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In the Pursuit of Innovation: The Role of Top Management Team Functional Diversity and Open Discussion in Family Firm Innovation Intentions

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ABSTRACT

Academic Summary: Interest in family firm innovation has increased in recent times, generating the assumption that family firms are less willing to innovate than nonfamily firms. We investigate firm innovation inputs by examining whether family firms differ from nonfamily counterparts regarding innovation intentions. We then adopt an upper echelons perspective to study whether the TMT functional diversity and open discussion explain the alleged lower intention to innovate of family firms. The analysis of survey data from 393 Italian firms reveals that family firms are less willing to innovate than nonfamily firms and that the TMT functional diversity partially mediates this result, meaning that family firms develop lower innovation intentions due to their lower TMT functional diversity compared to nonfamily firms. Focusing on family firms, we find that the relationship between TMT functional diversity and innovation intentions is positively moderated by TMT open discussion. Our study shows that TMT functional diversity and TMT open discussion are essential to stimulate family firms' innovation intention, contributing to the family business innovation literature, the debate on the ability-willingness paradox, and upper echelons research. Moreover, it provides practical implications by highlighting the importance of creating a functionally diverse TMT, while fostering open discussion among its members.

Managerial Summary: Our study highlights how family firms can overcome their lower intention to innovate compared to nonfamily firms. The analysis of survey data from 393 Italian firms highlights two key factors that help explain and address this gap: the functional diversity of the TMT and the presence of open discussion within the team. Our findings indicate that, because of their lower TMT functional diversity, family firms develop fewer intentions to innovate. Thus, family firms should invest at least as much as their nonfamily counterparts in TMT functional diversity. A practical way to do so is by promoting TMT appointment criteria to deliberately include individuals with varied functional backgrounds. However, diversity alone is not enough. An environment where TMT members feel encouraged to share doubts, opinions, and suggestions is essential to ensure that diverse knowledge is shared and used effectively. Together, these practices can significantly strengthen a family firm's intention to innovate. What is interesting about the implications of this study is that functional diversity and open discussion are not fixed traits; rather, they are strategic levers that leaders can shape over time to strategically refine and improve the attitudes toward innovation of their TMT and unlock their firm's innovation potential.

Summary

- Our study reveals two key factors that explain the innovation intentions gap between family and nonfamily firms: TMT functional diversity and open discussion.
- Because of their lower TMT functional diversity, family firms develop fewer intentions to innovate. Family firms should thus invest at least as much as their nonfamily counterparts in TMT functional diversity.
- However, functional diversity alone is not enough. An environment where TMT members feel encouraged to share doubts, opinions, and suggestions is essential to ensure that diverse knowledge is shared and used effectively.
- TMT functional diversity and open discussion are not fixed traits, but rather strategic levers that leaders can shape over time to strategically refine and improve the attitudes toward innovation of their TMT and unlock their firm's innovation potential.

1 | Introduction

Innovation is the fulcrum for the competitiveness and sustainable growth of firms in a rapidly changing global economic context (Chirico et al. 2023; Knudsen et al. 2023), driving productivity, employment, and economic development (e.g., Appio et al. 2021; Gradillas and Thomas 2023). This is particularly crucial for family firms, the most ubiquitous organizational form in any world economy (De Massis et al. 2018), where the profound influence of the family on management and ownership can both foster or hinder innovation, leading to contrasting results (Calabrò et al. 2019; De Massis, Frattini, and Lichtenthaler 2013). Family ownership and management indeed shape the firm's ability (discretion to act) and willingness (disposition to act) to innovate (Appleton et al. 2025; De Massis et al. 2014; Duran et al. 2016), with family firms benefiting from a long-term vision and strong social capital, but also being more resistant to change and conservative toward risk-taking (Arregle et al. 2007; Mismetti et al. 2024). This generates ambiguity in innovation processes, known as "ability-willingness paradox" (Chrisman, Chua, et al. 2015). While the importance of the willingness to innovate is acknowledged (Migliori et al. 2020), research has primarily focused on innovation outcomes (Hu and Hughes 2020), neglecting how resources and firm dynamics influence this willingness (Chrisman, Fang, et al. 2015; Hu and Hughes 2022).

Our study seeks to address this gap by investigating how family firms can overcome their alleged lower intention to innovate. We adopt an upper echelons perspective and investigate whether the top management team (TMT)—and particularly its functional diversity and open discussion—matters in this regard. Focusing on the TMT allows us to get a clearer understanding of firms' intention to innovate as this team is typically responsible for making the firms' strategic decisions (Rondi and Rovelli 2021; Rovelli et al. 2020), which include those concerning innovation (De Massis et al. 2021): managers must be willing to undertake strategic innovative behaviors (Slater et al. 2014) to make the firm engage in innovation. First, we focus on the TMT functional diversity, that is, the variety in team members' experiences and functional backgrounds (Boeker and Wiltbank 2005). This diversity is especially important in relation to innovation as a functionally diverse team brings with it different and often complementary backgrounds, ideas, perspectives, and experiences (e.g., Camelo-Ordaz et al. 2005) that can stimulate creativity and open up opportunities for innovation (Bantel and Jackson 1989; Buyl et al. 2011; Camelo-Ordaz et al. 2005; Milliken and Martins 1996). Additionally, we consider the internal team's dynamics of open discussion, that is, how group members perceive conflict and how open and encouraging they are in expressing their doubts, opinions, and uncertainties (Jehn 1995; Tjosvold 1991), as a possible lever to manage TMT heterogeneity resulting from functional diversity. Indeed, information exchange and intensive interactions allow TMT members to exchange ideas and knowledge (Ormiston et al. 2022), which is central to engaging in innovation activities (Andreini et al. 2022; Rondi and Rovelli 2021).

Specifically, starting from the baseline hypothesis that innovation intentions are lower in family firms than in nonfamily counterparts, we claim that this lower willingness to innovate can be explained by considering the functional diversity of the TMT. We argue that family firms tend to have a less functionally diverse TMT compared to nonfamily firms and that this, in turn, negatively associates with the intention to innovate of this team, and thus of the firm itself. We then contend that, in family firms, TMT functional diversity is needed but not sufficient to foster the intention to innovate. Instead, besides possessing functionally different knowledge, the TMT members also need to share their knowledge within the team and openly discuss innovation opportunities.

Our empirical analyses on survey-collected data from a sample of 393 Italian firms confirm our claims. Family firms appear less willing to innovate than nonfamily counterparts, and the functional diversity of the TMT partially mediates this result. Considering family firms only, results show that for this type of firm, the relation between TMT functional diversity and innovation intentions is positively moderated by open discussion in the TMT.

This research makes three contributions. First, we add to the literature on family firm innovation—which mainly focuses on the role of family involvement (e.g., Duran et al. 2016; Matzler et al. 2015) – by investigating the influential role played by the TMT, specifically its functional diversity and open discussion. Second, we advance the debate on the ability-willingness paradox. While most of the literature focuses on innovation ability, we know less about what drives innovation willingness and how family firms can address the ability-willingness gap (De Massis et al. 2015; Debellis et al. 2021; Guenther et al. 2023). By leveraging the upper echelons theory (UET), we contribute to this literature by showing the important role played by the TMT in closing the gap between family and nonfamily firms concerning innovation intentions (i.e., willingness to innovate). Third, we contribute to the UET by showing how being a family firm is a situational factor (Ensley and Pearson 2005; Martínez-Alonso et al. 2023) influencing the TMT decision-making approach, with specific reference to innovation intentions. Finally, by shedding light on the (combined) role of TMT functional diversity and open discussion for family firms' innovation intentions, we offer practical implications on how TMTs should be structured to increase family firms' willingness to innovate and on the importance of open interaction among TMT members.

2 | Theoretical Framework

2.1 | Innovation Intentions in Family and Nonfamily Firms

Family firm innovation literature has traditionally investigated the differences between family and nonfamily firms in the drivers and outcomes of innovation (De Massis, Frattini, and Lichtenthaler 2013; Feranita et al. 2017). Indeed, the family nature of the firm plays a key role in influencing the firm's innovative behavior (Chrisman, Chua, et al. 2015) as this peculiar type of firm is characterized by paradoxical tensions that simultaneously witness the presence of constraining as well as fostering forces in innovation (De Massis et al. 2015; Ingram et al. 2016). Specifically, while their inherent strengths (long-term focus, tacit knowledge, stable leadership) suggest an ability to innovate (Duran et al. 2016; Röd 2016), the reluctance to take risks, share control, or invest in areas such as technology can limit their innovation intentions (Block et al. 2013; Röd 2016; Rondi et al. 2021), a key element to effectively innovate (Migliori et al. 2020; Slater et al. 2014). The "ability-willingness paradox" captures this tension in family firms' innovation (Chrisman, Chua, et al. 2015; De Massis et al. 2015), according to which they are renowned for having greater ability to innovate but lower willingness than their nonfamily counterparts (Duran et al. 2016).

To understand how family firms could overcome this paradox and keep up with nonfamily firms, we focus on innovation intention, that is, the willingness of the firm to strategically engage in innovation to grow (Carland et al. 1984; Gundry and Welsch 2001). Following prior research on innovation, our baseline hypothesis posits that family firms differ from nonfamily firms, experiencing lower innovation intentions. Previous studies already highlighted differences between these two types of firms. Scholars primarily focused on the key element of distinction—that is, the presence of a family in the ownership and management of the firm (Chrisman, Fang, et al. 2015; Filser et al. 2018). Indeed, the family plays a crucial role in influencing innovative strategic behaviors (König et al. 2013; Mismetti et al. 2023), mainly by prioritizing the pursuit of noneconomic goals rather than economic ones (Block et al. 2013). This might be at the expense of losing economic benefits originating from innovative activities (Kotlar et al. 2013; Matzler et al. 2015). Consistent with this view, different ownership types (family vs. nonfamily) may influence the firm's innovation intentions (Hoskisson et al. 2002; Thomsen and Pedersen 2000), wherein family firms may differ in their willingness to develop innovation (Appleton et al. 2025; Ceipek et al. 2020), and thus have fewer intentions to engage in innovation activities than nonfamily firms. H1 follows.

H1. *Family firms have lower innovation intentions than nonfamily firms.*

2.2 | Unpacking Innovation Intentions With Upper Echelons

To understand innovation intentions, UET emphasizes studying the TMT—that is, "the team, formed by the Chief Executive Officer (CEO) and the managers who report directly to her/him (TMT members), responsible for the strategic decision-making (Amason 1996; Collins and Clark 2003)" (Rovelli and Rossi-Lamastra 2018, 176)—and its composition and processes (Hambrick 2007; Hambrick and Mason 1984). According to UET, firms are considered a reflection of their TMT (Cyert and March 1963; Hambrick and Mason 1984) as the firm's strategies reflect the beliefs, preferences, motivational incentives, and behaviors of the TMT and its members (e.g., Li et al. 2008; Lumpkin and Dess 1996; Van Doorn et al. 2013). Specifically, UET emphasizes that TMTs interpret situations based on the individual experiences, values, and personalities of their members (Hambrick 2007). This builds on the premise of bounded rationality (Cyert and March 1963; March and Simon 1958), according to which decision-makers have a limited ability to acquire and understand all the information they need when making management decisions (Hambrick and Mason 1984). Thus, based on UET, complex situations are interpreted, not objectively known (Mischel 1977). Additionally, the UET suggests studying the entire TMT, not just the CEO, as its composition and the interactions within the team are crucial predictors influencing TMT members' interpretations and affecting their choices (Hambrick 2007; Hambrick and Mason 1984). In essence, to echo this approach (Cannella Jr 2001), you cannot fully understand innovation unless you understand innovators.

Following UET, we argue that innovation intentions can be better understood considering how the TMT thinks and behaves. To do so, we focus on TMT functional diversity and open discussion. Indeed, on the one hand, UET recognizes the difficulties in obtaining detailed psychological data and suggests the use of functional backgrounds as a proxy for cognitive frames (Hambrick and Mason 1984; Miller et al. 1998); on the other hand, besides considering how the TMT thinks and interprets situations, UET encourages examining the processes that link TMT cognition and intentions (Hambrick et al. 2015; Hambrick and Mason 1984). In the next sections, we illustrate how TMT functional diversity and open discussion might close the gap in innovation intentions between family and nonfamily firms.

2.3 | Family and Nonfamily Firms' Innovation Intentions: The Mediating Role of TMT Functional Diversity

In line with UET (Hambrick and Mason 1984), we contend that the characteristics of the TMT may have a critical role in influencing the firm's innovation intentions. Among TMT characteristics, its functional diversity, intended as the diverse experience and functional background[1] of its members (Boeker and Wiltbank 2005), might be particularly relevant. Indeed, diversity across a group, where different individuals contribute distinct skills, experiences, and perspectives (Bunderson and Sutcliffe 2002; Cannella et al. 2008), increases the areas of knowledge within the TMT and enables complex problem-solving. However, it can also slow down decision-making processes and increase the potential for conflict within the team (Cannella et al. 2008). Given the costs and benefits of functional diversity, empirical findings on TMT functional diversity are unsurprisingly ambiguous (Buyl et al. 2011).

Family business research has highlighted that family firms differ in their TMT configuration compared to nonfamily counterparts

(De Massis et al. 2021). The management of family firms tends to be less formalized and built on an unstructured approach compared to that of nonfamily firms (Tsang 2001, 2002), and this is also reflected in the hiring process and TMT composition (Stewart and Hitt 2012). Family firms are keen to preserve family control and socioemotional wealth (Gomez-Mejia et al. 2007) and prioritize familial relationships and common values (Chrisman et al. 2014), favoring managers' long-term commitment and shared goals over functional expertise when selecting TMT members. Thus, in appointing managers, family firms might overvalue the individual at the expense of TMT capabilities in decision-making and functional diversity (Morck and Yeung 2003). Specifically, they might prioritize those who have ties with the family (Daily and Dalton 1992; Gomez-Mejia et al. 2010) and could align themselves with the family goals (Patel and Cooper 2014) over individuals with managerial skills that would complement other TMT members (Padgett and Morris 2005), but simultaneously could potentially jeopardize family goals (Chung 2013). This may be to the detriment of the TMT functional diversity, giving rise to TMTs that are more homogenous in functional competencies compared to those appointed in nonfamily firms. Nonfamily counterparts indeed often experience less biased hiring processes, which are based on the competence of individuals rather than appointing members to leadership positions due to their close ties and values alignment with the firm (Liu et al. 2015; Schulze et al. 2003), and are more likely to hire and appoint in the TMT managers that have the various functional backgrounds typically needed to run a firm (Schulze et al. 2003). H2 thus follows.

H2. *Family firms have a less functionally diverse TMT than nonfamily firms.*

According to UET, TMTs are rationally bounded by subjective interpretations of strategic situations that are influenced by TMT members' experiences, values, and personalities (Cyert and March 1963; March and Simon 1958). TMT functional diversity provides a competitive advantage[2] (Ling and Kellermanns 2010), contributing to mitigate this bounded rationality (Cyert and March 1963; March and Simon 1958) by broadening information and perspectives and enabling more comprehensive and less biased strategic decisions in complex, uncertain situations such as those referred to innovation. The literature studying the upper echelons in both family and nonfamily firms indeed agrees that having a low degree of functional diversity in the TMT limits the knowledge and perspectives (Anderson and Reeb 2004) available to its members to identify and properly evaluate innovation opportunities and decisions (see D'Allura 2019; Hambrick 2007). Contrarily, cognitive diversity among TMT members—that is, having a more functionally diverse TMT—increases the set of skills, capabilities, knowledge (Boeker and Wiltbank 2005), and sources of information (Agarwal et al. 2004; Buyl et al. 2011) at their disposal. As such, the TMT is less subject to groupthink (Bettinelli et al. 2022) and more inclined toward risky behaviors and making strategic decisions that may benefit the business (Martins and Sohn 2022; Schulze et al. 2001), given that executives can blend many ideas and perspectives to develop original solutions to challenging issues and innovation (Smith et al. 2005; Talke et al. 2011).

In synthesis, we contend that the members of functionally diverse TMTs are more likely to challenge the status quo, to be receptive to novel operating methods (Geletkanycz and Black 2001), and to adapt to change more quickly (Williams et al. 1995). Therefore, consistent with UET, we posit that TMTs with greater functional diversity are more likely to develop intentions (or willingness) to engage in innovation activities. H3 follows.

H3. *The greater the functional diversity of the TMT, the greater the innovation intentions of the firm.*

Taking together the arguments above, we posit that the TMT functional diversity mediates the relation between the family nature of the firm and innovation intentions. As said, following UET, the firm's behavior can be considered a result of the TMT characteristics (e.g., Hambrick and Mason 1984). Indeed, the literature shows that a significant relation exists between TMT characteristics and a firm's performance (e.g., Binacci et al. 2016; Hambrick et al. 1996; Minichilli et al. 2010; Simsek et al. 2005). This might also hold for the firm's willingness to innovate, which, as argued above, might indeed be explained by the functional diversity of the TMT, with a greater functional diversity acting as a stimulus for innovation intentions. We thus argue that family firms show lower innovation intentions compared to nonfamily counterparts due to their propensity to have a less functionally diverse TMT. This lower functional diversity in turn limits the set of knowledge at TMT members' disposal and their propensity to risk, and thus the innovation intentions of its members and the firm. Contrarily, nonfamily firms are expected to experience greater innovation intentions compared to family firms due to their propensity to appoint a greater functionally diverse TMT. In line with this reasoning, we posit that TMT functional diversity is the mechanism that explains differences in innovation intentions between family and nonfamily firms. We thus outline H4.

H4. *TMT functional diversity mediates the relation between the family nature of the firm and its innovation intentions.*

2.4 | Family Firms' Innovation Intentions: The Importance of TMT Open Discussion

H4 contends that TMT functional diversity mediates the relation between the family nature of the firm and innovation intentions. This means that having a greater functional diversity among TMT members might help family firms close the gap with nonfamily firms concerning innovation intentions. However, we argue that functional diversity might only be a necessary but not a sufficient condition to foster family firms' innovation intentions.

According to the upper echelons literature (e.g., Carpenter et al. 2004), the combination of TMT composition and decision-making process is critical. Indeed, the TMT interaction in strategic decision-making, together with the characteristics of the TMT members, may affect the decision-making outcome (Liu et al. 2022). Prior research showed that team diversity may be detrimental to performance, leading to poor information exchange and cohesion (Srikanth et al. 2016). Yet, team decision-making improves in the presence of norms that encourage open discussion of ideas, especially in the presence of disagreements (Jehn 1995), wherein managers play a critical role in creating an atmosphere of open discussion that benefits team performance (Jehn and Mannix 2001). Indeed, research highlights the need to combine diverse team characteristics (e.g., functional diversity,

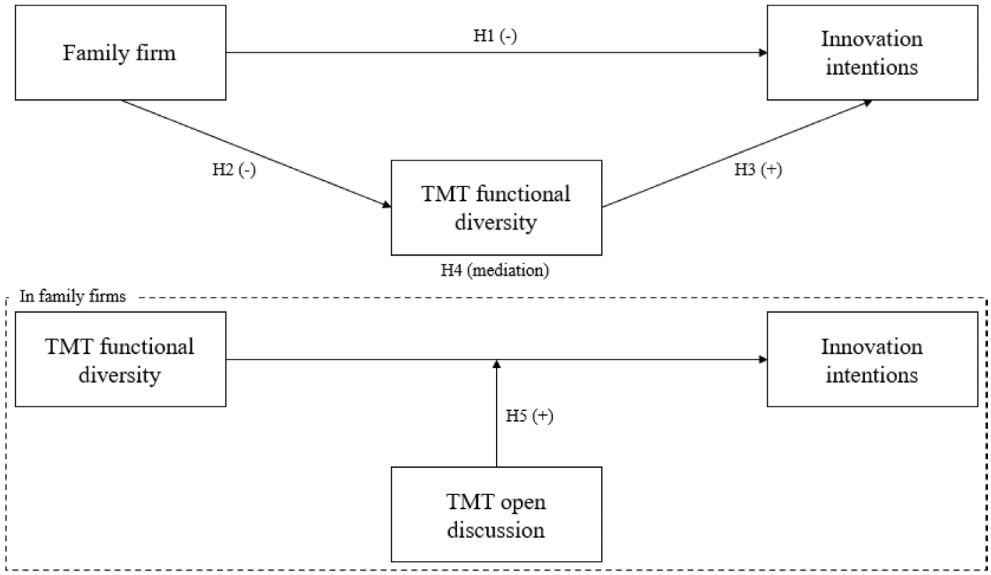

FIGURE 1 | Synthesis of the hypotheses.

Buyl et al. 2011) with internal processes (Smith et al. 1994), especially to manage internal dynamics and possible subgroup faultlines, and enhance cohesion and knowledge-sharing (Richard et al. 2019). This aspect is further emphasized in the specific case of family firms, where TMT heterogeneity needs to be managed carefully to benefit in terms of innovation from its diversity, requiring intensive information exchange and interactions among its members (Matzler et al. 2015).

We argue that TMT open discussion is crucial to enhance the positive relation between TMT functional diversity and family firms' intentions to engage in innovation activities. Indeed, besides possessing functionally diverse knowledge, TMT members should also exchange this knowledge (Rondi and Rovelli 2021), and this would be possible only provided an environment of open communication and discussion in the TMT (Ormiston et al. 2022). Open discussion would also allow TMT members to solve any issue of bounded rationality that may arise from conflicting goals (e.g., among family and nonfamily managers), which might potentially limit innovation intentions. We thus derive H5.

H5. *In family firms, TMT open discussion positively moderates the relation between TMT functional diversity and the innovation intentions of the firm.*

Figure 1 synthesizes the hypothesized relations.

3 | Methodology

3.1 | Data Collection and Sample

To test our hypotheses, we relied on unique survey data collection addressed to CEOs of Italian firms in 2021. Our starting population consisted of all Italian firms operating in the manufacturing and services industries and with more than 10 employees, which assures the presence of a TMT, this being the focus of our analysis. From this population, we randomly extracted a target sample stratified by geographic location, industry, and size. We then sought out the contact information of the CEO of the firms in this sample. In so doing, we were able to administer the questionnaire via phone to a contacted sample of 3650 firms through the support of a firm specialized in survey data collection from prominent informants. We developed the questionnaire based on established scales of measurement previously validated in the literature, which were translated into Italian and then back-translated to English by a professional language expert to ensure that the original meaning was preserved (Brislin 1980; Kriauciunas et al. 2011). 437 questionnaires were returned, corresponding to a response rate of 11.97%, which is in line with similar studies on CEOs and TMTs (e.g., Rovelli et al. 2023; Rovelli and Mismetti 2025).[3] No issues of reliability of CEOs' answers (compared to a second respondent member of the TMT) emerged. We checked reliability by comparing CEOs' answers with those retrieved by administering the questionnaire to a managing or executive director of the firm. In so doing, 82 questionnaires were collected and then matched with the answers of the corresponding CEOs to evaluate their inter-rater reliability (Burke and Dunlap 2002; Danneels 2015).

To complement survey data with information on general firm characteristics, we relied on secondary data sources (i.e., the AIDA database). Given the topic of our study, to test hypotheses we excluded from the sample any firm having more than 500 employees, as such firms often belong to large multinationals with different TMT dynamics (Buyl et al. 2011). To test H1–H4, we thus considered the sample of 393 Italian firms with more than 10 employees and a maximum of 500 employees; we then restricted our analyses to the 160 family firms (40.71%) in this sample to test H5.

3.2 | Measures

3.2.1 | Dependent Variable

Departing from prior studies that mainly considered R&D investments as a proxy of the willingness to innovate (Migliori et al. 2020), we took inspiration from the measure developed by

Gundry et al. (2003) and Gundry and Welsch (2001) that captures the degree to which the firms intends to engage in innovation strategies with the final aim of growing and expanding (e.g., Audretsch et al. 2014). In other words, this measure more broadly points to the firm intention to engage in innovative behaviors (Carland et al. 1984), as used in Gundry et al. (2003) to assess growth and technological innovation intentions. We thus measure *Innovation intentions* through a multi-item construct. Specifically, we asked CEOs to evaluate through a 5-point Likert-like scale (1 = very low, 5 = very high) the intention of the firm to pursue 19 different strategic activities meant for innovation to grow and expand the firm (e.g., adding a new product or service, expanding distribution channels, computerizing current operations, upgrading computer systems, adding specialized employees, redesigning work methods). *Innovation intentions* are computed as the average across the 19 items: the higher the value, the higher the intention to grow and expand the firm by means of innovation activities. Moreover, to better understand innovation intentions and their relation with the family nature of the firm and the characteristics of the TMT, in an exploratory analysis, we considered the five dimensions of innovation intentions as defined by Gundry and Welsch (2001) separately: *Market expansion*, *Technological change*, *Search for financing*, *Operations planning*, and *Organizational development*; these variables are computed as the average across the corresponding items (see Gundry and Welsch 2001).

3.2.2 | Independent Variables

The independent variables of this study are *Family firm*, *TMT functional diversity*, and *TMT open discussion*. *Family firm* is a dummy variable equal to one in the case of family firms and zero for nonfamily firms (De Massis et al. 2021). CEOs were asked to identify their firm as a family firm considering that a family firm "is a business 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 or families" (Chua et al. 1999, 25). *TMT functional diversity* captures the different backgrounds of the TMT members. According to Segaro et al. (2014), we asked CEOs to indicate how diverse the functional background of the TMT is by selecting one or more among the categories: (i) research and development, (ii) manufacturing and operations, (iii) marketing and sales, and (iv) finance, accounting, legal and administrative. Each category is represented by a dummy variable (equal to one in case the corresponding functional background is present in the TMT) and the sum of the four dummies gives the total *TMT functional diversity*, which ranges from zero to four (Boeker and Wiltbank 2005; Segaro et al. 2014): the higher the value, the greater the functional diversity of the TMT. Finally, we measured *TMT open discussion* through a multi-item scale. Following Jehn and Mannix (2001), we asked CEOs to evaluate through a 5-point Likert-like scale (1 = not at all, 5 = a lot): (i) how much open the discussion of issues in the TMT is, (ii) to what degree the communication in the TMT is open, and (iii) to what extent conflict is dealt with openly in the TMT. The variable is computed as the average across the three items: the higher the value, the higher the degree of open discussion among TMT members.

3.2.3 | Control Variables

We considered multiple control variables in our models. In the models used to test H1–H4—which, as mentioned above, consider both family and nonfamily firms—we included controls at the firm, CEO, and TMT levels. At the firm level, we considered *Firm size*, computed as the logarithm of the number of employees (e.g., Kellermanns and Eddleston 2006), the logarithm of *Firm age*, an *Industry dummy* (manufacturing vs. services), and a *Geographical area dummy* (North vs. rest of Italy) (e.g., Chirico et al. 2011; De Massis et al. 2021). At the CEO level, we controlled for the gender of the CEO (*Female CEO*, equal to one in the case of women) and her/his tenure in this role in the firm (*CEO tenure*) (e.g., Rovelli et al. 2023; Rovelli et al. 2020). At the TMT level, we included the *TMT size*, measured as the logarithm of the number of TMT members, and the logarithm of *TMT tenure*, which is computed considering the year in which the current TMT was constituted, as indicated by the CEO in the questionnaire (e.g., Buyl et al. 2011; Rovelli et al. 2023). When considering only family firms to test H5, we included three additional control variables at the family firm level: the *Number of generations involved* in the family firm, the presence of a *Family CEO* (a dummy equal to one in case the CEO belongs to the owning family), and the *TMT family involvement*, measured as the percentage of TMT members who belong to the owning family (e.g., Rovelli et al. 2023; Sciascia et al. 2013).

Table 1 provides a synthesis of the variables of the study.

3.3 | Method of Analysis

To test the hypotheses, we used a series of OLS models, which, depending on the hypothesis considered, rely on different samples and dependent variables. Specifically, to test our baseline hypothesis on the relation between being a family firm and innovation intentions (H1) and the mediating effect of the functional diversity of the TMT on this relation (H2–H4), we considered the sample of 393 firms, including both family and nonfamily firms. To test this mediation, we used the traditional 4 steps of Baron and Kenny (1986) as well as the more modern approaches (Bollen and Stine 1990; Hicks and Tingley 2011; Shrout and Bolger 2002), such as the sensitivity analysis and the Zhao et al. (2010) approach (Stata commands: *medeff*, *medsens*, *medsem*). Specifically, Model 1 includes only control variables. In Model 2, we regress the dependent variable *Innovation intentions* against *Family firm* (the treatment in the mediating relationship). In Model 3, we regress the mediator (*TMT functional diversity*) given the treatment (*Family firm*). Finally, the dependent variable is regressed against the mediator in Model 4 and against the treatment and the mediator in Model 5.

To test H5, which investigates the moderating effect of the presence of open discussion in the TMT in the relation between family firms' TMT functional diversity and the innovation intentions of these firms, we focused on the sub-sample of 160 family firms. In this case, first we ran a model with only control variables (Model 6) and we tested again H3 in this sub-sample, adding the independent variable *TMT functional diversity* to the model with only controls (Model 7). Then, in Model 8 we added the moderator (*TMT open discussion*) to

TABLE 1 | Synthesis of the variables of the study and their measurement.

Variable	Measurement
Dependent variable	
Innovation intentions	Multi-item construct measured by asking the CEO to evaluate through a 5-point Likert-like scale (1 = very low, 5 = very high) the intention of the firm to pursue 19 different strategic activities meant for innovation to grow and expand the firm. *Innovation intentions* is computed as the average across the 19 items, which comprise the five sub-dimensions of *Market expansion*, *Technological change*, *Search for financing*, *Operations planning*, and *Organizational development* (Gundry et al. 2003; Gundry and Welsch 2001)
Independent variables	
Family firm	Dummy variable equal to one in case of family firms and zero for nonfamily firms based on a self-identification criterion (De Massis et al. 2021)
TMT functional diversity	Variable measured as the sum of four dummy variables, each of one indicating whether the corresponding functional background is present in the TMT, as provided by the CEO: (i) research and development, (ii) manufacturing and operations, (iii) marketing and sales, and (iv) finance, accounting, legal and administrative (Segaro et al. 2014)
TMT open discussion	Multi-item construct measured by asking the CEO to evaluate through a 5-point Likert-like scale (1 = not at all, 5 = a lot): (i) how much open the discussion of issues in the TMT is, (ii) to what degree the communication in the TMT is open, and (iii) to what extent conflict is dealt with openly in the TMT. *TMT open discussion* is computed as the average across the three items (Jehn and Mannix 2001)
Control variables	
Firm size	Logarithm of the number of firm's employees
Firm age	Logarithm of firm's age
No. of generations involved	For family firms, number of family generations involved in the firm
Female CEO	Dummy variable equal to one in case the CEO is woman, zero otherwise
CEO tenure	Number of years since the individual is serving as CEO of the focal firm
Family CEO	For family firms, dummy variable equal to one if the CEO is a member of the family owning the firm, zero otherwise
TMT size	Logarithm of the number of TMT members
TMT tenure	Logarithm of the tenure of the TMT, computed by considering the year in which the current TMT was constituted
TMT family involvement	For family firms, percentage of TMT members who belong to the family owning the firm
Industry dummy	Dummy variable equal to one in case the firm operates in a manufacturing industry, zero if in a services industry
Geographical area dummy	Dummy variable equal to one in case the firm is located in the North of Italy, zero if in the rest of Italy

test its direct relation with *Innovation intentions*. Finally, in Model 9 we tested the interaction between *TMT functional diversity* and *TMT open discussion*. To interpret the results of the moderating effect, we computed the average marginal effects (AMEs).

4 | Results

Table 2 presents the descriptive statistics and the correlations among the variables considered in our study. As mentioned above, we limited our sample to firms with more than 10 employees and a maximum of 500 employees, which reflects in a TMT size comprised of between 2 and 25; the average sample size is 70.27 employees (71.22 in the subsample of family firms and 69.62 considering nonfamily firms only) and the average TMT size is 3.87 (3.27 and 4.28 in family and nonfamily firms respectively). Looking at the main variables used to test hypotheses, *Innovation intentions* is negatively and significantly correlated with *Family firm* (rho = −0.104, p value = 0.039), while it is positively and significantly correlated with *TMT functional diversity* (rho = 0.614, p value = 0.000) and *TMT open discussion* (rho = 0.672, p value = 0.000). These two latter variables are positively and significantly correlated (rho = 0.583, p value = 0.000). Finally, *Family firm* is negatively and significantly correlated with *TMT open discussion* (rho = −0.163, p value = 0.000).

TABLE 2 | Descriptive statistics and correlations.

		Obs.	Mean	Std. dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	Innovation intentions	393	4.044	0.699	1.000									
(2)	Innovation intentions: Market expansion	393	4.090	0.788	0.896***	1.000								
(3)	Innovation intentions: Technological change	393	4.153	0.781	0.865***	0.709***	1.000							
(4)	Innovation intentions: Search for financing	393	3.863	0.944	0.842***	0.686***	0.647***	1.000						
(5)	Innovation intentions: Operations planning	393	3.993	0.800	0.861***	0.650***	0.669***	0.716***	1.000					
(6)	Innovation intentions: Organizational development	393	4.062	0.839	0.724***	0.562***	0.620***	0.481***	0.623***	1.000				
(7)	Family firm	393	0.407	0.492	−0.104**	−0.095*	−0.096*	−0.105**	−0.075	−0.056	1.000			
(8)	TMT functional diversity	393	3.288	1.023	0.614***	0.597***	0.492***	0.598***	0.437***	0.422***	−0.076	1.000		
(9)	TMT open discussion	393	3.741	1.215	0.672***	0.665***	0.537***	0.558***	0.550***	0.457***	−0.163***	0.583***	1.000	
(10)	Firm size	393	70.272	71.877	−0.166***	−0.064	−0.120**	−0.139***	−0.255***	−0.191***	−0.008	−0.031	−0.117**	1.000
(11)	Firm age	393	33.562	17.313	−0.020	−0.027	−0.003	−0.071	0.028	−0.010	0.222***	−0.017	−0.056	0.132***
(12)	No. of generations involved	160	1.625	0.652	−0.120	−0.117	−0.059	−0.149*	−0.112	−0.020	—	−0.023	−0.135*	0.251***
(13)	Female CEO	393	0.130	0.336	0.037	0.013	0.041	0.043	0.044	0.026	0.050	−0.027	0.022	0.042
(14)	CEO tenure	393	20.687	11.978	0.122**	0.099*	0.062	0.131***	0.153***	0.060	0.144***	0.099**	0.019	−0.073
(15)	Family CEO	160	0.919	0.274	0.129	0.024	0.112	0.143*	0.120	0.263***	—	−0.033	−0.027	−0.071
(16)	TMT size	393	3.870	2.443	−0.185***	−0.173***	−0.145***	−0.148***	−0.190***	−0.099*	−0.214***	−0.048	−0.102**	0.303***
(17)	TMT tenure	393	18.506	14.134	0.308***	0.286***	0.248***	0.192***	0.302***	0.273***	0.068	0.153***	0.279***	−0.286***
(18)	TMT family involvement	160	0.869	0.197	−0.043	−0.059	−0.041	−0.052	0.001	0.004	—	−0.170**	−0.012	−0.067
(19)	Industry dummy	393	0.656	0.475	0.005	−0.046	0.044	0.045	−0.013	0.038	0.207***	0.083	−0.029	0.029
(20)	Geographical area dummy	393	0.209	0.407	−0.131***	−0.117**	−0.046	−0.163***	−0.099**	−0.154***	−0.018	−0.120**	−0.114**	0.070

		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1)	Innovation intentions										
(2)	Innovation intentions: Market expansion										

(Continues)

TABLE 2 | (Continued)

		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(3)	Innovation intentions: Technological change										
(4)	Innovation intentions: Search for financing										
(5)	Innovation intentions: Operations planning										
(6)	Innovation intentions: Organizational development										
(7)	Family firm										
(8)	TMT functional diversity										
(9)	TMT open discussion										
(10)	Firm size										
(11)	Firm age	1.000									
(12)	No. of generations involved	0.285***	1.000								
(13)	Female CEO	−0.032	−0.081	1.000							
(14)	CEO tenure	0.231***	0.001	−0.086*	1.000						
(15)	Family CEO	0.026	0.145	−0.003	−0.109	1.000					
(16)	TMT size	0.033	0.032	−0.069	−0.158***	0.033	1.000				
(17)	TMT tenure	0.131***	−0.120	0.006	0.488***	−0.219***	−0.265***	1.000			
(18)	TMT family involvement	0.004	0.147*	0.011	−0.052	0.204***	−0.318***	−0.051	1.000		
(19)	Industry dummy	0.067	−0.035	−0.008	0.073	−0.106	−0.070	−0.009	−0.120	1.000	
(20)	Geographical area dummy	−0.030	0.024	0.081	−0.115**	−0.023	0.064	−0.129**	0.143*	−0.143***	1.000

Note: Descriptive statistics and correlation of family firm level control variables were computed considering the sub-sample of family firms only. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE 3 | Results of the OLS models testing H1–H4.

	Model 1	Model 2	Model 3	Model 4	Model 5
	Innovation intentions	Innovation intentions	TMT functional diversity	Innovation intentions	Innovation intentions
Family firm	—	−0.217***	−0.226**	—	−0.129**
		(0.072)	(0.108)		(0.057)
TMT functional diversity	—	—	—	0.398***	0.392***
				(0.029)	(0.030)
Firm size	−0.041	−0.040	0.031	−0.053	−0.052
	(0.042)	(0.042)	(0.069)	(0.035)	(0.036)
Firm age	−0.048	−0.012	−0.052	−0.012	0.009
	(0.059)	(0.061)	(0.090)	(0.048)	(0.048)
Female CEO	0.073	0.088	−0.048	0.098	0.107
	(0.105)	(0.105)	(0.154)	(0.080)	(0.081)
CEO tenure	−0.002	−0.001	0.003	−0.003	−0.002
	(0.003)	(0.003)	(0.006)	(0.003)	(0.003)
TMT size	−0.149	−0.202**	−0.060	−0.147*	−0.178**
	(0.095)	(0.098)	(0.135)	(0.086)	(0.087)
TMT tenure	0.214***	0.208***	0.156**	0.149***	0.147***
	(0.045)	(0.044)	(0.069)	(0.041)	(0.040)
Industry dummy	YES	YES	YES	YES	YES
Geographical area dummy	YES	YES	YES	YES	YES
Constant	4.055***	4.049***	2.958***	2.875***	2.889***
	(0.274)	(0.272)	(0.436)	(0.239)	(0.239)
Observations	393	393	393	393	393
R-squared	0.122	0.142	0.052	0.447	0.454
Log-likelihood	−391.2	−386.6	−555.7	−300.3	−297.8

Note: Robust standard errors in parentheses. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

To exclude multicollinearity, we performed variance inflation factor tests. Indexes (entire sample: max VIF = 1.66, mean VIF = 1.31; only family firms sample: max VIF = 1.88, mean VIF = 1.42) were lower than the cut-off of 5 that is typically associated with multicollinearity issues (Hair et al. 2010). Moreover, as most of the variables used in this study were retrieved through the same survey data collection, we checked whether the results may be affected by common method variance (Podsakoff et al. 2003; Podsakoff et al. 2012). To do so, following established practices (Podsakoff et al. 2003; Podsakoff and Organ 1986), we used the Harman (1967) single factor test, which excluded the presence of common method bias (Podsakoff and Organ 1986). Indeed, considering the variables used to test H1–H4, it revealed five factors with eigenvalues greater than one, which account for 66.11% of the total variance, with the first one explaining only 20.27% of the variance. Similarly, analyzing the variables used to test H5, the factor analysis revealed six factors with eigenvalues greater than one, which account for 66.01% of the total variance; also in this case, the first factor does not explain most of the variance, but only 17.19%.

Table 3 presents the results of the OLS models run to test H1–H4, which include the four steps of Baron and Kenny (1986) needed to test mediation. As explained above, Model 1 is the baseline model including only control variables. Generally, a greater willingness to innovate emerges the longer the tenure of the TMT (p value = 0.000). As predicted in our baseline H1, Model 2 shows that family firms tend to have lower intentions to innovate than nonfamily firms (p value = 0.003). These lower intentions are explained by the lower functional diversity of family firms' TMT. First, Model 3 confirms H2, which claims that family firms have a less functionally diverse TMT than nonfamily firms; the coefficient of *Family firm* is indeed negative and significant (p value = 0.037). Second, Model 4, which tests the relation between

the mediator (*TMT functional diversity*) and the dependent variable, confirms H3. The coefficient of *TMT functional diversity* is indeed positive and significant (p value = 0.000), showing that the greater the functional diversity of the TMT, the greater the innovation intentions of the firm. Finally, the fourth step of Baron and Kenny (1986) approach (i.e., Model 5), the sensitivity analysis, and the modern approach of Zhao et al. (2010) confirm that *TMT functional diversity* partially mediates the relation between the family nature of the firm and innovation intentions, supporting H4. In Model 5, both *Family firm* (p value = 0.025) and *TMT functional diversity* (p value = 0.000) keep their significance and sign, being respectively negatively and positively related to *Innovation intentions*; however, the coefficient of *Family firm* decreases in absolute terms from −0.217 to −0.129. Moreover, the partial mediation is confirmed by both the Sobel's test (p value = 0.042) and the Monte Carlo test (p value = 0.035). Specifically, about 41% of the effect of *Family firm* on *Innovation intentions* is mediated by *TMT functional diversity*, and the mediated effect is about 0.7 times as large as the direct effect of *Family firm* on *Innovation intentions*.

Table 4 presents the results of the models we used to test H5. As explained above, given the hypothesis, these models are run considering only family firms in the sample, that is, 160 observations. Model 6 serves as the baseline model, including only control variables. Also in this sub-sample, *TMT tenure* positively relates to *Innovation intentions* (p value = 0.000); moreover, two other control variables significantly relate to the intention of family firms to innovate: *CEO tenure* (p value = 0.032), with family firms led by relatively newly appointed CEOs being more willing to innovate compared to family firms led by CEOs with longer tenure, and *Family CEO* (p value = 0.000), with family firms led by a family CEO being more willing to innovate compared to family firms led by a CEO who does not belong to the owning family. Model 7 adds *TMT functional diversity*, which, in line with the previously verified H3, positively and significantly relates to *Innovation intentions* (p value = 0.000). Model 8 includes the moderator, testing its direct relation with our dependent variable, which results in being positive and significant (p value = 0.000). Finally, Model 9 confirms that, in family firms, *TMT open discussion* positively moderates the relation between *TMT functional diversity* and *Innovation intentions* of the firm. Indeed, the interaction term between *TMT functional diversity* and *TMT open discussion* results positive and significant (p value = 0.003). More specifically, the AME of *TMT functional diversity* on *Innovation intentions* is not significant when *TMT open discussion* is low (tenth percentile, p value = 0.554), while it is positive and significant when *TMT open discussion* is high (ninetieth percentile, p value = 0.000); the AME turns to be positive and significant when *TMT open discussion* equals 2.5 (p value = 0.001). This result is well represented in Figure 2, which presents marginal effects, and Figure 3, which presents predictive margins of *Innovation intentions* at different levels of *TMT functional diversity* when TMT open innovation is low (10th percentile = 1.667) and high (90th percentile = 5.000).

TABLE 4 | Results of the OLS models testing H5 (dependent variable: *Innovation intentions*).

	Model 6	Model 7	Model 8	Model 9
TMT functional diversity	—	0.364***	0.252***	−0.212
		(0.045)	(0.055)	(0.151)
TMT open discussion	—	—	0.159***	−0.375*
			(0.043)	(0.192)
TMT functional diversity × TMT open discussion	—	—	—	0.154***
				(0.052)
Firm size	0.047	0.041	0.052	0.068
	(0.061)	(0.057)	(0.056)	(0.050)
Firm age	0.041	0.144	0.124	0.117
	(0.105)	(0.089)	(0.081)	(0.079)
No. of generations involved	−0.129	−0.147*	−0.115	−0.111
	(0.079)	(0.086)	(0.082)	(0.077)
Female CEO	0.035	0.136	0.097	0.063
	(0.161)	(0.139)	(0.130)	(0.120)
CEO tenure	−0.008**	−0.009**	−0.006*	−0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
Family CEO	0.483***	0.486***	0.467***	0.403***
	(0.126)	(0.133)	(0.130)	(0.144)
TMT size	−0.130	−0.072	−0.071	−0.045
	(0.178)	(0.158)	(0.149)	(0.145)
TMT tenure	0.212***	0.224***	0.162***	0.125**
	(0.063)	(0.057)	(0.058)	(0.058)
TMT family involvement	−0.221	0.097	0.005	−0.002
	(0.262)	(0.220)	(0.205)	(0.200)
Industry dummy	YES	YES	YES	YES
Geographical area dummy	YES	YES	YES	YES
Constant	3.523***	1.671***	1.649***	3.288***
	(0.571)	(0.530)	(0.491)	(0.769)
Observations	160	160	160	160
R-squared	0.143	0.428	0.484	0.525
Log-likelihood	−150.0	−117.7	−109.4	−102.9

Note: Robust standard errors in parentheses. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

4.1 | Exploratory Analysis and Robustness Check

As explained in the Section 3, we measured the intention of firms to innovate, taking inspiration from a measure developed by Gundry et al. (2003) and Gundry and Welsch (2001). In their studies, the authors analyze the intention of firms to engage in innovation strategies, distinguishing among five different strategic areas: *Market expansion*, *Technological change*, *Search for financing*, *Operations planning*, and *Organizational development*. Therefore, to understand more in depth the investigated relations, we re-examined our hypotheses by separately considering

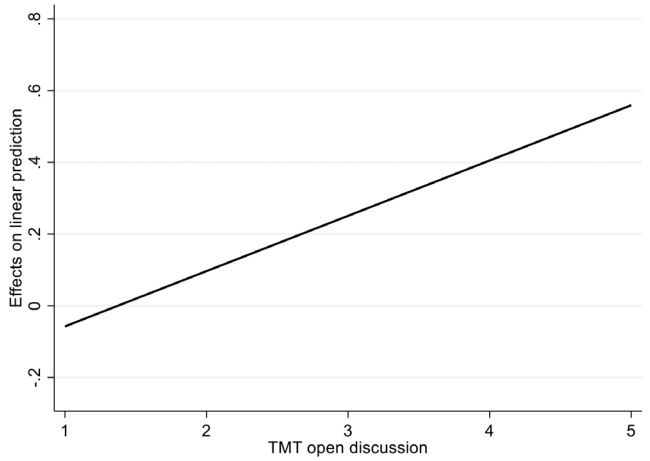

FIGURE 2 | Average marginal effects of *TMT functional diversity* at different levels of *TMT open discussion*.

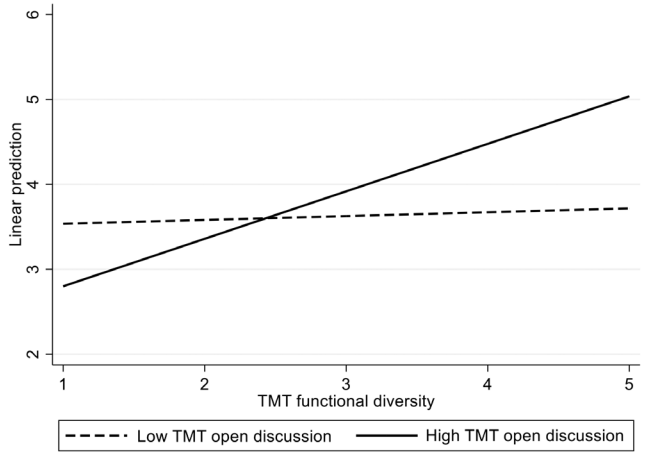

FIGURE 3 | Predictive margins of *Innovation intentions* at different levels of *TMT functional diversity* when *TMT open discussion* is low (10th percentile) and high (90th percentile).

the five strategic areas regarding which the firm might develop innovation intentions. In other words, in our models, we substituted our dependent variable *Innovation intentions* with *Market expansion*, *Technological change*, *Search for financing*, *Operations planning*, and *Organizational development*, one at a time. Results (Supporting Information: Appendix A) are in line with the main estimations and confirm our hypothesis. Yet, it is worth noting that, while *TMT functional diversity* partially mediates the relation between *Family firm* and *Technological change* and *Search for financing*, we found full mediation when considering *Market expansion*, *Operations planning*, and *Organizational development*. Thus, if TMT functional diversity is essential for family firms to get closer to nonfamily firms with respect to any innovation intention, it proves to be a *conditio sine qua non* when considering market expansion, operations planning, and organizational development intentions.

Finally, we conducted further analyses to test the robustness of our results (Supporting Information: Appendix B). First, we considered an alternative measure for the size of the firm, considering revenues as opposed to the number of employees. Results are in line with the main estimations. Second, instead of relying on the self-identification measure of the family nature of the firm, we looked at ownership and identified family firms by considering different thresholds of shares owned by members of the same family or group of families. According to established definitions of family firm, we considered the thresholds of 25% (e.g., De Massis, Kotlar, et al. 2013) and 50% (e.g., Cruz and Nordqvist 2012; Ling and Kellermanns 2010). With the first threshold, we identified 158 firms as family firms, while 156 family firms were detected considering the latter; in both cases, estimates confirm the main results. Moreover, we also tested H1–H4 considering the continuous variable measuring the percentage of shares owned by members of the same family or group of families instead of the *Family firm* dummy; also in this case, hypotheses are still confirmed, with the percentage of shares owned by family members being negatively related to innovation intentions. Third and last, we ran analyses by considering among control variables a measure of profitability, which might be intended as a proxy for the ability of the firm to engage in innovation. In this respect, we considered, alternatively, ROA and ROE, measured at the time of the survey data collection (t) and the year before ($t-1$). Results are once again in line with the main estimations.

5 | Discussion

Family firms, despite having inherent innovation potential, often lack the drive to pursue it (De Massis et al. 2015). This study explores the factors influencing family firms' innovation intentions, highlighting the role of TMT characteristics (Ceipek et al. 2020). Our findings suggest that family firms tend to have a less functionally diverse TMT, which explains their lower innovation intentions compared to nonfamily firms. This gap can be closed by increasing TMT functional diversity and fostering open discussion within the TMT.

Our study shows that, while family firms generally tend to be less prone to innovate, there is a high level of heterogeneity among them due to TMT characteristics. Existing TMT research highlights that various forms of TMT diversity may create different effects. As pointed out by Richard et al. (2019), strong relationship-related faultlines, based on attributes such as gender, age, and educational level, hinder subgroup cohesion, thereby reducing a TMT's capacity to initiate strategic change. Conversely, strong task-related faultlines, based on characteristics such as functional background and tenure, facilitate inter-subgroup knowledge-sharing, enhancing the TMT's ability to implement strategic change (Richard et al. 2019). This line of research also stresses the value of combining team characteristics (e.g., functional diversity, Buyl et al. 2011) with internal processes (Smith et al. 1994), especially to manage internal dynamics and possible subgroup faultlines (Richard et al. 2019). While basic demographics are readily available, deeper insights (Denis et al. 2012; Srikanth et al. 2016) are more challenging. Our design moves beyond family vs. nonfamily (Memili and Dibrell 2019) to explore heterogeneity within family firms (Appleton et al. 2025). Indeed, family firms should not be viewed as uniform entities. Chua et al. (2012) emphasize that the variations among family firms can be as substantial, or even more pronounced, than the differences between family and nonfamily firms. In this context, we provide empirical evidence

that adds to the research stream on family firm heterogeneity about innovation inputs (Daspit et al. 2021). In line with Ling and Kellermanns (2010), who show that family firms' specific sources of TMT diversity positively influence firm performance only in combination with carefully managed information exchange and integration mechanisms, we show that TMT open discussion moderates the relationship between TMT functional diversity and innovation intentions. This means that TMT functional diversity is necessary but not sufficient to trigger family firms' innovation intentions. Following our results, family firms may instead mimic the often more professionally organized behavior of nonfamily firms, pairing a greater TMT functional diversity with an environment of open discussion among TMT members. Functional diversity is generally seen as a source of new knowledge that can enrich the TMT with new ideas, skills, and concepts and thus stimulate innovation intentions (e.g., Agarwal et al. 2004). However, family firms tend to be relatively hesitant with regard to the inclusion in their TMTs of external members who can be a source of functional diversity (Poza and Daugherty 2014). This is because family firms find it more difficult to welcome into their TMT individuals external to the family, or who do not align with their views and goals, since the family tends to safeguard its socioemotional wealth (Gomez-Mejia et al. 2011) and a quick decision-making (Ward 1987), and because such individuals may not be fully trusted or have goals that differ from those of the family although they may be carriers of new functional knowledge (e.g., Binacci et al. 2016; Chrisman et al. 2014). While the literature indicates that diversity in general and functional diversity in particular can be beneficial (e.g., Binacci et al. 2016), diversity can also carry risks. Diverse teams can slow decision-making (Nuscheler et al. 2019). While family firms often prioritize core competencies and homogenous leadership (Gomez-Mejia et al. 2010), this can limit innovation (Appleton et al. 2025; Binacci et al. 2016). The findings suggest that for family firms, the benefits of having a diverse TMT outweigh the downsides, fostering innovation intentions through a broader knowledge base. Moreover, this study highlights the importance of TMT open discussion in amplifying the benefits of functional diversity, despite potential risks of relational conflict (Bettinelli et al. 2022; Mismetti et al. 2025). These risks are heightened in family firms due to stronger ties and the potential for value destruction from internal conflict (Eddleston and Kellermanns 2007). Interestingly, our findings suggest that family firms implementing open discussion can overcome these risks, adding to our understanding of TMT dynamics and innovation intention.

5.1 | Theoretical Contributions

This research contributes to three areas. First, we contribute to the literature on family firm innovation. Previous research mainly focused on how different levels of family influence in the ownership, management, and governance of the firm affect innovation (e.g., Duran et al. 2016; Ling and Kellermanns 2010; Matzler et al. 2015; Röd 2016). In this respect, family involvement in management and governance is shown to negatively affect innovation inputs while positively affecting innovation outputs (Duran et al. 2016; Matzler et al. 2015), indicating higher levels of risk aversion combined with equally higher levels of effectiveness (Matzler et al. 2015). We expand this debate by focusing instead on the TMT, whose role in family firm innovation is relatively understudied. Existing research focuses on how family involvement in the TMT affects innovation types (Arzubiaga et al. 2019; Van Doorn et al. 2022), with recent efforts to dig deeper into exploring the role of TMT elements such as political capital (Capella et al. 2024) and knowledge exchange (Rondi and Rovelli 2021) in family firms' innovation. Our work expands this knowledge by revealing the importance of TMT functional diversity and open discussion to foster family firms' innovation intentions.

Second, we advance the debate on the ability-willingness paradox (Appleton et al. 2025; De Massis et al. 2015). Within the situational condition of being a family firm, the literature identified such a paradox and called for a clearer understanding of how willingness can be improved (Debellis et al. 2021; Guenther et al. 2023; Rondi et al. 2019). While research exists on innovation drivers and outcomes in family firms (Duran et al. 2016), there was a gap regarding what explains innovation willingness compared to ability (Arzubiaga et al. 2019; Capella et al. 2024). In our study, we specifically focus on innovation intentions and, integrating the upper echelon theory with the ability-willingness literature, we demonstrate that family firms can cover their innovation intentions gap with nonfamily counterparts by ensuring a greater TMT functional diversity and open discussion. Taken together, these two factors indeed help foster family firms' willingness to innovate, and this provides a novel explanation for how family firms can bridge the innovation gap with nonfamily firms. This constitutes a theoretical contribution by offering specific, actionable mechanisms that shape the motivational drivers (intentions) behind innovation in family firms, thus moving beyond solely focusing on family firms' resource endowments or capabilities (ability).

Third, we contribute to the UET. UET suggests that TMT strategic preferences (Hambrick and Mason 1984), such as innovation intentions, are a reflection of situational conditions faced by firms. A key situational condition is being a family firm (Ensley and Pearson 2005; Martínez-Alonso et al. 2023), which shapes the decision-makers' approach to innovation. Indeed, the upper echelon executives think and act differently when belonging to family firms (Ensley and Pearson 2005). Our study contributes to the literature adopting the UET by showing how this situational factor—that is, being a family firm—relates to innovation intentions. We thus enrich the repertoire of situational factors that explain how the TMT interprets information and thinks differently (Hambrick 2007) in family and nonfamily firms.

5.2 | Practical Implications

From a practical perspective, our study provides helpful insights into innovation management for decision-makers. For firm managers, TMT functional diversity is proven to be a key variable to keep in mind when understanding the mechanisms affecting innovation intentions. Moreover, our findings indicate that, because of their lower TMT functional diversity, family firms develop fewer intentions to innovate. Thus, to obtain benefits in terms of higher innovation intentions, family firms should invest at least as much as their nonfamily counterparts in TMT functional diversity. A practical way to do so is by broadening

recruitment and promotion criteria to deliberately include individuals with varied functional backgrounds, even beyond the family circle. Likewise, within the family, focusing on the development of next-generation family members from a young age is critical. This can be achieved by encouraging them to pursue their passions and interests in their educational life and by encouraging them to have personal and professional experiences both outside the family firm and internationally.

However, TMT functional diversity is not enough, and family firms should also promote open discussion among TMT members, which is necessary to benefit from TMT functional diversity. Indeed, maximizing the benefits of functional diversity within a family firm's TMT is contingent upon fostering an atmosphere of open discussion. Although TMT members possess a broad range of expertise, it is equally significant that they actively share and discuss this knowledge. This kind of information sharing can only take place in an environment where the value of dialogue and communication is recognized. In addition to encouraging the exchange of different viewpoints, this kind of atmosphere helps TMT members resolve conflicts that may arise due to diverging goals, as between family and nonfamily managers. By addressing and resolving any potential tension through open dialogue, family firms can overcome potential obstacles to innovation and bolster their intentions to engage and participate in innovative activities. For instance, family firms can institutionalize regular cross-functional meetings or workshops to encourage transparent communication and the exchange of diverse perspectives. Engaging a family business advisor to mediate the meetings and workshops with an unbiased view may be a wise strategy. This is also crucial to avoid the groupthink effect, especially toward family members, which could discourage the rise of novel and cutting-edge ideas.

What is interesting about the implications of this study is that functional diversity and open discussion are managerial levers that can be worked on strategically to refine and improve the attitudes toward innovation of a TMT. There are several ways to intervene in this direction. A way to do so is by defining and formalizing ex ante TMT members' selection criteria aimed at increasing functional diversity and by investing in the regular training of the TMT members so that the variety of their competencies is nurtured over time. The same goes for open discussion. Even in cases where TMTs are not accustomed to open discussion, the realization of its importance and benefits should spur corporate decision-makers to encourage open discussions by changing the internal culture and working daily to make it a reality. Importantly, fostering both TMT functional diversity and open discussion in tandem ensures that the benefits of diverse perspectives are fully leveraged, helping family firms unlock their full innovation potential.

5.3 | Limitations and Future Research

Like any research, this too is not without limitations. First, our sample focuses on firms with more than 10 employees and a maximum of 500 employees. Future research could thus extend the analysis to very large firms, seeking to understand whether and how TMT characteristics explain differently the innovation intentions of family and nonfamily firms when considering firms that might be affiliated with large multinational corporations. In a similar vein, while the size of the TMTs in our sample—comprised between 2 and 25 members—suggests that a shared decision-making policy is in place, in which TMT functional diversity and open discussion might play an influential role, we cannot guarantee that our sample is devoid of cases in which CEOs take decisions autonomously, acting as solo decision-makers and disregarding the opinion of the TMT. We thus invite scholars to collect data about the allocation of decision authority within firms and enrich our study by investigating whether the presence of a CEO who acts as a solo decision maker affects the relation between TMT characteristics and firm innovation intention. Secondly, it would be important for future research to complement the quantitative data we have obtained with qualitative data explaining in greater depth the internal decision-making processes of TMTs and how innovation intention is formed. Likewise, future research could go beyond exploring the innovation intentions and also investigate whether and how such TMT characteristics and dynamics influence their innovation outputs, examining potential differences between different types of innovation (e.g., radical and incremental innovation). Third, a possible limitation of this research concerns the method of measuring our dependent and independent TMT variables by referring to a single respondent for each group. As mentioned above, we checked the reliability of CEOs' answers by administering the questionnaire to a second respondent. Even if the interrater reliability analyses (Burke and Dunlap 2002; Danneels 2015) were comforting, group-level analysis could have shed some additional light on the relationships between TMT features and innovation intentions, and different results might have emerged applying alternative methods. To overcome this limitation, future research should approach the subject by surveying a set of entire TMTs, which would increase the chances of comparing different approaches to this issue. Finally, our empirical data is drawn from firms in a single country. While we rely on a representative sample of Italian firms, future research could expand these findings by conducting cross-country examinations. Indeed, as the contextual and cultural setting might play a substantial role (Hayton et al. 2002), future research should analyze whether national context affects the investigated relationships. Such comparative studies would help assess whether the relations between TMT functional diversity, open discussion, and innovation intentions hold across different cultural and institutional contexts.

6 | Conclusions

Despite family firms being among the most innovative firms in the world, their willingness to innovate does not always align with their ability. In this study, we investigate firms' willingness to innovate, and we provide empirical evidence that family firms have fewer intentions to engage in innovation activities compared to nonfamily counterparts. Building on UET, we account for TMT characteristics, showing that family firms have a less functionally diverse TMT and that this inhibits their willingness to innovate. Family firms can thus keep up with nonfamily firms by improving their TMT functional diversity. However, to be effective, TMT functional diversity has to be paired with open discussion among TMT members. Our work therefore extends and enriches research on family business innovation, the ability-willingness paradox, and upper echelons,

and offers practical implications to family firms on how to design their TMT to the benefit of the firm's innovation intentions.

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Ethics Statement

The authors have read and agreed to the Committee on Publication Ethics (COPE) international standards for authors.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Endnotes

[1] Functional background points to the managerial experience owned by the members of the TMT across different functional areas—for example, finance, marketing, research and development (Segaro et al. 2014).

[2] It is worth acknowledging that prior literature highlights that diversity within a team might also have negative consequences for firms. For instance, Srikanth et al. (2016) discuss that diversity, in general terms, may be both beneficial and detrimental to performance; similarly, Nuscheler et al. (2019) find that TMT functional diversity negatively affects a new venture's product growth. Departing from this debate, in our study, we instead provide arguments supporting the idea that, in established firms, TMT functional diversity may be beneficial for firms' innovation intentions.

[3] The sample is representative of the contacted sample and of the population based on geographical location and number of employees, while CEOs of manufacturing firms appear to be overrepresented compared to those leading firms operating in the services industry; however, representativeness is almost achieved when considering the distribution of firms at the 2-digit NACE industry level. Regarding non-response bias, no difference emerged between respondents and non-respondent concerning geographical location and distribution of number of employees, while manufacturing industry is over-represented among respondents compared to services.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** Supporting Information.