−0.29* (0.12)	0.017 (−2.38)	0.186 (1.33)
Leverage ratio	−0.08 (0.09)	0.368 (−0.90)	−0.12 (0.09)	0.10† (0.05)	0.072 (1.80)	0.013 (−2.52)
Firm performance	−0.04 (0.09)	0.655 (−0.45)	−0.05 (0.09)	0.02 (0.09)	0.861 (0.18)	0.020 (2.35)
Firm age	0.01 (0.01)	0.569 (0.57)	0.00 (0.01)	0.01 (0.01)	0.207 (1.26)	−0.03*** (0.01)
Community religiosity	−2.29 (1.42)	0.106 (−1.62)	−2.87* (1.44)	−2.53† (1.52)	0.096 (−1.67)	0.001 (−3.58)
Board size	−0.03 (0.08)	0.716 (−0.36)	0.02 (0.08)	0.01 (0.07)	0.905 (0.12)	0.995 (0.01)
Board independence	−1.14 (1.79)	0.524 (−0.64)	−1.44 (1.84)	−0.53 (1.74)	0.762 (−0.30)	17.63*** (3.60)
Board average age	0.01 (0.04)	0.689 (0.40)	0.01 (0.04)	−0.03 (0.03)	0.428 (−0.79)	0.04 (0.04)
Constant	0.55 (2.98)	0.853 (0.19)	0.04 (2.80)	0.90 (3.16)	0.776 (0.29)	−21.1*** (2.40)
Year-fixed effects	Yes		Yes	Yes		Yes
Pseudo R ²	0.1603		0.2334	0.2265		0.8925
R ²	—		—	—		126
N	126		126	128		126

Explanatory variables are lagged by one year and winsorized at the 1% level

IV/independent variable

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$; Community religiosity omitted by STATA in fixed effects model when using xtreg, fe command

Table 7 Empirical results for CEO's perceived religiosity, mainline Protestants, and Catholics in relation to financial performance

	Model 1a Return on assets		Model 1b Revenue (log)		Model 1c Market share	
	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)
CEO perceived religiosity (all)	− 0.01 (0.01)	0.555 (− 0.59)	− 0.01 (0.05)	0.833 (− 0.21)	− 0.00 (0.01)	0.517 (− 0.65)
Control variables included	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	124		124		124	
N	862		862		862	
	Model 2a Return on assets		Model 2b Revenue (log)		Model 2c Market share	
	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)
Mainline Protestant CEOs	− 0.01 (0.02)	0.790 (− 0.27)	0.03 (0.09)	0.739 (0.33)	− 0.00 (0.01)	0.856 (− 0.18)
Control variables included	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	124		124		124	
N	862		862		862	
	Model 3a Return on assets		Model 3b Revenue (log)		Model 3c Market share	
	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)
Catholic CEOs	− 0.01 (0.01)	0.579 (− 0.56)	− 0.02 (0.06)	0.750 (− 0.32)	− 0.01 (0.01)	0.388 (− 0.87)
Control variables included	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	124		124		124	
N	862		862		862	

Explanatory variables are lagged by 1 year and winsorized at the 1% level

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

R-squared compared to a regression without the instrument (0.84 vs. 0.69). The Cragg-Donald Wald F-values of 638.46 exceed the Stock-Yogo critical value of 16.38. Rerunning our regression models with this new instrument provided comparable results, offering confidence that omitted variable bias is likely not an issue.

General Discussion

Our findings suggest that family firms with strong family coalitions, as measured through family voting rights, are more likely to employ religious boards of directors. Religious boards are subsequently more likely to appoint religious CEOs, cascading the presence of religious top-level executives. The relationship between strong family coalitions

and religious boards of directors is less pronounced when industry R&D intensity is higher.

We illuminate the role of SEW and the factors leading to religious beliefs in both board members and CEOs. In doing so, we establish a conceptual understanding, backed by empirical data, that explains how the religiosity of boards and CEOs can be interpreted from the perspective of SEW. This allows us to understand the micro-foundations of CEO succession to a greater degree. Perceived religiosity, as a characteristic of board members and CEOs, relates to increased religious successor selection, irrespective of family affiliation. Thus, we identified an additional metric in which family leadership is undiversified.

Although academic debates show the complex relationship between individual characteristics and a firm's context and industry (Cooper et al., 2014; Feng et al., 2017; McNamara et al., 2008), our results generally support the notion

Table 8 Empirical results for Evangelical Protestant CEOs and financial performance

	Model 1 Return on assets		Model 2 Revenue (log)		Model 3 Market share	
	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)	Coeff (St. Err.)	P-value (<i>t</i> -value)
Evangelical Protestant CEO	0.08*** (0.02)	0.000 (3.63)	0.18** (0.07)	0.008 (2.69)	0.15*** (0.02)	0.000 (6.67)
Firm size	0.01 (0.02)	0.611 (0.51)	0.82*** (0.05)	0.000 (15.12)	0.04*** (0.01)	0.000 (4.63)
R&D intensity	− 0.61 [†] (0.32)	0.062 (− 1.89)	− 1.18 (1.20)	0.329 (− 0.98)	0.08 (0.13)	0.554 (0.59)
Capital intensity	0.01 (0.01)	0.376 (0.89)	− 0.23* (0.10)	0.019 (− 2.38)	0.00 (0.01)	0.967 (0.04)
Leverage ratio	0.00 (0.00)	0.590 (0.54)	− 0.00 (0.00)	0.195 (− 1.30)	0.00 [†] (0.00)	0.085 (1.74)
Firm age	0.00 (0.00)	0.613 (0.51)	− 0.00* (0.00)	0.015 (− 2.46)	− 0.00 [†] (0.00)	0.088 (− 1.72)
CEO salary	0.00 (0.00)	0.167 (1.39)	0.00 [†] (0.00)	0.064 (1.87)	− 0.00 (0.00)	0.576 (− 0.56)
CEO age	0.00 (0.00)	0.212 (1.26)	0.00 (0.00)	0.153 (1.44)	− 0.00 (0.00)	0.763 (− 0.30)
Constant	0.00 (0.07)	0.957 (0.05)	5.93*** (0.28)	0.000 (21.55)	0.07 (0.06)	0.289 (1.06)
R2	0.0014		0.6458		0.1870	
Industry-fixed effects	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	124		124		124	
N	862		862		862	

Explanatory variables are lagged by one year and winsorized at the 1% level

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

a connection exist. They clearly shows that more intensive industry R&D attenuates the relationship between strong family voting rights and the share of board members with perceived religiosity. One possible explanation for this is that family firms strongly oriented toward the social needs of the family members prioritize family satisfaction and SEW as well as creativity in long-term business orientation over investing in other activities connected with risk aversion (Chen et al., 2022; Sorenson & Milbrandt, 2023).

Religion and family interact in a nuanced way when considering different religions (Fathallah et al., 2020), which is why our post-hoc analysis produced diverging results. Religion is a double-edged sword when it comes to economic effects (Abdelgawad & Zahra, 2020) and is always related to the complexity of the makeup of a religious group (Parboteeah et al., 2008). Considering that Evangelical Protestantism has its roots in Pietism, known for its devout work and long working hours as well as good infrastructure, Spenkuch's (2017) explanations in his study of the connection between religious values and market outcomes in Germany could offer insights into why only Evangelical Protestant CEOs are associated with greater financial performance in our US sample.

Theoretical Implications

Our study contributes to the family firm and ethics literature in several important ways and addresses previous research gaps in our understanding of how religiosity permeates family firm business activities (Astrachan et al., 2020). First, by incorporating perceived religiosity into the relationship between family firm voting rights and board members, we uncovered a mechanism through which the relationship between SEW and religiosity is manifested in family firms. We argue that employing religious managers is an additional avenue for ensuring SEW stock because religiously perceived personnel are thought to behave ethically and engage in fewer unnecessary risks (Bénabou et al., 2015; Cai et al., 2019; Connelly et al., 2020). Perceived religiosity seems to be an indicator for related traits, which confirms previous observations (Alsherhri et al., 2021; Connelly et al., 2020; Parboteeah et al., 2008). This theoretical development is important because most past research focused on the founding family's religious identity rather than on how that religiosity is imparted through the family business.

The mixed results on financial performance make it natural to conjecture that changes in perceived board and CEO

Table 9 Complementary tests:
Family voting rights & board
members' perceived religiosity

	Model 1 Share of RNF-BM ¹		Model 2 FLR		Model 3 2-year lag	
	Coeff (St. Err.)	P-value (z-value)	Coeff (St. Err.)	P-value (z-value)	Coeff (St. Err.)	P-value (t-value)
Family voting rights	0.08** (0.02)	0.001 (3.35)	1.61*** (0.21)	0.000 (7.69)	0.14** (0.05)	0.002 (3.11)
Industry R&D intensity	–	–	– 2.65* (1.09)	0.016 (– 2.42)	– 0.21 (0.26)	0.410 (– 0.82)
Family voting rights × Industry R&D intensity	–	–	– 16.9*** (3.70)	0.000 (– 4.57)	– 1.75* (0.83)	0.034 (– 2.12)
Firm size	0.00 (0.00)	0.893 (0.13)	0.12** (0.04)	0.002 (3.09)	0.01 (0.01)	0.278 (1.09)
Capital intensity	0.00 (0.01)	0.884 (0.15)	– 0.25*** (0.04)	0.000 (– 6.42)	– 0.02 (0.01)	0.103 (– 1.63)
Leverage ratio	– 0.00* (0.00)	0.018 (– 2.38)	– 0.01 (0.01)	0.227 (– 1.21)	– 0.00 (0.00)	0.359 (– 0.92)
Firm performance	0.00** (0.00)	0.008 (2.65)	0.01 (0.03)	0.692 (0.40)	0.00 (0.00)	0.220 (1.23)
Firm age	0.00 (0.00)	0.814 (0.24)	0.01* (0.00)	0.023 (2.27)	0.00 (0.00)	0.427 (0.79)
Community religiosity	0.10 (0.07)	0.119 (1.56)	2.89*** (0.42)	0.000 (6.95)	0.43** (0.15)	0.005 (2.80)
Share of religious board members	0.87*** (0.05)	0.000 (27.96)	–	–	–	–
Constant	– 0.05 (0.05)	0.309 (– 1.02)	– 3.31*** (0.31)	0.000 (– 10.83)	– 0.06 (0.10)	0.532 (– 0.62)
Chi ² a)	965.73		–		17.41	
Pseudo R2	–		0.0651		–	
Industry-fixed effects	Yes		Yes		Yes	
Year-fixed effects	Yes		Yes		Yes	
Number of firms	147		147		146	
N	986		986		966	

Explanatory variables are lagged by one year and winsorized at the 1% level

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

¹Religious non-family board members

^{a)}We include industry- and year-fixed effects in all of our models, resulting in a large number of control variables. Therefore, Chi² is not reported in STATA. The Chi² herein represents Wald-tests conducted on variables of interest exclusively

religiosity are connected to SEW considerations (Miller & Le Breton-Miller, 2014). The SEW dimensions “identification of family members with the firm,” “binding social ties,” and “emotional attachment” (see Berrone et al., 2012, p. 263) appear particularly important in this regard as they are valued and attributed via means of perceived religiosity. In other words, perceived religiosity affords family members to pursue a strong sense of belonging (binding social ties), internal contractual relationships based on trust, external relationship building with other stakeholders (binding social ties) as well as to increase affective decision-making (emotional attachment). This research thereby extends family business literature by providing an explanation for how perceived religiosity affects SEW. Also, we provide initial

empirical evidence on the religious convictions of non-family stakeholders as a determining factor for the protection of SEW in family firms.

Second, we propose a new antecedent for family firms' successor choice: perceived religiosity. This trait can be thought of as preserving a family's SEW and pointing toward more ethically sound behavior. Despite the recent interest in the micro-level components of family business succession (e.g., Lu et al., 2021) and the first insights into the appointments of religiously perceived CEOs (Connelly et al., 2020; Damaraju & Makhija, 2018), the analysis of perceived religiosity and its organizational contingencies has thus far not affected family firm research. By connecting shareholder characteristics and CEOs perceived as religious, this study

provides evidence of “how and why [...] religious values influence the purely economic evaluation of potentially profitable courses of actions” (Smith et al., 2021, p. 5).

Third, our study contributes to the growing literature on family firm heterogeneity by highlighting the boundary condition industry R&D intensity for the relationship between family voting rights and board members perceived as religious. Industry R&D investment appears to decrease the influence of perceived religiosity and, thus, the contingency of religiosity in family firms. Therefore, we go beyond prior work indicating that family members’ SEW considerations shape the outcomes of firm-level R&D (Bendig et al., 2020), but in addition—industry-level R&D intensity shapes the processes through which SEW is preserved.

Fourth, this study is also a direct response to the call for research at the intersection of business ethics and family businesses (Vazquez, 2016). Our research provides “answers regarding questions as to how [...] business-owning families [can] incorporate their family values and ethical behavior into the governance of the family business when family involvement is low” (Vazquez, 2016, p. 706). Our study provides a novel rationale for why family firms with stronger family coalitions employ more executives perceived to be religious, thereby serving SEW and ethical considerations of the owning family. Recent thought-provoking research findings have highlighted that greater cohesion among family members can lead to greater secret-hiding driving unethical behavior (Jiang & Min, 2023). Families’ ethical considerations that initially lead to the choice of board and CEO can thereby stand in contrast to subsequent unethical behavior.

Managerial Implications

The results expose the role of perceived religiosity in board compositions. Thereby they bring in a new contingency in the explanation of board and leadership diversity in family firms; which leads to the questioning of equality in family firm recruiting practices. Working with the results of this research could move the family firm management field beyond representational diversity based on readily identifiable categories such as gender to a deeper-level understanding of the practices that hinder or support diversity, including perceived religiosity in combination with SEW considerations. There are two obvious reasons why family firm management should care: First, family firm board diversity—which includes variables already under observation such as age and disability but also implicit, deeper-level variables such as religion—is seen as a catalyst for prosperity and digital transformation (PwC, 2023). Second, societal pressure to enhance inclusion, equity, and diversity efforts has led to judicial scrutiny, particularly

in terms of gender, racial, and religious discrimination. Regulatory guidelines (e.g., NASDAQ Board Diversity Rule) increasingly require firms to appoint top personnel from underrepresented minorities, making it important to understand the practices that inform, support, or hinder top personnel’s diversity. Although religion has not been officially included as a diversity metric, through this research, we show how religiously perceived top personnel matter to this end, as related power mechanisms result in religious leadership homogeneity. There are concrete steps helping firms to ensure that rational decision-making processes are not biased by board members’ personal preferences such as ethics awareness trainings for leadership self-reflexivity as well as the implementation of diversity management to act upon self-reflection.

This suggestion is especially important considering that our post-hoc analysis indicated a positive relationship between higher voting rights and perceived religiosity in non-family board members. Family firms can recognize the potential influence of religiosity even among non-family board members and consider it as an implicit factor in their governance structures. Managers and other family firm personnel could benefit from understanding this influence, and considering the religious and ethical ideologies when developing ethics and diversity policies or codes of conduct could help prevent misinterpretation of these values. Including religious minorities as a pillar in a firm’s internal diversity policies is an appropriate management step to facilitate a common understanding among employees from different religious backgrounds ultimately, integrating diverse religious perspectives can contribute to a broader ethical understanding and decision-making process. At the same time, religion in the workplace should not be ignored, but disclosure should be absolutely voluntary (Alewell and Rastetter, 2020).

It is important to note that family firm diversity management can only truly be prioritized, when family firm owners overcome their overreliance on relational trust mechanisms during succession choices and board appointments. Family firm owners consistently identify fear of conflict and distrust as preventing them from making changes to a trustful, institutional culture, as they expect trust to be higher between those similar to themselves (Beugelsdijk & Klasing, 2016; Jiang & Min, 2023; PwC, 2023). If family firm owners consider relational trust to be a superior characteristic in the workplace due to a fear of conflict resulting from human differences, formal governance structures (shareholder agreements, family protocols, etc.) should be established to increase the chance of minorities entering the circle of trust.

From a market perspective, our findings could inform shareholders’ and stock market analysts’ risk assessments, as the tendency for risk-averse and ethical business operations is

amplified through more religiously perceived top personnel in family firms. Furthermore, if investment portfolios are increasingly guided by diversity (Mirchandani, 2023) and if religious minorities are included as a (voluntary) diversity metric as suggested (see, e.g., Alewell & Rastetter, 2020), then those companies who underperform on this metric will be at a disadvantage in the marketplace.

Limitations and Future Research Avenues

Our measure of top-level executives' perceived religiosity faces some structural constraints. Especially for research with secondary data, finding appropriate proxies for individuals' religious convictions is challenging, resulting in various approaches, such as name (Damaraju & Makhija, 2018), place of birth (Ma et al., 2020), or undergraduate university (Connelly et al., 2020). Our measure provides additional behavioral information on leisure activities, yet we cannot preclude the possibility that executives may be religious but not covered by our data. However, following Cai et al., (2019, p. 197), we argue that "the measurement error is not systematically related to the corporate outcome that we examine, the noise in the measure works against finding a statistically significant effect of CEOs' religiosity-related traits." According to previous research, prayer and attendance at religious services are "negatively related to justifications of ethically suspect behaviors" (Parboteeah et al., 2008, p. 390). Researchers could explore other avenues to approximate the religiosity of top-level executives based on alternative data sources, such as non-sectarian approaches (e.g., universities not associated with a particular religion) (Pieper et al., 2020) and using other methodologic approaches (e.g., interviews).

Second, family firm classifications differ significantly across studies. We used an expansive definition of family firms (Gomez-Mejia et al., 2011; Zellweger, 2017). Future researchers could investigate the interplay of board religiosity with amended family firm definitions (Jiang & Min, 2023; Villalonga & Amit, 2006). They could also empirically test other dependent variables, such as long- and short-term goals (Pieper et al., 2020). Similarly, SEW measurement has been subject to some debate; as SEW's different dimensions might provide more nuanced knowledge about the relationship between strong family coalitions and religious boards and CEOs, it would be interesting to see SEW operationalized and address some researchers' requests in this area (e.g., Swab et al., 2020).

Finally, our research design only allowed us to measure whether a given top-level executive is perceived as one of three Christian denominations. Future research should overcome the data limitation to include religious groups such as Judaism, Hinduism, Buddhism or Islam, which we

believe are also important factors in family firms in the US and other geographies.

Motivated by the limited diversity observed in family boards and the unexplored connection between religion and SEW considerations within this context, this research investigates the mechanisms and underlying reasons for the integration of religion in family firms. Collectively, our findings indicate that religion significantly influences SEW considerations, manifesting through board members' and CEOs' perceived religiosity, thereby reinforcing the prevalence of mono-religious leadership in family enterprises. We trust that these outcomes will stimulate future investigations into the implications of religion in family businesses.

Funding Open Access funding enabled and organized by Projekt DEAL.

Declarations

Conflict of interest Our manuscript has not been published or accepted for publication. It is not under consideration at another journal. An earlier version of this manuscript has been accepted for presentation at *Babson conference* in June 2022. The data is secondary data, but used in a unique combination for this study. Should you select our manuscript for peer review, we have no conflict of interest to disclose. Many thanks for your time and consideration. We look forward to your response.

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