M@n@gement

Faultlines in Family SMEs: The U-Shape Effect of Family Control on Innovativeness and Performance

Naeem Ashraf[1]*, Waqar Wadho[2]*, and Subhan Shahid[3]

[1]Faculty of Management and Humanities, EDHEC Business School, Roubaix, France
[2]Faculty of Economics, Lahore School of Economics, Lahore, Pakistan
[3]Strategy, Sustainability and Entrepreneurship Department, KEDGE Business School, Marseille, France

Abstract

Studies on innovation have yielded contradictory results regarding the influence of family control, giving rise to competing perspectives that either emphasize the stewardship role of family managers or the agency problems that their presence creates. Recent research integrates both perspectives, theorizing an inverted U-shaped relationship between family control and innovativeness. However, scholars typically focus on the family agenda, neglecting the dynamics of family–non-family members, particularly in SMEs, which may also influence innovation and performance. Drawing from faultline theory and based on the Spanish Innovation Survey panel data, the present paper examines family control's direct U-shape effect on firm innovativeness and its indirect effect on firm performance. By demonstrating a U-shaped relationship between family control and firm innovativeness, we highlight the relevance of 'faultlines' between family — non-family organizational members.

Keywords: *Family control*; *Innovativeness*; *Product innovation*; *Firm performance*; *Faultlines*; *SMEs*

The governance of family affects the innovativeness of small and medium-sized family firms (SMEs); however, findings regarding the nature of this effect have been inconsistent (Deman et al., 2018; Filser et al., 2018). Family firms are governed and/or managed with the intention to shape and pursue 'the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family' (Chua et al., 1999, p. 25). Some studies suggest the regulating role of family controls when owner-family members also manage their firms' operations (Madanoglu et al., 2016; Martínez-Alonso et al., 2022) make family firms more innovative (König et al., 2013; Matzler et al., 2015). Innovativeness refers to a firm's ability or capacity to produce innovative outputs such as new products (Jun et al., 2021). However, research also highlights that family control does not affect innovativeness (Filser et al., 2018), or it reduces firm innovativeness (Cucculelli et al., 2016; Deman et al., 2018; Le Breton-Miller et al., 2015), which can ultimately affect the performance of SMEs (Jun et al., 2021; Martínez-Alonso

et al., 2022). Whereas these efforts mainly underline the complexities associated with governance in family SMEs and yield focused or linear explanations of family firm innovativeness and performance, an emerging stream of work attempts to integrate the different approaches to family control through nonlinear analysis (Bauweraerts & Colot, 2017; Calabrò et al., 2017; De Massis et al., 2015; Maseda et al., 2019). For example, Bauweraerts and Colot (2017) conceptualize an inverted U-shaped relationship between family control in terms of family involvement in board members and firm innovativeness. That is, initially, the family's stewardship attitude fosters innovation, but beyond a certain point, family control promotes conservatism and agency problems, thus hampering innovative pursuits (Bauweraerts & Colot, 2017).

Although the extant efforts to provide a consistent explanation for family firm innovativeness and performance (Calabrò et al., 2017; De Massis et al., 2015) are generating important insights about the role of family control, they seem to focus strongly on family control in the composition of board members (Bauweraerts & Colot, 2017; Calabrò et al., 2017) or top

*Corresponding author: Naeem Ashraf, Email: naeem.ashrf@gmail.com; Waqar Wadho, Email: w.wadho@lahoreschool.edu.pk

management (Arzubiaga et al., 2018; Barth et al., 2005; Elbanna et al., 2020), underappreciating even the tacit role of non-family members or employees in subgroup organizational politics (Tabor et al., 2018). Particularly, in family SMEs, due to informal hierarchical structures and unclear functional boundaries, the family members' authorial control may directly be observed by employees (Gnan et al., 2015). Research has shown that the governance structure of family SMEs is less formal in comparison to large firms, where interventions and interaction between owner family and employees cut across hierarchical boundaries (Gnan et al., 2015; Nordqvist, 2012; Wang & Shi, 2021). However, literature has rarely explored the implications of this on firm behavior and performance.

This is an important hiatus, because family firms routinely employ non-family members to implement innovation strategies (Bammens et al., 2015; Daspit et al., 2018; Randolph et al., 2021; Tabor et al., 2018). In other words, implications of the varying ratio of family members versus non-family members in an organization may form an essential part of the explanation of family control's effect on firm innovativeness (Bauweraerts & Colot, 2017; Daspit et al., 2018) and financial performance (Calabrò et al., 2017; De Massis et al., 2015; Minichilli et al., 2010), and shape them in ways that have not been captured yet. Such as, research unfolds that non-family members are valuable human resources that positively affect the innovativeness, profitability, and survival of family-owned businesses (Franco & Franco, 2017; Vallejo, 2009). Therefore, in family SMEs, family control is evident across the organization due to informal interventions. Thus, creating subgroup dynamics that affect organizational outcomes, which is thus far not addressed in the literature.

Moreover, studies that highlight the nonlinear effects of family control on innovativeness (Bauweraerts & Colot, 2017) and performance (Calabrò et al., 2017; Chirico & Baù, 2014; Minichilli et al., 2010) are mostly based on large firms and look into the consequences of board membership or top management team (Bauweraerts & Colot, 2017). However, in SMEs, the nature and effect of family control differ. In SMEs, informal relationships between family and non-family members cut across functional boundaries or hierarchies (Nordqvist, 2012), can increase trust (Wang & Shi, 2021) between family and non-family members, but can also expose employees to family politics (Lewis et al., 2020) which affects firm performance (Bammens et al., 2015; Nordqvist, 2012). The family ownership and involvement in managing the firm make the non-family managers' positions redundant or less effective (Kraiczy et al., 2015; Nordqvist, 2012). The direct, often informal, intervention and interaction of family members with employees thus creates two subgroups – family/owners and – non-family/employees (Daspit et al., 2018; Nordqvist, 2012). For this purpose, understanding family control (Kraiczy et al., 2015) in SMEs at the level of top-management team (Bauweraerts & Colot,

2017; Chirico & Baù, 2014; Deman et al., 2018) is partial. On this basis, one might question whether the complexity of the relationship between family control, firm innovativeness, and firm performance is fully reflected in the literature.

The dynamics between family and non-family members have been discussed in the literature using faultline theory, besides other frameworks, to make sense of the relationships between these two groups (Antino et al., 2019; Basco et al., 2019; Minichilli et al., 2010; Vandebeek et al., 2016). Faultlines refer to the distinction of organizational members on one or more attributes (Bunderson & Van der Vegt, 2018; Lau & Murnighan, 2005). Faultline theory suggests that subgroup identification by organization members (for instance, as 'family' or as 'non-family') hampers organizational functioning through conflict and limited communication (Antino et al., 2019; Lau & Murnighan, 1998; Minichilli et al., 2010). However, consequences of faultlines between family and non-family members beyond the top management team are scantily examined (Calabrò et al., 2017; Minichilli et al., 2010; Vandebeek et al., 2016) particularly in the context of family SMEs. Highlighting the relevance of faultlines between family and non-family members in SMEs, and assuming that family control disturbs the faultlines between these groups, the present paper revisits the question 'does family control in family SMEs affect firm's innovativeness and performance?'.

By explicating the role of subgroup identity between family and non-family members in SMEs that cut across hierarchies and functional roles, the faultline theory, we argue, complements other theories used in the literature. For instance, agency theory (Martínez-Alonso et al., 2022; Werner et al., 2018), stewardship theory (Filser et al., 2018), or resource-based view (Bauweraerts & Colot, 2017; Deman et al., 2018), that presuppose the existence of subgroups (principal/family and employee/non-family), but do not fully explore the role of subgroup identity. This constitutes our primary contribution. In addition, arguing that faultlines may operate organization-wide between family and non-family members in family SMEs, we also extend the literature (Basco et al., 2019; Minichilli et al., 2010) that focuses only on faultlines in top management teams. This constitutes our second contribution. In the following pages, we argue that in family SMEs, family control has a U-shape relationship with innovativeness and firm performance and that innovativeness mediates the influence of family control on firm performance. These findings contradict the literature (Bauweraerts & Colot, 2017; Calabrò et al., 2017; Chirico & Baù, 2014) that demonstrates an inverted U-shape relationship between family control and innovativeness (Bauweraerts & Colot, 2017) and performance (Calabrò et al., 2017) which primarily focused on large firms and family control in top management teams.

The empirical support to proposed hypotheses, to explicate the consequences of family control, is based on the panel data which is drawn from the Encuesta sobre Estrategias Empresariales

(ESEE), or the Survey on Business Strategies, performed by the Fundación Sociedad Estatal de Participaciones Industriales (SEPI), or the SEPI Foundation (Martínez-Alonso et al., 2022; Ortega-Argilés et al., 2005). This ESEE annual survey consisted of 107 questions and was targeted at Spanish manufacturing firms with at least 10 employees. In the remainder of this article, we first briefly review the existing literature on family control and management and its consequences. This is followed by sections on hypotheses, methods, and results. The article concludes by discussing our theoretical contributions and implications for research and practice.

Family control

Research on family SMEs has surged because family ownership constitutes a ubiquitous form of firm governance, dominating many national economies worldwide (Urbinati et al., 2017). Because of their longitudinal focus, family SMEs are typically organized in ways that favor family control in management (Vandekerkhof et al., 2015). The large time horizon of family SMEs (Diaz-Moriana et al., 2020; Hoffmann et al., 2016) also connects them with innovativeness, which is a crucial factor in long-term survival (Jaskiewicz et al., 2015; Urbinati et al., 2017).

Because family firms have specific characteristics that affect innovation patterns (Duran et al., 2016), a long line of research has examined the effects of family control and management on firm innovativeness. However, these efforts have spawned a heterogeneous body of literature marked by conflicting theoretical perspectives and empirical findings (Diaz-Moriana et al., 2020; Filser et al., 2018). Two central opposing positions have emerged: one that family control and management facilitate innovation (König et al., 2013; Werner et al., 2018), and second that family control reduces innovation (Cucculelli et al., 2016; Deman et al., 2018). In the 'facilitative' approach scholars suggest that family SMEs provide a fruitful context for innovativeness because some of the family-based governance features are complementary to innovative attitudes (König et al., 2013; Werner et al., 2018). Researchers have explored several of these features, most notably the relatively long-term investment horizon of family firms (Diaz-Moriana et al., 2020; Hoffmann et al., 2016), which promotes tolerance to experimentation and nonlinear creative processes (Lumpkin et al., 2010), the enactment of lasting values and the formation of enduring relationships (Arregle et al., 2007). All these traits promote investment in projects whose immediate potential might seem limited. In addition, many family firms harbor a culture in which both family and non-family members have interests in furthering the mission of the organization as a whole (Kellermanns et al., 2012; Werner et al., 2018). Family firms often rely on trust and exhibit flexible organizational structures, participative decision-making (König et al., 2013; Nordqvist, 2012; Werner et al.,

2018), and organizational support (Bammens et al., 2015). In turn, these features influence firm innovativeness and performance (König et al., 2013).

In contrast, the 'restrictive' approach suggests that family control stifles innovativeness. This stream of research highlights that family firms tend to avoid risky, innovative projects (Cucculelli et al., 2016; Kraiczy et al., 2015) because they make investments with the socioemotional and financial wealth of family members in mind (Arregle et al., 2007; Cœurderoy & Lwango, 2012; Jaskiewicz et al., 2015). It is argued that when business operations rely on family's capital, family firms may feel the need to closely monitor how money is spent, which may constrain innovativeness (Kraiczy et al., 2015). Moreover, some scholars associate family control with the formation of close, long-term family networks that favor narrow mental maps (König et al., 2013) and hamper the recruitment and retention of good quality non-family human resources (Barnett & Kellermanns, 2006; Daspit et al., 2018) that could spur innovative and entrepreneurial initiatives.

In an effort to resolve the ongoing debate (Gast et al., 2018), scholars have zoomed in on the effects of specific family firm features, such as the intensity of family control (Gast et al., 2018). In these approaches, family control does not have an inherently positive or negative effect on firm innovativeness and performance; rather, at varying degrees of family influence, the recipe for higher innovation and performance is different (Tables 1 and 2). Although these efforts have moved the debate on the innovative potential of family firms beyond simple bivariate analysis, the explanatory power of focused examinations of particular (combinations of) family firm traits remains limited. This led to a parallel call for theoretical and empirical explorations of the nonlinear effects of family control on innovativeness (Bauweraerts & Colot, 2017) and performance (Calabrò et al., 2017; Hoffmann et al., 2016). As part of this emerging development, Bauweraerts and Colot (2017) integrate the stewardship, agency, and resource-based view perspectives, proposing an inverted U-shaped relationship between family control in terms of family involvement in board members and firm innovativeness. According to this model, low to moderate levels of family control foster stewardship attitude and innovativeness, but as family control further increases, the emergence of agency and human resource-related problems progressively start impeding innovative activities. However, the theory behind the inverted U-shaped model mostly focuses on the large firms and family control in top management teams (Bauweraerts & Colot, 2017; Calabrò et al., 2017; Chirico & Baù, 2014), neglecting the in/out group identity in SMEs that may cut across formal hierarchies. Addressing this research gap is of significant theoretical and practical importance since family firms routinely employ non-family members to implement innovation strategies (Bammens et al., 2015; Daspit et al., 2018; Randolph et al., 2021).

Table 1. Family firms' and SMEs' literature

References	Theoretical foundation(s)	Key point(s)	Focus
Arregle et al. (2007)	Social capital theory	In family firms, two forms of organizational social capital exist the family's and the firm's social capital. The link between them is based on shared organizational identity, human resource practices, and rationality.	Large family firms
Barnett and Kellermanns (2006)	Fairness theory	Nonfamily members perceived less fairness when there is high family involvement in family firms compared to a moderate level of family involvement, which is perceived positively by nonfamily members.	Family versus non-family firms
Barth et al. (2005)	Agency theory	Nonfamily managers are generally more productive for family firms than family members as managers.	Family versus non-family firms
Bauweraerts and Colot (2017)	Stewardship theory, resource-based view, agency theory	The relationship between family involvement in board members and entrepreneurial orientation has an inverted U-shape relationship. In addition, the relationship is moderated by the board monitoring task.	Medium to large family firms
Chu (2009)	Agency theory, resource-based view	There is a significant positive relationship between family ownership and SME performance. In addition, no statistical support was found for the inverted U-shape relationship between family ownership and performance.	Small to medium family firms
Arzubiaga et al. (2018)	Socioemotional wealth	The entrepreneurial orientation of family firms is positively associated with firm performance. However, the relationship is strengthened by the moderating effect of gender diversity in board members and weekend by the moderating role of family involvement in board members.	Small to medium family firms
Fang et al. (2022)	Resource-based view	Nonfamily manager is only beneficial for family firm performance when the firms are underperforming in comparison to the industrial average.	Small family firms
Maseda et al. (2019)	Agency theory	Demonstrated that the relationship between family board members' ownership and SME performance is not only inverted U-shape but also found empirical evidence to support the S-shape relationship.	Small to medium family firms
González-Cruz and Cruz-Ros (2016)	Set theory	Found three combinations that lead to the high performance of family SME 1. A large enough family SME with family CEO and a board including nonfamily members 2. A large enough family SME in its first generation, and run by nonfamily managers 3. A large enough family SME with weak family governance structures and ownership concentration	Small to medium family firms
Oswald et al. (2009)	Agency theory, entrenchment theory	There is a negative relationship between the percentage of family control in top management teams and the performance of family firms. No statistical support was found for the positive relationship among them, based on the framework of agency theory.	Small to large family firms
Miralles-Marcelo et al. (2014)	Behavioral agency model	Spanish and Portuguese family firms have the same level of performance as nonfamily firms. However, firm size and firm age have significant moderating effects on the performance of family firms. Such that small and older family firms are more concerned about financial aspects and thus perform better.	Large family and non-family firms
Arosa et al. (2010)	Agency theory, stewardship theory	In family SMEs, the presence of independents in board members positively influences firm performance only if the family SME is run by the first generation. No statistical support was found for the given relationship in the case of family SMEs run by subsequent generations.	Small to medium family firms
Songini and Gnan (2015)	Agency theory	Family involvement in board and governance and their interaction influence the financial performance of family SMEs. At the same time, the agency cost control mechanism is the underlying mechanism that positively supports the path.	Small to medium family and non-family firms
Vandebeek et al. (2016)	Faultline theory	First, measured faultiness by encompassing three attributes (type of directorship, family membership, and gender). Second found that, faultlines in the board of directors are negatively linked with board control and service role performance.	Small to large family and non-family firms

Table 2. Differences between large family firms and family SMEs

Governance factors	Large family firms	Family SMEs	Differences
Hierarchical structure	Formal	Informal	There are unclear functional boundaries in family SMEs, and family members exercise their rights in all domains (Gnan et al., 2015), creating subgroup identity conflict between family and non-family members.
Family control	Visible in top management	Visible organization-wide	Family control is considerably evident in board members and top management in large family firms (Arzubiaga et al., 2018; Bauweraerts & Colot, 2017), giving rise to agency problems. Whereas in family SMEs, family control is visible organization-wide (Nordqvist, 2012), creating organization-wide faultiness between family–non-family members.
Role of non-family members	Evident in executive positions	Evident across organization-wide	In large family firms, non-family members' role is evident if they have executive positions (Barth et al., 2005). In comparison, due to smaller firm size, every employee is considered an essential resource in family SMEs (Franco & Franco, 2017; Vallejo, 2009).
Strategic decisions making (SDM)	SDM focuses on top management values and preferences	SDM focuses on protecting family's socio-emotional wealth	Due to the broader scope of large family firms, SDM is primarily influenced by top management involving both family and non-family executives (Bauweraerts & Colot, 2017). Top management values and preferences influence firm's strategy (Maseda et al., 2019). In comparison, SDM in family SMEs focuses on protecting the family's influence and control (Ibrahim et al., 2001), creating tensions between family–non-family members for the firm's strategy (Wang & Shi, 2021). This can lead to a subgroup divide between family–non-family members.

Note: Large family firms and small family SMEs are assumed to be ideal types. There can be variations and exceptions to the differences highlighted above.

If family–non-family identity and equilibrium in organizations explain part of family firms' innovation outcomes (Daspit et al., 2018) and performance (Calabrò et al., 2017; Minichilli et al., 2010), and if identity politics is made more explicit, there is an opportunity to arrive at a nonlinear model that offers a more systematic and comprehensive explanation of family firm innovativeness and consequently firm performance. For instance, in SMEs, the intervention and interaction between family owners and employees are often informal as family owners-members may influence the decisions at all levels and domains (Gnan et al., 2015; Nordqvist, 2012; Wang & Shi, 2021). In contrast to large family firms, where hierarchies are formal (Songini & Gnan, 2015) and family control is more pronounced in board member or top management (Arosa et al., 2010; Bauweraerts & Colot, 2017), family SMEs have culture, where family members give directions to employees directly (Gnan et al., 2015; Nordqvist, 2012), creating sub-group identify conflicts among family–non-family members. Therefore, in the context of family SMEs, it is imperative to consider sub-group identify conflicts across the organization.

Research has revealed an inverted U-shape relationship between family control in board members and family-owned big firms' performance (Bauweraerts & Colot, 2017; Maseda et al., 2019). They argued that at low to moderate levels of family control, family directors posit stewardship attitudes that are beneficial to utilize firm resources to improve performance. As family control increases, key stakeholders may focus more on power politics than on pursuing firm-level objectives, thus impeding performance. However, as we argued in family SMEs,

family control is visible beyond top management due to informal boundaries; thus, at moderate to high family control, family members influence subgroup dynamics by exercising power over non-family members. Increase in family control and family members' socio-emotional investments and identity with the firm may then have positive consequences. Thus, in SMEs, contrary to studies that demonstrate an inverted U-shape relationship between family control and performance, we expect the U-shape relationship.

Hypotheses development

We explain the consequences of family and non-family dynamics by drawing upon faultline theory (Bunderson & Van der Vegt, 2018; Lau & Murnighan, 2005). Prior literature that mainly focused on board composition of family businesses has used agency, stewardship, and resource-based view to examine the relationship between family control and performance (Arzubiaga et al., 2018; Bauweraerts & Colot, 2017; Calabrò et al., 2017). However, we argued that in the context of family SMEs, the formal relationships cut across hierarchical boundaries, and family control is evident beyond board members; thus, these perspectives do not wholly cover the family and non-family dynamics. In family SMEs, family–non-family member interventions and interactions are often direct, and family members exercise their power in all domains. (Gnan et al., 2015; Nordqvist, 2012). Thus, this creates faultlines within the organization, and these faultlines are not fully captured by the other framework used in family firm

literature. We build on faultline theory to comprehend sub-group dynamics across family SMEs to complement other theoretical frameworks. Table 3 provides an overview of the theoretical rationales.

Faultline theory is rooted in social identity and social categorization theory (Bunderson & Van der Vegt, 2018), according to which organizational members perceive each other as belonging to different social categories. When members share one or more demographic or social characteristics, social categorization causes the formation of different groups in organizations. This may lead members of one group to favor interaction with fellow group members and to feel little attachment to members of other group members (Kunze & Bruch, 2010; Lau & Murnighan, 2005; Sanchez-Famoso et al., 2014). This group alignment, we argue, creates a faultline between groups. However, we emphasize here that faultline theory's full potential is still unrealized as most of the studies explore the subgroup dynamics and consequences at the team level (Bunderson & Van der Vegt, 2018; Minichilli et al., 2010).

In family SMEs we argue, of many sub-groups, the relationship between family and non-family subgroups has consequences based on reasons unique to the family firms (Daspit et al., 2018; Kraiczy et al., 2015; Nordqvist, 2012; Sanchez-Famoso et al., 2014). These include roles of family control and informal relationships that cut across hierarchical boundaries. Research has shown that non-family members are important human resources that positively influence the innovativeness, profitability, and survival of family-owned businesses (Franco & Franco, 2017; Vallejo, 2009). For example, Franco and Franco (2017) revealed that employee commitment in family SMEs positively affects their contextual performance. Thus, subgroup dynamics invoked due to informal hierarchical boundaries can create faultlines. Therefore, complementing the earlier literature, we utilize faultline theory, in addition to making use of the existing literature, to hypothesize how family control affects firm innovativeness and performance.

Family control, firm innovativeness, and financial performance

In SMEs, the interventions and interaction among family owners and employees are often direct and informal, and family owners-members may influence the decisions at all levels and domains. In family firms, since the roles and behaviors of family and non-family members can be different due to diverging viewpoints and interests (Bammens et al., 2015; Kellermanns et al., 2012; Sanchez-Famoso et al., 2014), family control may disturb or activate the faultline between family and non-family groups. Compared to non-family members, family members perceive to be more emotionally invested in the firm (Calabrò et al., 2017; Hoffmann et al., 2016; König et al., 2013), particularly in the case of SMEs, and often prefer to trust other family members more than outsiders (Calabrò et al., 2017; Lewis et al., 2020; Vandebeek et al., 2016). In turn, non-family members or employees may feel excluded from the controlling family (Lewis et al., 2020). The resulting identity consciousness may lead to the principal-agency problems of group politics and zero-sum negotiations over firm strategy and thus influence the organizational functioning (Jehn et al., 2008; Minichilli et al., 2010). As regards innovation, decision-making routines and processes are disturbed, and group identity contests may hinder learning by lowering access to and the integration of knowledge (Nordqvist, 2012; Randolph et al., 2021). In addition, communicative differences, status conflicts (Antino et al., 2019; Jehn et al., 2008), and biases toward family and non-family members (Lewis et al., 2020; Verbeke & Kano, 2012) in SMEs may require constant negotiation over rights to pursue specific innovation strategies (Kraiczy et al., 2015). We argue that the cognitive resources

Table 3. Comparison of main theories

Theory	Theoretical foundations	Main theme(s)	Limitations to studying family SMEs identity conflict
Resource-based view	Strategy	The firms should strategically use firm-specific resources to achieve sustainable competitive advantage.	The focus is on achieving competitive advantage, not on identity conflicts within the organization while implementing the firm's strategies.
Agency theory	Economics	Principal (or shareholders) – agent (or top management) problem due to conflict of interests.	The focus is on maximizing economic gains, not on identity conflicts within the organization.
Stewardship theory	Psychology & Sociology	Managers act as stewards to engage other members to take collective actions based on trust.	The focus is on achieving long-term goals with collaboration and teamwork – no such issue of identity conflicts.
Faultline theory	Psychology & Sociology	Subgroup identity of team members is based on some common attributes that affect the organizational outcomes.	**Strengths:** Faultline theory harmonizes other argued theoretical frameworks in understanding the subgroup identity conflicts within family SMEs, where management-members divide are informal and cut across functional boundaries.

to engage with this process take energy away from innovation-related activities hurting the firm innovativeness.

However, when family members in SMEs cross a certain threshold of occupying most of the positions and roles in family firms, principal-agency identity contests over rights and resources between family and non-family subgroups may subside (Minichilli et al., 2010). The family members due to common history, identity (Filser et al., 2018; Sanchez-Famoso et al., 2014; Vandebeek et al., 2016), and emotional investment in the firm-level objectives (Filser et al., 2018), give a focus and support (Madanoglu et al., 2016) to other organizational members helping the firm to regain the lost momentum and resume the trajectory of innovation (Bammens et al., 2015; Werner et al., 2018). Hence, we expect a U-shaped relationship between family control and firm innovativeness.

Hypothesis 1: There will be a U-shaped relationship between family control and the innovativeness of SMEs.

The relationship between family control and firm innovativeness is important because of its eventual performance implications (Rubera & Kirca, 2012; Salavou & Avlonitis, 2008). Research has shown that innovation affects firm performance in terms of growth and revenues (Avlonitis & Salavou, 2007; Rubera & Kirca, 2012; Wadho et al., 2019). The traditional explanation for this relationship rests on the concept of competitive advantage (Falahat et al., 2018), according to which innovation gives firms a temporary quasi-monopoly position that helps them attain higher growth.

We argue that in family SMEs, the relational conflicts due to family versus non-family faultlines may drain the cognitive resources of organizational members, hindering teamwork, learning, and sharing of tacit knowledge (Jehn et al., 2008). Organizational members are more likely to spend their resources on identity contests in zero-sum games than to pursue firm-level performance goals (Jehn et al., 2008). As family control influences innovativeness (Sanchez-Famoso et al., 2014) by invoking family versus non-family faultlines, and as firm innovativeness affects firm performance (Jun et al., 2021; Wadho & Chaudhry, 2018, 2022), it can be expected that the effect of family control on innovativeness in SMEs eventually influences firm performance (Martínez-Alonso et al., 2022).

Hypothesis 2: Firm innovativeness will mediate the relationship between family control and the performance of SMEs.

Data and method

In order to empirically test our hypotheses, we used the Spanish Survey on the Business Strategies (ESEE), collected by the SEPI foundation, which consists of panel data on Spanish industrial firms with 10 or more employees (Ortega-Argilés et al., 2005). This database has been used previously in similar studies (Martínez-Alonso et al., 2022; Muñoz-Bullón et al., 2020; Ortega-Argilés et al., 2005). As SEPI collects data periodically for some variables, and data on some key variables were either missing for some years or was not available, we limited our analysis to the period 2010–2014 to create continuous panel data settings. In addition, we focused only on family SMEs – those owned and controlled by a family as classified in ESEE (Martínez-Alonso et al., 2022; Ortega-Argilés et al., 2005). As per the criteria for classifying SMEs in the European Union, firms are considered SMEs if they employ 10–250 employees (Brinkerink, 2018; De Massis et al., 2015) and if their annual turnover is between 2 million to 250 million euros. In case a firm is part of a corporate group, consolidated annual turnover should be used. However, in our dataset, we did not have this information, we, therefore, excluded those firms which belonged to a corporate group. The resulting sample consisted of 642 family SMEs operating in 20 industrial sectors. Since SEPI collects data through stratified random sampling, using only SMEs does not alter the representativeness of our sample. The summary statistics (available upon request) of key variables for 849 SMEs (sub-population) and 642 family SMEs (working sample) were also comparable; hence, we expect the final sample to yield unbiased results.

Most of the family SMEs in the sample were in the business of production of food and tobacco (12.3% on average), followed by manufacturing of fabricated metal products (11.8% on average). The average age of firms in the sample was 31 years, and 28% of them reported one or more product innovations. The owners and relatives working in the family firms ranged from 1 to 4 (see Table 4 for more details).

The analysis required two outcome variables: firm *innovativeness* as a mediator and the firm's financial *performance* as a final dependent variable. To measure firm innovativeness, we used the number of product innovations introduced by a firm during an observation year. Because some firms may have a larger product portfolio than others, we divided the number of product innovations by the total number of products following Ortega-Argilés et al. (2005). We used net sales revenues to measure financial performance following the existing literature (Calabrò et al., 2017; Delmar et al., 2003; Oswald et al., 2009). From an empirical point of view, sales revenues are a more consistent variable in our dataset than profitability because some firms in our dataset do not report their financial performance in traditional metrics, such as return on assets or equity. From a conceptual standpoint, sales revenues are less biased than profitability as many family firms have an incentive to minimize their taxable income, but not their sales revenues (Oswald et al., 2009). Furthermore, a firm's innovation efforts may not always be translated into profits in the short term due to the associated investments, whereas revenues do respond fairly quickly to product innovations (Delmar et al., 2003).

Table 4. Descriptive statistics

S.No.	Variable	Obs	Mean	SD	Min	Max
1	Performance (sales)	1977	95.17804	90.37451	20.01366	490.5004
2	Family members	1977	2.22	1.01	1	4
3	Employees (full time)	1977	50.09	41.18	11	249
4	Firm size	1977	0.34	0.47	0	1
5	No. of product innovations	1964	1.23	9.41	0	205
6	No. of products	1977	1.18	0.46	1	4
7	Firm age	1977	30.97	17.09	2	121
8	Market condition	1977	2.20	0.72	1	3
9	Market share	1937	6.66	15.92	0	100
10	Industry activities	1977	9.47	5.42	1	20

SD, standard deviation.

Note: Descriptive statistics of unstandardized and untransformed variables. Total number of firms is 642; firms varied in each observation year. Sales are reported here in hundreds of thousands.

Considering the absence of information in the dataset about the composition of management teams, we followed the existing literature (Martínez-Alonso et al., 2022; Muñoz-Bullón et al., 2020; Oswald et al., 2009) to compute *family control* and used a ratio of family members, who work in the firm in executive or non-executive positions, over full-time employees working in the firm (Madanoglu et al., 2016; Oswald et al., 2009). This also aligns with the perspective that in family SMEs, informal relationships and family-members/owners interactions cut across functional and hierarchical boundaries, and thus the subgroup identity can stem from membership of family/owners or no-family/employees (Kraiczy et al., 2015; Nordqvist, 2012; Werner et al., 2018). The higher the family control, the lower the influence that non-family members can assert over firm strategies.

In older firms, the set of responsibilities, power relations, and interests that govern business operations are more crystallized and entrenched than in younger firms, as are daily rituals and routines (Turner et al., 2013). To control for this effect (Werner et al., 2018), we computed *firm age*, following Oswald et al. (2009), by deducting the firm's year of establishment from the observation year. Moreover, to account for the differences between small and medium-sized firms, we created a dichotomous variable that takes the value of 1 for medium-sized firms. Where medium-sized firms are defined as the firms employing 50–250 employees. Our approach to using employee cut-off levels (instead of a continuous size variable) for accounting for firm size effects is based on three premises. First, theoretically, medium-sized firms have their own idiosyncrasy that makes them different from small firms. For example, they have better access to capital but may lack the flexibility and dynamism of small firms (Drucker, 1999).

Second, from a policy support point of view, many innovation support initiatives are based on size cut-offs. For example, the European Commission has initiated policies to facilitate the creation and growth of small-sized firms and entrepreneurs (Czarnitzki & Delanote, 2013). Third, using a dichotomous variable also helps us implement our estimations without running into a possible high correlation between our main independent variable (family control) and firm size.

We considered some other available covariates to account for alternate explanations. The first is *market conditions* may influence a firm's innovation and revenues: for example, a growing market may absorb the costs of innovative activities better than a declining market (Chirico & Baù, 2014; Mowery & Rosenberg, 1979). To account for market conditions, we used market conditions – a categorical variable from our dataset as a proxy. This variable indicates whether a market is expanding, stable, or in recession.

We also accounted for the effect of the firm's *market share* (in percentages) in its main market that may influence its innovation performance (Cucculelli et al., 2016; Kellermanns et al., 2012). Finally, the nature of a firm's industry might affect innovativeness (Sanchez-Famoso et al., 2014; Werner et al., 2018). To control for this factor, we included industry fixed effects, *industrial activity,* which captures the 20 main industrial activities of firms in the sample.

Table 5 shows the correlations between our variables. Some correlations were quite significant ($p < 0.01$), but we did not find evidence of multicollinearity as the variance inflation factors (VIF) values of all the main variables were below 5. However, we standardized all the explanatory variables to avoid the issue of multicollinearity that may arise between squared or product terms with the original variables.

Table 5. Pairwise correlations

S.No.	Variables	VIF	1	2	3	4	5	6	7
1	Performance (sales)[a]								
2	Innovativeness[a]	1.08	0.119***						
3	Family control (FC)[b]	3.47	−0.474***	−0.097***					
4	FC squared	2.41	−0.129***	−0.017	0.681***				
5	Firm age[b]	1.16	0.178***	−0.011	−0.114***	−−0.054***			
6	Market share[b]	1.04	0.143***	0.062***	−0.090***	−0.059***	0.041*		
7	Market condition[b]	1.05	−0.116***	−0.04*	−0.024	−0.019	0.070***	0.004	
8	Firm size	1.89	0.639***	0.074***	−0.554***	−0.118***	0.132***	0.095***	−0.038*
	Industry dummies included	<3.65	YES	YES	YES	YES	YES	YES	YES

VIF, variance inflation factors.
Note: ****$p < 0.01$, **$p < 0.05$, *$p < 0.1$; a = log transformed; b = standardized.

We estimated our models with generalized structure equation modeling (GSEM) using Stata 15. GSEM extends the generalized linear model (GLM) framework to incorporate multiple equation systems. Our conceptual model involved two simultaneous equations. In the first equation, we regressed firm innovativeness on family control and other covariates. Because the distribution of firm innovativeness has a lower limit of 0, we used tobit regression (left-censored). We regressed financial performance on innovativeness, family control, and other covariates in the second equation. The joint estimation of the two equations allowed us to control for some of the endogeneity in the relationship between innovation and firm performance. The second equation formed the basis of our estimation of conditional indirect effects, or mediation effects (Hayes, 2017). Instead of aggregating separate effects, conditional indirect effects integrate them into one coefficient. Because our data did not satisfy the normality criterion for mediation models, we computed standard errors for these models by employing bootstrapping, which allows for constructing a confidence interval (CI) for indirect effects. CIs better respect the irregularity of the sampling distribution of indirect effects and, as a result, yield more adequate inferences (Hayes, 2017). In our study, bootstrapping consisted of 5000 replications at a 95% CI. To test for nonlinear effects of family control, we used the squared term and its first-order term.

The analysis consisted of two separate structured equation models. In the first model, we regressed innovativeness on family control and the covariates (model 1a and 1b), and simultaneously tested for the effect of innovativeness and covariates on financial performance (model 1b). In the next model, we regressed innovativeness on family control and the covariates, including family control (model 2a), while simultaneously testing for a mediation effect of innovativeness in the relationship between family control and financial performance (model 2b). The

direct versus indirect effects of family control on performance was further confirmed through the bootstrapping procedure.

Results

The two structured models we estimated using GSEM are displayed in Table 6, which also shows the estimation of the indirect effect of family control on firm performance through the bootstrapping procedure. In the first step of our analysis, we tested the core relationships of our conceptual model. Model 1a suggests that some covariates have a significant relationship with innovativeness, and model 1b shows that innovativeness positively affects performance ($\beta = 0.078$, $p < 0.01$). Whereas models 2a and 2b show effects of covariates, innovativeness, and family control. With family control in the models 2a and 2b, the fitness of models improves (AIC = 5678.99 compared to AIC = 5816.71 of models 1a and 1b). Beyond the positive and significant coefficient of the squared term of family control ($\beta = 0.12$, $p < 0.05$), our results (model 2a, Table 6) meet the other criteria for a robust U-shaped relationship (Haans et al., 2016) between family control and innovativeness. The extremum or turning point ($\beta = 1.953$, $p < 0.01$), and its confidence intervals (CI: 0.63 ~ 3.27) lie within the data range of family control. In order to ease the interpretations, we also plotted the effect of family control on innovativeness. Figure 1 also clearly shows a U-shaped effect of family control on innovativeness. Together, these results lend strong support to hypothesis 1 and suggest the pertinence of faultline theory to family firm innovativeness.

We subsequently tested whether family control has an indirect effect on firm performance. Model 2b in Table 5 shows that the squared term of family control has a U-shaped relationship with financial performance ($\beta = 0.058$, $p < 0.01$). In other words, any mediation effect of family control through innovativeness is partial. Table 6 also suggests an indirect relationship between family control and firm performance through

Table 6. Structured equation models to predict firm innovativeness and firm performance

Variables	Model 1a	Model 1b	Model 2a	Model 2b
	Innovativeness	Performance	Innovativeness	Performance
Firm age	−0.070	0.062***	−0.070	0.060***
	(0.071)	(0.016)	(0.072)	(0.015)
Market share	0.110	0.062***	0.100	0.060***
	(0.068)	(0.016)	(0.066)	(0.015)
Market condition	−0.108	−0.066***	−0.120	−0.070***
	(0.076)	(0.013)	(0.0760)	(0.013)
Firm size	0.710***	1.095***	0.240	0.820***
	(0.156)	(0.031)	(0.200)	(0.038)
Innovativeness		0.078***		0.060**
		(0.025)		(0.024)
Family control (FC)			−0.460***	−0.260***
			(0.139)	(0.023)
FC squared			0.120**	0.058***
			(0.057)	(0.010)
Constant	−2.490***	15.73***	−2.310***	15.830***
	(0.415)	(0.064)	(0.418)	(0.062)
AIC	5816.707		5678.986	
Extremum[a](turning point)			1.953**	
			(0.673)	
Direct effect[c]			−0.201***	
			(0.008)	
Indirect effect[c]			−0.021***	
			(0.007)	
Total effect[c]			−0.222***	
			(0.010)	

AIC, Akaike Information Criterion.
Note: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$; robust standard errors in parenthesis; number of observations = 1924; observation period: years 2010 to 2014 inclusive; a = computed through delta method; c = bias corrected bootstrap standard errors, computed with 5000 replications, are in parenthesis.
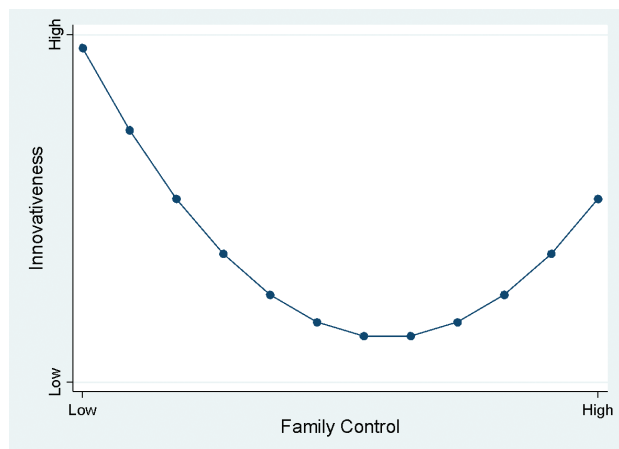

Figure 1. Curvilinear relationship between family control and innovativeness.

innovativeness ($\beta = -0.021$, $p < 0.01$). This result supports hypothesis 2.

Discussion

Complementing the earlier studies that either show that greater family influence has negative consequences for innovativeness (Deman et al., 2018) or positive consequences for innovativeness (König et al., 2013; Kotlar et al., 2013; Matzler et al., 2015), we show that the effect of family control is not linear in SMEs, and include both negative and positive outcomes. Our results show that there is a U-shape relationship between family control and innovativeness in family SMEs, which partially mediates the effect of family control on performance. Moreover, our results contradict Bauweraerts and Colot (2017) and Calabrò et al. (2017) findings regarding the

outcomes of family control in family firms. For example, Bauweraerts and Colot (2017) show that the nonlinear relationship between family control and entrepreneurial orientation is inverted U-shaped in the sample of medium to large family firms. Likewise, Calabrò et al. (2017) demonstrated an inverted U-shape relationship between family control and firm growth but neglected the role of non-family members in the 'principle-principle' conflict as if non-family members have no voice or role in these conflicts. However, extending the findings of Minichilli et al. (2010) in the context of SMEs, we find that family control has a U-shape effect on firm performance. Contrary to Bauweraerts and Colot (2017) and Calabrò et al. (2017), we focused on family SMEs and family–non-family conflict beyond the board member that could explain the variation in the outcomes. Whereas existing research focuses on the agenda of the controlling family when theorizing the effects of family control on innovativeness, we highlight the relevance of faultline theory and thus of the dynamics between family and non-family organizational members. Indeed, at intermediate levels of family control, it is not that family control reaches an optimum point where the effects of stewardship are not yet undone by agency problems (Bauweraerts & Colot, 2017). Instead, our data support the idea that the clash between fears of family members regarding the short-termism of non-family organizational members (Jaskiewicz et al., 2015; Madanoglu et al., 2016) and fears of non-family members about the nepotism and tribalism of family members (Daspit et al., 2018; De Massis et al., 2015; König et al., 2013) reaches a climax there, hurting both innovation and consequently financial performance.

Theoretical contributions

The study's main contribution lies in signifying the identity conflict through the lens of faultline theory between family and non-family members within the context of family SMEs. The faultline assumptions related to identity and social categories remained implicit in studies that used other theoretical frameworks (Filser et al., 2018; Martínez-Alonso et al., 2022; Matzler et al., 2015). For instance, literature that used agency theory (De Massis et al., 2015; Matzler et al., 2015), the relationship between principal-agent, presupposes that each party to the relationship considers itself as a member of a category – principal/owners/family, or agent/employee/non-family. The same is the case with the literature that uses stewardship theory (Filser et al., 2018), or socio-emotional wealth theory (Cucculelli et al., 2016), in which 'agent' is considered as 'steward', nevertheless, non-family employees are still regarded as separate from the family in terms of firm ownership. The resource-based view is more complex as it goes beyond the dichotomies and categories and focuses on the underlying set of

resources that may give a competitive advantage to a firm. Nevertheless, some studies that use a resource-based view (Bauweraerts & Colot, 2017; Deman et al., 2018; Martínez-Alonso et al., 2022) assume group identity at play, for instance, family structural capital versus knowledge diversity due to non-family members. We contend that faultline theory complements other theoretical frameworks by making the consequences of subgroup dynamics more explicit in theorization.

Through the theory of faultlines (Antino et al., 2019; Verbeke & Kano, 2012), we highlighted that family – non-family group identity has consequences. Our faultline framework incorporates the motivations of both family and non-family members. It is only by taking a broader perspective on the behavioral dynamics within and around family firms that their innovative behavior and success can be understood more systematically and comprehensively. This constitutes our primary contribution.

Moreover, by defining the faultlines on the basis of organization-wide family and non-family members, we also extended the literature on faultline theory (Bunderson & Van der Vegt, 2018) that remained focused on the top management team (Bunderson & Van der Vegt, 2018; Minichilli et al., 2010) and on board members (Bauweraerts & Colot, 2017; Calabrò et al., 2017). We argued that, in family SMEs, vertical differences – status, identity, and privileges between organizational members might stem from family membership; and given the size of SMEs, informal and direct interventions of family members make the formal organizational boundaries redundant (Kraiczy et al., 2015; Nordqvist, 2012). Therefore, family control is evident across the organization in family SMEs due to informal interventions. Thus, creating subgroup dynamics that affect organizational outcomes. It is for these reasons we argue that in SMEs settings, exclusive focus on top management team may not help explicate the full potential of faultline theory. This is our second contribution.

Practical implications

Our findings have noticeable implications for SMEs management. Where possible, strategizing based on linear projections may be avoided if a change in family governance is expected. Moreover, to attenuate the undesirable consequences of change in the family governance and to reverse the decreasing performance, a culture of openness, tolerance, and altruism must be institutionalized organization-wide. This is because, in family SMEs, non-family members are critical human resources that positively affect the innovativeness, profitability, and survival of family-owned businesses (Franco & Franco, 2017; Vallejo, 2009). Any identity conflict between family and non-family members hampers innovation and subsequent performance. Therefore, we recommend family owners should be

very cautious while exercising their power over non-family members or, in other words, a formal hierarchical structure should be implemented and followed to rule out the direct interventions and control over non-family members in family SMEs. This may help family and non-family organizational members to arrive at a negotiated settlement over role and status amicably.

Limitations and future research avenues

Our study has some limitations, which nevertheless provide opportunities for future research. Although our models fit with the faultline theory and tell a consistent story, the quantitative nature of our data has prevented us from directly observing faultlines and any organizational response. Qualitative methods, such as interviews, might be necessary to establish to what extent faultlines are present, around which personal trait(s) they revolve, and thus how relevant family–non-family categorization of organizational members is for firm innovativeness and financial performance. Although we argue that in SMEs, formal hierarchy often becomes redundant as family owners-members may interfere and manage the firm operations at all levels and domains, nevertheless considering the unavailability of data, we could not account for the effects of formal positions within and between two subgroups – family and non-family in SMEs. We invite future researchers to explore the role of formal titles in family versus non-family organizational dynamics.

Furthermore, given the discrepancies in the family firm literature, particularly family SMEs per se, regarding positive, negative, and nonlinear effects of family control for innovativeness (König et al., 2013; Matzler et al., 2015), firm performance (Hughes et al., 2018), entrepreneurial orientation (Bauweraerts & Colot, 2017), researchers should consider employing configurational approaches to provide a more nuanced view of the dynamics involved in family SMEs. Although our data did not allow us to incorporate different sets of attributes between family–non-family categorization, we recommend future scholarships consider different configurational paths to explain performance using qualitative comparative analysis (e.g., see Hughes et al., 2018). In addition, our broad categorization of organizational members as family and non-family members does not account for identity conflicts within these groups. Especially the conflicts within family owners/members and governance are reported in the literature (Blanco-Mazagatos et al., 2016; Schulze et al., 2001), which have severe effects on firm performance. This opens avenues for future research to extend our work.

Moreover, our research was based on Spanish data, but nonlinear analyses of family firm innovativeness and performance that employ data from different cultural contexts, such

as India or China, could reveal varieties in different ways. Although our analysis has a temporal dimension, many family firms have a much longer history than our 5-year observation period. The family–non-family distinction and its consequences may affect innovativeness and financial performance differently over a longer period. Future researchers may consider these faultlines over a longer time span in order to establish how they evolve as successive generations of managers succeed each other and how faultlines (cease to) impact firms' innovative pursuits.

Funding

References

Antino, M., Rico, R. & Thatcher, S. (2019). Structuring reality through the faultlines lens: The effects of structure, fairness, and status conflict on the activated faultlines-performance relationship. *Academy of Management Journal*, *62*(5), 1444–1470. doi: 10.5465/amj.2017.0054

Arosa, B., Iturralde, T. & Maseda, A. (2010). Outsiders on the board of directors and firm performance: Evidence from Spanish non-listed family firms. *Journal of Family Business Strategy*, *1*(4), 236–245. doi: 10.1016/j.jfbs.2010.10.004

Arregle, J.-L., Hitt, M. A., Sirmon, D. G. & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, *44*(1), 73–95. doi: 10.1111/j.1467-6486.2007.00665.x

Arzubiaga, U., Iturralde, T., Maseda, A. & Kotlar, J. (2018). Entrepreneurial orientation and firm performance in family SMEs: The moderating effects of family, women, and strategic involvement in the board of directors. *International Entrepreneurship and Management Journal*, *14*(1), 217–244. doi: 10.1007/s11365-017-0473-4

Avlonitis, G. J. & Salavou, H. E. (2007). Entrepreneurial orientation of SMEs, product innovativeness, and performance. *Journal of Business Research*, *60*(5), 566–575. doi: 10.1016/j.jbusres.2007.01.001

Bammens, Y., Notelaers, G. & Van Gils, A. (2015). Implications of family business employment for employees' innovative work involvement. *Family Business Review*, *28*(2), 123–144. doi: 10.1177/0894486513520615

Barnett, T. & Kellermanns, F. W. (2006). Are we family and are we treated as family? Nonfamily employees' perceptions of justice in the family firm. *Entrepreneurship Theory and Practice*, *30*(6), 837–854. doi: 10.1111/j.1540-6520.2006.00155.x

Barth, E., Gulbrandsen, T. & Schønea, P. (2005). Family ownership and productivity: The role of owner-management. *Journal of Corporate Finance*, *11*(1–2), 107–127. doi: 10.1016/j.jcorpfin.2004.02.001

Basco, R., Campopiano, G., Calabrò, A. & Kraus, S. (2019). They are not all the same! Investigating the effect of executive versus non-executive family board members on firm performance. *Journal of Small Business Management*, *57*(sup2), 637–657. doi: 10.1111/jsbm.12535

Bauweraerts, J. & Colot, O. (2017). Exploring nonlinear effects of family involvement in the board on entrepreneurial orientation. *Journal of Business Research*, *70*, 185–192. doi: 10.1016/j.jbusres.2016.08.020

Blanco-Mazagatos, V., de Quevedo-Puente, E. & Delgado-García, J. B. (2016). How agency conflict between family managers and family owners affects performance in wholly family-owned firms: A generational

perspective. *Journal of Family Business Strategy*, 7(3), 167–177. doi: 10.1016/j.jfbs.2016.07.003

Brinkerink, J. (2018). Broad search, deep search, and the absorptive capacity performance of family and nonfamily firm R&D. *Family Business Review*, 31(3), 295–317. doi: 10.1177/0894486518775187

Bunderson, J. S. & Van der Vegt, G. S. (2018). Diversity and inequality in management teams: A review and integration of research on vertical and horizontal member differences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 47–73. doi: 10.1146/annurev-orgpsych-032117-104500

Calabrò, A., Campopiano, G. & Basco, R. (2017). Principal-principal conflicts and family firm growth: The moderating role of business family identity. *Journal of Family Business Management*, 7(3), 291–308. doi: 10.1108/JFBM-02-2017-0005

Chirico, F. & Baù, M. (2014). Is the family an 'asset' or 'liability' for firm performance? The moderating role of environmental dynamism. *Journal of Small Business Management*, 52(2), 210–225. doi: 10.1111/jsbm.12095

Chu, W. (2009). The influence of family ownership on SME performance: Evidence from public firms in Taiwan. *Small Business Economics*, 33(3), 353–373. doi: 10.1007/s11187-009-9178-6

Chua, J. H., Chrisman, J. J. & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39. doi: 10.1177/104225879902300402

Cœurderoy, R. & Lwango, A. (2012). Social capital of family firms and organisational efficiency: Theoretical proposals for a transmission model through bureaucratic costs. *M@n@gement*, 15(4), 415–439. doi: 10.3917/mana.154.0416

Cucculelli, M., Le Breton-Miller, I. & Miller, D. (2016). Product innovation, firm renewal and family governance. *Journal of Family Business Strategy*, 7(2), 90–104. doi: 10.1016/j.jfbs.2016.02.001

Czarnitzki, D. & Delanote, J. (2013). Young innovative companies: The new high-growth firms? *Industrial and Corporate Change*, 22(5), 1315–1340. doi: 10.1093/icc/dts039

Daspit, J. J., Madison, K., Barnett, T. & Long, R. G. (2018). The emergence of bifurcation bias from unbalanced families: Examining HR practices in the family firm using circumplex theory. *Human Resource Management Review*, 28(1), 18–32. doi: 10.1016/j.hrmr.2017.05.003

Delmar, F., Davidsson, P. & Gartner, W. B. (2003). Arriving at the high-growth firm. *Journal of Business Venturing*, 18(2), 189–216. doi: 10.1016/S0883-9026(02)00080-0

Deman, R., Jorissen, A. & Laveren, E. (2018). Family control and innovativeness in private firms: The mediating role of board task performance. *Management Decision*, 56(2), 295–310. doi: 10.1108/MD-09-2016-0665

De Massis, A., Kotlar, J., Campopiano, G. & Cassia, L. (2015). The impact of family involvement on SMEs' performance: Theory and evidence. *Journal of Small Business Management*, 53(4), 924–948. doi: 10.1111/jsbm.12093

Diaz-Moriana, V., Clinton, E., Kammerlander, N., Lumpkin, G. T. et al. (2020). Innovation motives in family firms: A transgenerational view. *Entrepreneurship Theory and Practice*, 44(2), 256–287. doi: 10.1177/1042258718803051

Drucker, P. F. (1999). *Management: Tasks, responsibilities, practices*. Butterworth-Heinemann.

Duran, P., Kammerlander, N., van Essen, M. & Zellweger, T. (2016). Doing more with less: Innovation input and output in family firms. *Academy of Management Journal*, 59(4), 1224–1264. doi: 10.5465/amj.2014.0424

Elbanna, S., Thanos, I. C. & Jansen, R. J. G. (2020). A literature review of the strategic decision-making context: A synthesis of previous mixed findings and an agenda for the way forward. *M@n@gement*, 23(2), 42–60. doi: 10.37725/mgmt.v23i2.4621

Falahat, M., Knight, G., & Alon, I. (2018). Orientations and capabilities of born global firms from emerging markets. *International Marketing Review*, 35(6), 936-957. doi: 10.1108/IMR-01-2017-0021

Fang, H., Chrisman, J. J., Daspit, J. J. & Madison, K. (2022). Do nonfamily managers enhance family firm performance? *Small Business Economics*, 58, 1459–1474. doi: 10.1007/s11187-021-00469-6

Filser, M., De Massis, A., Gast, J., Kraus, S. et al. (2018). Tracing the roots of innovativeness in family SMEs: The effect of family functionality and socioemotional wealth. *Journal of Product Innovation Management*, 35(4), 609–628. doi: 10.1111/jpim.12433

Franco, M. & Franco, S. (2017). Organizational commitment in family SMEs and its influence on contextual performance. *Team Performance Management*, 23(7–8), 364–384. doi: 10.1108/TPM-05-2016-0020

Gast, J., Filser, M., Rigtering, J. P. C., Harms, R. et al. (2018). Socioemotional wealth and innovativeness in small- and medium-sized family enterprises: A configuration approach. *Journal of Small Business Management*, 56(S1), 53–67. doi: 10.1111/jsbm.12389

González-Cruz, T. F. & Cruz-Ros, S. (2016). When does family involvement produce superior performance in SME family business? *Journal of Business Research*, 69(4), 1452–1457. doi: 10.1016/j.jbusres.2015.10.124

Gnan, L., Montemerlo, D. & Huse, M. (2015). Governance systems in family SMEs: The substitution effects between family councils and corporate governance mechanisms. *Journal of Small Business Management*, 53(2), 355–381. doi: 10.1111/jsbm.12070

Haans, R. F., Pieters, C. & He, Z.-L. (2016). Thinking about U: Theorizing and testing U- and inverted U-shaped relationships in strategy research. *Strategic Management Journal*, 37(7), 1177–1195. doi: 10.1002/smj.2399

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. The Guilford Press.

Hoffmann, C., Wulf, T. & Stubner, S. (2016). Understanding the performance consequences of family involvement in the top management team: The role of long-term orientation. *International Small Business Journal: Researching Entrepreneurship*, 34(3), 345–368. doi: 10.1177/0266242614550500

Hughes, M., Filser, M., Harms, R., Kraus, S. et al. (2018). Family firm configurations for high performance: The role of entrepreneurship and ambidexterity. *British Journal of Management*, 29(4), 595–612. doi: 10.1111/1467-8551.12263

Ibrahim, B., Dumas, C. & McGuire, J. (2001). Strategic decision making in small family firms: An empirical investigation. *Journal of Small Business Strategy*, 12(1), 80–90.

Jaskiewicz, P., Combs, J. G. & Rau, S. B. (2015). Entrepreneurial legacy: Toward a theory of how some family firms nurture transgenerational entrepreneurship. *Journal of Business Venturing*, 30(1), 29–49. doi: 10.1016/j.jbusvent.2014.07.001

Jehn, K. A., Greer, L. L. & Rupert, J. (2008). Diversity, conflict, and their consequences. In A. Brief (Ed.), *Diversity at work* (pp. 127–174). Cambridge University Press. doi: 10.1017/CBO9780511753725.007

Jun, J., Lee, T. & Park, C. (2021). The mediating role of innovativeness and the moderating effects of strategic choice on SME performance. *Journal of Small Business Management*, 59(4), 627–647. doi: 10.1111/jsbm.12517

Kellermanns, F. W., Eddleston, K. A., Sarathy, R. & Murphy, F. (2012). Innovativeness in family firms: A family influence perspective. *Small Business Economics*, 38(1), 85–101. doi: 10.1007/s11187-010-9268-5

König, A., Kammerlander, N. & Enders, A. (2013). The family innovator's dilemma: How family influence affects the adoption of discontinuous

technologies by incumbent firms. *Academy of Management Review, 38*(3), 418–441. doi: 10.5465/amr.2011.0162

Kotlar, J., De Massis, A., Frattini, F., Bianchi, M. et al. (2013). Technology acquisition in family and nonfamily firms: A longitudinal analysis of Spanish manufacturing firms. *Journal of Product Innovation Management, 30*(6), 1073–1088. doi: 10.1111/jpim.12046

Kraiczy, N. D., Hack, A. & Kellermanns, F. W. (2015). What makes a family firm innovative? CEO risk-taking propensity and the organizational context of family firms. *Journal of Product Innovation Management, 32*(3), 334–348. doi: 10.1111/jpim.12203

Kunze, F. & Bruch, H. (2010). Age-based faultlines and perceived productive energy: The moderation of transformational leadership. *Small Group Research, 41*(5), 593–620. doi: 10.1177/1046496410366307

Lau, D. C. & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review, 23*(2), 325–340. doi: 10.2307/259377

Lau, D. C. & Murnighan, J. K. (2005). Interactions within groups and subgroups: The effects of demographic faultlines. *Academy of Management Journal, 48*(4), 645–659. doi: 10.5465/amj.2005.17843943

Le Breton-Miller, I., Miller, D. & Bares, F. (2015). Governance and entrepreneurship in family firms: Agency, behavioral agency and resource-based comparisons. *Journal of Family Business Strategy, 6*(1), 58–62. doi: 10.1016/j.jfbs.2014.10.002

Lewis, D., Manolchev, C., Pursell, L., Hodgins, M. et al. (2020). The SME paradox? Investigating ill-treatment behaviours in small and medium-sized enterprises in Ireland. *International Small Business Journal: Researching Entrepreneurship, 38*(8), 746–767. doi: 10.1177/0266242620940165

Lumpkin, G. T., Brigham, K. H. & Moss, T. W. (2010). Long-term orientation: Implications for the entrepreneurial orientation and performance of family businesses. *Entrepreneurship & Regional Development, 22*(3–4), 241–264. doi: 10.1080/08985621003726218

Madanoglu, M., Altinay, L. & Wang, X. (Lorna). (2016). Disentangling the effect of family involvement on innovativeness and risk taking: The role of decentralization. *Journal of Business Research, 69*(5), 1796–1800. doi: 10.1016/j.jbusres.2015.10.058

Martínez-Alonso, R., Martínez-Romero, M. J. & Rojo-Ramírez, A. A. (2022). Refining the influence of family involvement in management on firm performance: The mediating role of technological innovation efficiency. *Business Research Quarterly, 25*(4), 337–351. doi: 10.1177/2340944420957330

Maseda, A., Iturralde, T., Aparicio, G., Boulkeroua, L. et al. (2019). Family board ownership, generational involvement and performance in family SMEs: A test of the S-shaped hypothesis. *European Journal of Management and Business Economics, 28*(3), 285–300. doi: 10.1108/EJMBE-07-2018-0071

Matzler, K., Veider, V., Hautz, J. & Stadler, C. (2015). The impact of family ownership, management, and governance on innovation. *Journal of Product Innovation Management, 32*(3), 319–333. doi: 10.1111/jpim.12202

Minichilli, A., Corbetta, G. & MacMillan, I. C. (2010). Top management teams in family-controlled companies: 'Familiness', 'faultlines', and their impact on financial performance. *Journal of Management Studies, 47*(2), 205–222. doi: 10.1111/j.1467-6486.2009.00888.x

Miralles-Marcelo, J. L., del Mar Miralles-Quirós, M. & Lisboa, I. (2014). The impact of family control on firm performance: Evidence from Portugal and Spain. *Journal of Family Business Strategy, 5*(2), 156–168. doi: 10.1016/j.jfbs.2014.03.002

Mowery, D. & Rosenberg, N. (1979). The influence of market demand upon innovation: A critical review of some recent empirical studies. *Research Policy, 8*(2), 102–153. doi: 10.1016/0048-7333(79)90019-2

Muñoz-Bullón, F., Sanchez-Bueno, M. J. & De Massis, A. (2020). Combining internal and external R&D: The effects on innovation performance in family and nonfamily firms. *Entrepreneurship Theory and Practice, 44*(5), 996–1031. doi: 10.1177/1042258719879674

Nordqvist, M. (2012). Understanding strategy processes in family firms: Exploring the roles of actors and arenas. *International Small Business Journal: Researching Entrepreneurship, 30*(1), 24–40. doi: 10.1177/0266242611407413

Ortega-Argilés, R., Moreno, R. & Caralt, J. S. (2005). Ownership structure and innovation: Is there a real link? *The Annals of Regional Science, 39*(4), 637–662. doi: 10.1007/s00168-005-0026-6

Oswald, S. L., Muse, L. A. & Rutherford, M. W. (2009). The influence of large stake family control on performance: Is it agency or entrenchment? *Journal of Small Business Management, 47*(1), 116–135. doi: 10.1111/j.1540-627X.2008.00264.x

Randolph, R. V., Fang, H. C., Memili, E. & Nayir, D. Z. (2021). Family and non-family sources of knowledge diversity in family firms: The role of causation logics. *International Small Business Journal, 39*(1), 64–85. doi: 10.1177/0266242620953359

Rubera, G. & Kirca, A. H. (2012). Firm innovativeness and its performance outcomes: A meta-analytic review and theoretical integration. *Journal of Marketing, 76*(3), 130–147. doi: 10.1509/jm.10.0494

Salavou, H. & Avlonitis, G. (2008). Product innovativeness and performance: A focus on SMEs. *Management Decision, 46*(7), 969–985. doi: 10.1108/00251740810890168

Sanchez-Famoso, V., Maseda, A. & Iturralde, T. (2014). The role of internal social capital in organisational innovation. An empirical study of family firms. *European Management Journal, 32*(6), 950–962. doi: 10.1016/j.emj.2014.04.006

Schulze, W. S., Lubatkin, M. H., Dino, R. N. & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science, 12*(2), 99–116. doi: 10.1287/orsc.12.2.99.10114

Songini, L. & Gnan, L. (2015). Family involvement and agency cost control mechanisms in family small and medium-sized enterprises. *Journal of Small Business Management, 53*(3), 748–779. doi: 10.1111/jsbm.12085

Tabor, W., Chrisman, J. J., Madison, K. & Vardaman, J. M. (2018). Nonfamily members in family firms: A review and future research agenda. *Family Business Review, 31*(1), 54–79. doi: 10.1177/0894486517734683

Turner, S. F., Mitchell, W. & Bettis, R. A. (2013). Strategic momentum: How experience shapes temporal consistency of ongoing innovation. *Journal of Management, 39*(7), 1855–1890. doi: 10.1177/0149206312458704

Urbinati, A., Franzò, S., De Massis, A. & Frattini, F. (2017). Innovation in family firms: A review of prior studies and a framework for future research. In A. Brem & E. Viardot (Eds.), *Revolution of innovation management: Internationalization and business models* (Vol. 2, pp. 213–246). Palgrave Macmillan. doi: 10.1057/978-1-349-95123-9_8

Vallejo, M. C. (2009). The effects of commitment of non-family employees of family firms from the perspective of stewardship theory. *Journal of Business Ethics, 87*, 379–390. doi: 10.1007/s10551-008-9926-6

Vandebeek, A., Voordeckers, W., Lambrechts, F. & Huybrechts, J. (2016). Board role performance and faultlines in family firms: The moderating role of formal board evaluation. *Journal of Family Business Strategy, 7*(4), 249–259. doi: 10.1016/j.jfbs.2016.10.002

Vandekerkhof, P., Steijvers, T., Hendriks, W. & Voordeckers, W. (2015). The effect of organizational characteristics on the appointment of nonfamily managers in private family firms: The moderating role of

socioemotional wealth. *Family Business Review, 28*(2), 104–122. doi: 10.1177/0894486513514274

Verbeke, A. & Kano, L. (2012). The transaction cost economics theory of the family firm: Family-based human asset specificity and the bifurcation bias. *Entrepreneurship Theory and Practice, 36*(6), 1183–1205. doi: 10.1111/j.1540-6520.2012.00545.x

Wadho, W. & Chaudhry, A. (2018). Innovation and firm performance in developing countries: The case of Pakistani textile and apparel manufacturers. *Research Policy, 47*(7), 1283–1294. doi: 10.1016/j.respol.2018.04.007

Wadho, W. & Chaudhry, A. (2022). Innovation strategies and productivity growth in developing countries: Firm-level evidence from Pakistani manufacturers. *Journal of Asian Economics, 81*, Article 101484. doi: 10.1016/j.asieco.2022.101484

Wadho, W., Goedhuys, M. & Chaudhry, A. (2019). Young innovative companies and employment creation, evidence from the Pakistani textiles sector. *World Development, 117*, 139–152. doi: 10.1016/j.worlddev.2019.01.002

Wang, Y. & Shi, H. X. (2021). Particularistic and system trust in family businesses: The role of family influence. *Journal of Small Business Management, 59*(4), 700–734. doi: 10.1111/jsbm.12533

Werner, A., Schröder, C. & Chlosta, S. (2018). Driving factors of innovation in family and non-family SMEs. *Small Business Economics, 50*(1), 201–218. doi: 10.1007/s11187-017-9884-4