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Entrepreneurial Orientation and Family Firm Performance: The Moderating Role of TMT Identity-Based and Knowledge-Based Faultlines

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Abstract

Research has shown that entrepreneurial orientation (EO) is positively associated with performance, but several context-specific features and contingencies affect this relationship. Accordingly, this article focuses on the specific context of family firms (FFs) and introduces top management team (TMT) faultlines as moderators. The main findings, obtained on a sample of 111 medium- and large-sized FFs, suggest that strong identity-based faultlines (IBFs) negatively moderate the EO–FF performance relationship, even within TMTs that are comprised only of family members, which are often viewed as homogeneous teams. Conversely, strong knowledge-based faultlines (KBFs) amplify the positive effect of EO on FF performance.

Keywords

entrepreneurial orientation, family firms, identity-based faultlines, knowledge-based faultlines, TMT diversity, performance

Entrepreneurial orientation (EO) has been defined and conceptualized in many different ways since Miller's (1983) seminal work. Although the main perspectives (Covin & Slevin, 1989; Lumpkin & Dess, 1996) have appeared to be irreconcilable over the years, recent research has reconciled them by defining EO as a multifaceted organizational attribute (Wales et al., 2020). EO captures the strategic posture of a firm and can contribute to increased performance (Rauch et al., 2009). However, the expected benefits are not always evident, as often reported by insignificant results (Andersén, 2010). Such inconsistencies result from the omission of important

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contingency variables and the lack of focus on homogenous contexts of analysis (Slevin & Terjesen, 2011). Considering additional boundary conditions and more homogenous samples and organizational forms could address this gap.

Family firms (FFs) are a specific context to analyze EO, where the focus on the search for balance between economic and non-economic goals (Chrisman et al., 2012; Kotlar & De Massis, 2013), the intention to transfer the firm to the next generation (Calabrò et al., 2018; Chua et al., 1999), and the presence of a transgenerational entrepreneurial spirit (Ahrens et al., 2019; Basco et al., 2019; Clinton et al., 2018) are some of the main features shaping the EO–FF performance relationship. As in other firms, in FFs, EO needs to be properly managed to reap its potential (Hughes, Filser, et al., 2018; Hughes, Hodgkinson, et al., 2018). This suggests the need to investigate, among other boundary conditions, the role of internal influencers (Hughes, Filser, et al., 2018; Hughes, Hodgkinson, et al., 2018), such as members of the top management team (TMT), who define the entrepreneurial strategic-making process of a firm (Wales et al., 2020; Wood & Michalisin, 2010).

We extend this line of inquiry by examining whether, in the context of FFs, the EO-firm performance relationship is contingent on specific TMT diversity attributes. More specifically, and stemming from the social cognitive theory of team behavior (Turner, 2010) that complements arguments from social identity (Tajfel & Turner, 1986) and self-categorization theories (Turner et al., 1987), we focus on the joint effects of multiple TMT diversity attributes, from which TMT faultlines can derive (Lau & Murnighan, 1998). TMT faultlines are divided, and schisms are created because of the simultaneous alignment of multiple diversity attributes that, when strong, split the TMT into competing subgroups affecting its functioning (Li & Hambrick, 2005). We contend that TMT faultlines can result in negative outcomes when they are identity-based faultlines (IBF), that is, based on visible demographic diversity attributes (Thatcher & Patel, 2012), which drive TMT members to make social categorizations and identify themselves with a specific subgroup (van Knippenberg et al., 2011). Moreover, to advance our understanding of faultline theory beyond the negative consequences of TMT faultlines on the EO–FF performance relationship, we also investigate the role of knowledge-based faultlines (KBFs). These faultlines are grounded within an information/decision-making perspective (Williams & O'Reilly, 1998), emerge when the competence and knowledge features of TMT members align (Carton & Cummings, 2012) and can have potentially positive effects on TMT outcomes.

Our hypotheses were tested on a sample of 111 German FFs by applying structural equation modeling (SEM). The main finding suggests that EO positively affects FF performance; however, strong IBF negatively moderates the EO–FF performance relationship, even within TMTs that are comprised of only family members (which are often viewed as homogeneous entities). Hence, IBF also emerges in TMTs, where members belong to the same family. Being part of the same family is, therefore, not a guarantee of cohesiveness. In other words, although FFs have the potential to nurture EO, which helps them boost their performance, the contribution of EO to FF performance is somehow limited when they are unable to overcome the formation of IBF. Conversely, we observe that strong KBF favors the formation of knowledge-based subgroups that, leveraging informational diversity based on members' task-relevant knowledge, amplifies the positive effect of EO on FFs' performance. This suggests that FFs that hire non-family managers (and lose part of their exclusive authority in the firm) may be able to reach a better mix of TMT member knowledge and competence that amplifies the positive impact of EO on FF performance.

This study makes several contributions to theory and practice. First, we advance entrepreneurship research and knowledge about the EO-firm performance relationship (Rauch et al., 2009) by integrating TMT faultlines as a moderating variable, which enables the role of TMT-subgroups to be recognized as an important omitted internal contingency factor (Slevin &

Terjesen, 2011). Furthermore, we enrich the field of studies by acknowledging that KBF enables EO to express its potential for FF performance (Gardner et al., 2012; Martin & Javalgi, 2019). Second, while the faultlines literature is committed to the negative consequences of faultlines and has mainly developed in this direction, our findings support the view that it is also possible to leverage the positive effects of KBF. Thus, we advance the faultlines theory applied to team/group decision-making processes (Lau & Murnighan, 1998), in this case, through FFs pursuing growth and new value creation by leveraging EO, by integrating arguments from a social cognitive theory of team behavior (Turner, 2010) with those from an information/decision-making perspective (Williams & O'Reilly, 1998). Third, we extend the application of the faultlines theory within the FF context (e.g., Minichilli et al., 2010) by providing a measure of TMT faultlines not limited to the sole use of family membership as a criterion to measure faultlines. As anticipated, we demonstrate that faultlines can also arise in TMTs that comprise only family members that appear more homogenous and face splintering into subgroups. Finally, our findings have managerial implications for FF owners and managers, who need to be aware that placing more emphasis on knowledge differences across subgroups could be a good way to de-emphasize demographic differences and enhance identification with the TMT as a whole, thus exploiting its informational diversity and empowering EO to contribute to firm performance.

Theoretical Background and Hypotheses Development

EO pervades organizations at all levels, and members across the hierarchical levels of a firm, such as TMT members, are important for its strategic implementation (Wales et al., 2011). Therefore, we focus on internal contingencies/factors by examining whether and how TMT faultlines in the context of FFs shape the EO-firm performance relationship. In particular, we consider what happens to the EO-firm performance relationship when subgroups with divergent views and interests are created within TMTs due to the joint alignment of multiple diversity attributes.

According to the social cognitive theory of team behavior (Turner, 2010), complementing arguments from social identity (Tajfel & Turner, 1986) and self-categorization theories (Turner et al., 1987), the formation of TMT subgroups arises from a social categorization process through which TMT members quickly categorize each other according to their visible demographic diversity attributes, such as race, gender, and age (Hogg & Terry, 2000). When multiple diversity attributes align differentiating similar in-group members ("us") from dissimilar out-group members ("them"), faultlines emerge and, when strong, create divides within the TMT (Li & Hambrick, 2005). The core assumption is that diversity fosters categorization processes and stereotyping, resulting in negative outcomes due to the emergence of intra-subgroup solidarity instead of inter-subgroup differentiation (van Knippenberg et al., 2004). This especially happens when there are IBF (arising when multiple demographic attributes of TMT members align), which could then harm the contribution of EO to FF performance. However, the literature on faultlines has largely ignored how diversity also creates value, especially when it is based on knowledge (Carton & Cummings, 2012). Hence, subgroups created within the TMT based on the alignment and salience of knowledge attributes (KBF) may amplify the positive effect of EO on FF performance.

In this section, we theorize on the EO-firm performance relationship in the context of FFs, taking into account the main features of this type of organization and addressing the call for more research using contexts with uniform characteristics. Then, we hypothesize the moderating role of TMT faultlines as an internal contingency. Specifically, we theorize about the negative moderating effect of IBF and then about the positive moderating effect of KBF.

Entrepreneurial Orientation in Family Firms and the Impact on Firm Performance

Given that FFs start from a founder's entrepreneurial act, translating their vision into reality, they are a unique context for investigating entrepreneurial behavior (Nordqvist et al., 2008) and broadening the knowledge of the EO-firm performance relationship (Lumpkin et al., 2010). Specific FF features empower them to develop EO (Aldrich & Cliff, 2003) and affect firm performance (Casillas et al., 2010; Hernández-Linares & López-Fernández, 2018). As the owning-family makes decisions based on preserving the family legacy and the accumulated stock of affect-related value invested in the firm, that is, their socioemotional wealth (Gómez-Mejía et al., 2007), they may be better able to maintain and renew the original EO through generations, with a positive impact on FF performance (Hall et al., 2001; Kellermanns et al., 2008; Nordqvist et al., 2008; Zahra et al., 2004). Moreover, family ownership means patient capital and a longer time horizon, which favor entrepreneurial families in developing EO to stay competitive over time (Fang et al., 2019). Finally, the widespread overlap between ownership and management shapes a centralized organizational structure that facilitates innovative behavior (Salvato, 2004).

The EO-firm performance relationship has been widely investigated (e.g., Casillas et al., 2010; Chirico et al., 2011; Schepers et al., 2014) through a lively discussion on whether the unique organizational context of FFs fosters or hinders the effect of EO dimensions (innovativeness, proactiveness, and risk-taking) on firm performance (Hernández-Linares & López-Fernández, 2018). Although this relationship may change in the presence of certain contextual factors (e.g., Garcés-Galdeano et al., 2016; Schepers et al., 2014), it is generally positive (Rauch et al., 2009).

Focusing on innovativeness, the evidence suggests that investing in the research and development of new products is essential for business continuity (Hatak et al., 2016), a pivotal goal for FFs (Kellermanns et al., 2012). Entrepreneurial families are conscious that fostering innovativeness is a way to focus on current performance and long-term future returns (Craig & Dibrell, 2006). Accordingly, family members leverage innovativeness to encourage firm growth (Casillas & Moreno, 2010; Schepers et al., 2014), and the commitment of the family positively moderates the innovativeness-performance relationship (Hatak et al., 2016). Moreover, thanks to the accumulation and use of tacit knowledge, family members are more innovative than non-family members (Calabrò et al., 2020). These arguments suggest a positive relationship between a high degree of innovativeness and FF performance (Jiménez-Jiménez & Sanz-Valle, 2011).

The second EO dimension we are examining in the context of FFs is proactiveness. It synthesizes efforts to seize new opportunities, anticipate future market demand, and actively shape the external environment (Lumpkin & Dess, 2001). It is a distinctive trait of FF entrepreneurial behavior (Short et al., 2009) and a key source for enhancing growth and performance (e.g., Casillas et al., 2010). Although proactiveness in FFs is not constant but changes over time (De Massis et al., 2014; Zellweger & Sieger, 2012), the research suggests that, when it is high, it affects performance positively (Casillas et al., 2010; Short et al., 2009).

Lastly, some studies suggest that FFs take risks, but to a lesser extent than non-FFs (Naldi et al., 2007), partly because management and ownership are not separated and partly because of the family nature of ownership and management (Zahra, 2005). Casillas and Moreno (2010) demonstrated that family involvement has a decreasing effect on the negative relationship between the risk-taking dimension of EO and firm growth. Rauch et al. (2009) found that the effect of risk-taking on firm performance is significantly smaller than other dimensions of EO and suggested that the link between risk-taking and performance is less obvious than that between innovativeness, proactiveness, and performance. Considering EO as a unidimensional concept made up of a combination of innovativeness, proactiveness, and risk-taking (Covin & Slevin,

1989), we contend that the overall effect of appropriate levels of EO on FF performance is positive and formulated the following hypothesis:

Hypothesis 1: *There is a positive relationship between the level of entrepreneurial orientation and family firm performance.*

The Moderating Role of TMT Faultlines

The identification of variables that moderate the EO-firm performance relationship is still a highly debated topic within the EO literature and has been recently renewed through the call for more research focusing on investigating the moderating role of internal contingencies (Hughes, Filser, et al., 2018; Hughes, Hodgkinson, et al., 2018). This study focuses on TMTs as important internal influencers for the strategic implementation of EO (Wales et al., 2011). In particular, we discuss what happens to the EO–FF performance relationship when subgroups with divergent views and interests are created within the TMT due to the joint alignment of multiple diversity attributes. Hence, we do not look at TMT diversity by considering a single attribute (Blau, 1977), but focus on the compositional dynamics of multiple attributes of diversity (Lau & Murnighan, 1998). In this way, we can capture what happens when multiple TMT attributes are salient at the same time and align simultaneously (Hart & Van Vugt, 2006), which is the basis of the faultlines theory (Lau & Murnighan, 1998).

In the context of FFs, Minichilli et al. (2010) focused on TMT faultlines and investigated their negative impact on FF performance. However, they considered family membership as the only salient demographic attribute splitting the TMT into two subgroups. They suggested that family members within the TMT comprise a "cohesive" factional group, sharing a common culture, history, and values, and identifying more strongly with the firm, which does not happen in a subgroup of non-family members (Li & Lau, 2014). Thus, family members were believed to form a highly committed in-group (Vandebeek et al., 2016), favoring the emergence of an identity-based subgroup (Carton & Cummings, 2012) which, when opposed to other subgroups, activates dysfunctional team dynamics.

Other applications of the faultlines approach explore how TMT faultlines negatively intervene in explaining mainstream management relationships. Li and Jones (2019), for example, argue that TMTs with strong faultlines undertake fewer competitive actions, which ultimately worsens firm performance. In a similar vein, but in the context of international business, Barkema and Shvyrkov (2007) suggest that when diversity leads to the formation of subgroups within TMTs, it hampers a firm's propensity to enter new geographic areas. These studies suggest that faultlines based on identity-based attributes favor the creation of TMT subgroups, which have detrimental effects on the functioning of the team as a whole and, in turn, on firm dynamics and performance. This is in line with the predictions of the social cognitive theory of team behavior (Turner, 2010), complementing arguments from social identity (Tajfel & Turner, 1986) and self-categorization theories (Turner et al., 1987).

Notwithstanding, it is also important to note that talking about faultlines (when they are strong) does not only mean dysfunctional identity-based subgroup dynamics. Indeed, there might also be faultlines based on the knowledge and competence-related attributes of TMTs, which could instead favor the formation of subgroups that possess a broader range of task-relevant knowledge, skills, and members with different perspectives (van Knippenberg et al., 2004). In contrast to IBF, in this case, diversity can bring value; hence, we expect that when KBF arises, they positively amplify the impact of EO on FF performance.

The Moderating Role of Identity-Based Faultlines

Demographic characteristics are often used as the basis for social identity and self-categorization processes that can lead to the emergence of identity-based subgroups (Hogg & Terry, 2000). Gender, for example, is an easily observable demographic characteristic of TMT members, as people can quickly classify each other into their respective categories (Tajfel & Turner, 1986). Given that women are often not viewed in the same way as men and are considered to be more risk-averse, less effective in competitive environments, less attentive to financial performance, and are expected to focus on fulfilling caregiver roles within the family business (Gneezy et al., 2003; Martinez Jimenez, 2009), gender stereotyping within TMTs may lead to male versus female subgroupings (gender-based subgroups). Age also potentially creates identity-based subgroups (age-based subgroups), as young and old managers might have different views on which project to invest in Zahra et al. (2004). Lastly, in FFs, family membership is a demographic attribute that may create family and non-family subgroups (Minichilli et al., 2010).

In FFs, the alignment of these attributes (age, gender, and family membership) may create strong IBF within TMTs and determine the emergence of internally homogeneous subgroups (Rico et al., 2007). When this happens, TMT members, having little in common with members belonging to another subgroup (Gibson & Vermeulen, 2003; Hornsey & Hogg, 2000; Rico et al., 2007), can feel a sense of distinctiveness, as provided by their own subgroup's identity (Yoon et al., 1994) and identify more with their respective TMT-subgroup than with the TMT as a whole (Bezrukova et al., 2007). This "in-group bias" (Ndofor et al., 2015) will lead TMT members to achieve subgroup goals by working for the subgroup and not for the whole TMT. Hence, when salient diversity attributes make the whole TMT less cohesive, it is likely to have a detrimental effect on the EO–FF performance relationship (Tuggle et al., 2010).

In particular, strong IBF could reduce TMT innovativeness, which requires new ideas (Kunze & Leicht-Deobald, 2014) that may be lacking when diverging subgroups coexist. In the same vein, strong IBF can result in different degrees of proactiveness among subgroups, with some more inclined to spot and pursue new market opportunities, and others being more passive (Bateman & Crant, 1993). In such situations, discrepancies among subgroups will arise and, in turn, hamper the propensity to pursue new opportunities (Barkema & Shvyrkov, 2007). Finally, the formation of subgroups as a result of strong IBF may add different and competing views about the degree of risk a FF has to take (Mullins & Forlani, 2005). While one subgroup might be more willing to take risks to obtain future rewards (Zaleskiewicz, 2001), another might evaluate risk as undesirable. Risk-averse subgroups will perceive highly risky proposals as unreasonable and reduce the overall level of risk-taking (Ucbasaran et al., 2003).

When IBF is strong, as the polarization (van Knippenberg & Schippers, 2007) and distance of subgroups (Zanutto et al., 2011) are high, the potential of EO is hampered. We thus argue that in FFs with TMTs possessing strong IBF, EO's positive effect on FF performance is reduced. Hence, we formulate the following hypothesis:

Hypothesis 2: *Strong identity-based faultlines negatively moderate the relationship between EO and FF performance.*

The Moderating Role of Knowledge-Based Faultlines

Strong IBF negatively moderate the impact of EO on FF performance, as subgroup mechanisms based on social identity and categorization processes harm the functioning of the TMT. However, other types of subgroups, for example, knowledge-based, may arise and have a positive effect (Gibson

& Vermeulen, 2003). KBF are defined as the alignment of team members' human capital diversity, which splits the team into homogeneous subgroups of competence and knowledge (Bezrukova et al., 2009; Carton & Cummings, 2012; Crawford & LePine, 2013). The formation of this faultline type is grounded in an information/decision-making perspective (Williams & O'Reilly, 1998), claiming that the team members' knowledge and skills diversity across one or more faultlines and subgroups creates more resources for improved team performance.

In this study, we focus on three dimensions of TMT knowledge that are likely to cause subgroup formation, namely organizational tenure, functional background (the functional area that best represents the work experience of each manager), and the managers' university degrees (Bezrukova et al., 2009; Crawford & LePine, 2013). Organizational tenure represents the working experience of TMT members in a specific organization. This attribute is likely to cause the formation of faultlines given that subgroups with different organizational tenure can have different opinions about work and who should be responsible (Choi & Sy, 2010). A functional background may result in faultline formation as people belonging to the same functional area are more likely to agree to group actions, as they might have the same interests and mental scripts (Ancona & Caldwell, 1992). Lastly, the managers' university degrees play an important role in shaping their professional knowledge, skills, and abilities (Amason et al., 2006; Hutzschenreuter & Horstkotte, 2013). Similarly, where members possess a similar education, they are likely to form a subgroup with the same knowledge, skills, and abilities, thus similarly processing information.

Faultlines due to the alignment of such attributes are likely to promote the exchange of information and favor the overlap of cognitive schemata toward a common understanding and interpretation of events (Bezrukova et al., 2009; Carton & Cummings, 2012; Homan et al., 2007). With a strong KBF, each TMT member has their own subgroup in which information is shared using unique languages and symbols (Chung et al., 2015; Gibson & Vermeulen, 2003). Members of a subgroup will support each other, and it will be easier to exchange and share opinions with the members of other subgroups (Chung et al., 2015). The team will benefit from sharing knowledge from divergent views of different subgroups (Mannix & Neale, 2005), and from the ability to recombine information and knowledge creatively between subgroups (Carton & Cummings, 2012; Gibson & Vermeulen, 2003).

Strong KBF increases the elaboration of task-relevant information and perspectives within the TMT. Decision-making and decision quality are improved (Tasheva & Hillman, 2019), creativity and healthy debate are encouraged (Bezrukova et al., 2009; Carton & Cummings, 2012; Gibson & Vermeulen, 2003), and innovation and innovativeness are promoted (Hutzschenreuter & Horstkotte, 2013; Ndofor et al., 2015; van Knippenberg et al., 2004; Hutzschenreuter & Horstkotte, 2013, Ndofor et al., 2015an van Knippenberg et al., 2004). Furthermore, Strong KBF enables TMTs to glimpse more entrepreneurial opportunities to explore and exploit, increasing proactiveness levels (De Clercq et al., 2013). Lastly, members of a subgroup are likely to positively value the views of members of another knowledge-based subgroup, who may have access to unique knowledge and competence (Chung & Jackson, 2013) to assess a specific entrepreneurial initiative's risks. This allows to act in a more risk-taking manner. In sum, TMT subgroups emerging from strong KBF favor exchanging information and different points of view, thus positively moderating the relationship between EO and firm performance. Strong KBF may particularly amplify the positive effect of EO on firm performance in the context of FFs. Drawing on the previous arguments, we hypothesize the following:

Hypothesis 3: *Strong knowledge-based faultlines positively moderate the relationship between EO and FF performance*.

Methods

Data Collection and Sample

Our theoretical framework and related hypotheses were tested on a sample of 111 German medium- and large-sized[1] FFs. The choice to exclude micro- and small-sized firms was motivated by the general lack of formal and structured TMTs in such firms. Germany is a representative country in terms of FFs and economic activities, where FFs generate about 70% of GDP, 40% of the first 300 firms are FFs, and 119 of the top firms worldwide are German FFs. Furthermore, the two-tier governance system with two separate boards—the management board and the supervisory board[2]—allows an investigation of isolated TMT members (Calabrò et al., 2017; Klein, 2000).

The sampling process began by scanning Amadeus, a database from the Bureau van Dijk, containing comprehensive information on approximately 21 million European companies. To be eligible for our study, a firm had to be the global ultimate owner, and a family had to own at least 50.1% of the firm (Basco & Voordeckers, 2015), an appropriate threshold when working with private firms to represent "pure" ownership (Carney et al., 2015). This process yielded the first sample of 781 firms contacted via corporate email addresses to participate in an online survey (124 questions) during the summer of 2011. Based on past research, the respondents were CEOs, family or external, as they were expected to be the best key informants (Sharfman, 1998). When the CEO was not available, we asked another member of the management board with knowledge about the company to complete the survey (Hambrick, 1981).

We acknowledge that relying on a single key player's responses may increase the possibility of common method variance problems (Campbell & Fiske, 1959). Therefore, we applied two statistical techniques—Harmans' one-factor test and the partial correlation procedure—to control for this problem (Lyon et al., 2000; Podsakoff & Organ, 1986). According to the results of the Harmans' one-factor test, we conducted a factor analysis where more than one factor emerged and examined the unrotated results to identify the number of factors necessary to account for the variance in the variables' factor solution. By applying the partial correlation procedure and excluding the first unrotated factor, we then tested whether the relationships among the variables of interest still existed after the common method factor had been statistically controlled.

At the end of the survey administration period, we had a usable sample of 144 firms (response rate of 18.4%), in line with studies with a similar setting (e.g., Ensley & Pearson, 2005; Ensley, 2006). An analysis of variance between firms that responded before and after the follow-up mailing yielded no significant differences in the variables of interest, thus controlling for a potential non-response bias (Armstrong & Overton, 1977). We also collected secondary data for the performance measures (2008, 2013) from Bureau van Dijk Amadeus. Although it provides financial information for public and private companies across Europe, we did not find available data for 33 firms, and the final sample was composed of 111 FFs. The responding firms vary in size: 6.6% with 100 or fewer employees, 26.3% with 101–250 employees, 13.1% with 251–500 employees, and 54.0% with over 500 employees. They mainly operate in the manufacturing industry (56%), 53% are led by a family CEO, and 45% are owned by the first generation, although the median age of the firms is 63 years.

Definitions and Measurements of Variables and Constructs

Dependent Variable

Firm performance. The return on assets (ROA)—the income before extraordinary items and discontinued operations divided by the net assets—was used as the performance measure. ROA is widely applied in strategic leadership research (e.g., Finkelstein et al., 2009; Shen & Cannella, 2002) to assess the effects of top executives and family members on firm performance (Maury, 2006). We

Table 1. Dimensions, Items, and Loadings of EO.

Dimensions	Items	Loading
Tendency toward innovation	I1. The top managers favor a strong emphasis on the marketing of tried and true products/services—The top managers favor a strong emphasis on R&D, technological leadership, and innovation	0.71
	I2. TMT has introduced no new lines of products or services—TMT has introduced many new lines of products or services	0.76
	I3. Changes in products or service lines have been mostly minor—Changes in products or service lines have usually been quite dramatic	0.72
Proactive orientation	P1. TMT tends to respond to actions which competitors initiate—TMT tends to initiate actions to which competitors then respond to	0.78
	P2. The firm is very seldom the first business to introduce new products/services, administrative techniques, or operative technologies—the firm is often the first to introduce new products/services, administrative techniques, or operative technologies	0.74
	P3. TMT typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture—TMT typically adopts a very competitive, "undo-the-competitor" posture	0.73
Risk-taking propensity	R1. Top managers have a strong proclivity for low-risk projects (with normal and certain rates of return)—Top managers have a strong proclivity for high-risk projects (with chances of very high returns)	0.80
	R2. Top managers believe that owing to the nature of the environment, it is best to explore gradually via conservative, incremental behavior—Top managers believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives	0.74
	R3. TMT typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions—TMT typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities	0.79
Cronbach's α = 0.85	AVE = 0.63	

collected data from the Bureau van Dijk Amadeus database for 2013, 2 years after the survey administration. A time lag on the dependent variable is important because the EO effects on firm performance require time to materialize (Wiklund & Shepherd, 2003). This method also reduces the reverse causality problem encountered in many cross-sectional studies.

Independent Variable

Entrepreneurial orientation. Using the nine-item scale developed by Covin and Slevin (1989), we collected information about three EO dimensions (tendency toward innovation, proactive orientation, and risk-taking propensity) through a questionnaire administered in the summer of 2011. The answers were on five-point semantic differential scales (Osgood, 1964), and the specifications of the dimensions/items for this latent variable are reported in Table 1.

Moderating Variables

Identity-based and knowledge-based faultlines. We measured TMT, IBF, and KBF in terms of faultline strength by employing the formula[3] developed by Shaw (2004) that assesses the extent to which categorical attributes are aligned within subgroups and deviate between subgroups (Vandebeek et al.,

2016). Shaw's method involves several steps, the first of which is the identification of different attributes. By following the recommendations of Meyer et al. (2014) for selecting the most appropriate faultline measurement, we identified three attributes for measuring IBF (Hutzschenreuter & Horstkotte, 2013) and three attributes for measuring KBF (Thatcher et al., 2003). Specifically, for IBF, which may split the TMT into demographic subgroups, we selected "age," based on the date of birth and calculated for each TMT member; "gender" which denotes whether the member is female or male (Lau & Murnighan, 1998; Shaw, 2004; Zanutto et al., 2011), and "family membership," as either a family member or a non-family member (Minichilli et al., 2010; Vandebeek et al., 2016). For KBF, which split the team into homogeneous knowledge and expertise subgroups (Bezrukova et al., 2009; Crawford & LePine, 2013), we collected data about "experience," as years of work experience; "functional background" that best represents the work experience of each TMT member; and the "university degree," as the individual current graduate major.

The second step is categorization. As the adopted measure of faultlines is not suitable for numeric data, all attributes had to be categorical (Shaw, 2004). In our case, all attributes were categorical except for age and years of work experience, which were transformed into categories (Kunze & Bruch, 2010) as follows: age—under 25 years, 25–35 years, 36–45 years, 46–55 years, and over 56 years; experience—0–3 years, 4–6 years, 7–9 years, 10 or more years.

Third, we used Meyer and Glenz's (2013) program, which was specifically designed to calculate group faultlines. Specifically, we first measured the subgroup's internal alignment (IA) and then computed the cross-subgroup alignment (CGAI). Lastly, we calculated IBF and KBF strength scores ranging from 0.0 to 1.0. The closer the score is to 1.0, the stronger the faultlines within the TMT (Shaw, 2004), indicating that there is a divide within the TMT. In Table 2, we present examples from our sample to clarify the scores.

If the score is equal to 0.00, faultlines do not exist in the TMT, thus suggesting it is homogeneous. When the score is close to zero (IBF: 0.03–KBF: 0.04), we record extremely weak faultlines, indicating that TMT members differ from each other; however, they do not share salient attributes. When the score is close to one (IBF: 0.95–KBF: 0.97), half of the TMT members possess the same features for each attribute, whereas the other half also possesses similar features for each attribute, although they differ from the first half. There are thus two factional subgroups, creating very strong faultlines.We also provide descriptive statistics on how the scores for IBF and KBF are distributed across types of TMTs, family TMT, non-family TMT, and mixed TMT, as reported in Table 3.

The table indicates that within our sample, family TMTs have the strongest (between 0.75 and 1.0) IBF (51.61%) and KBF (62.44%), and are accordingly exposed to the creation of competing subgroups of family managers.

Analyses

The hypotheses were tested using SEM using Lisrel 9 software. We used the full information maximum-likelihood procedure to estimate the model's parameters, which allowed the control of missing values. This technique performs better than other missing data techniques when using all available raw data (Enders & Bandalos, 2001). To test the moderating effects and calculate the interaction between the latent variable (EO) and the two observed moderating variables (IBF and KBF), we followed the procedure recommended by Marsh et al. (2004), as IBF and KBF are two continuous variables. We calculated the root mean square error of approximation (RMSEA) and the comparative fit index (CFI) to assess the consistency of the model. RMSEA values should be less than .06, and CFI values greater than .95 (Hu & Bentler, 1998, 1999; Marsh et al., 2004).

Table 2. Examples of TMT Faultlines.

	Family membership	Age	Gender
IBF =.00 (no faultlines)	Family member	36–45	Male
	Family member	36–45	Male
	Family member	36–45	Male
IBF =.03 (very weak faultlines)	Family member	More than 56	Female
	Family member	Less than 25	Male
	Non-family member	36–45	Male
	Non-family member	25–35	Female
IBF =.16 (weak faultlines)	Family member	More than 56	Male
	Family member	25–35	Female
	Non-family member	More than 56	Male
	Non-family member	25–35	Male
IBF =.47 (strong faultlines)	Family member	More than 56	Male
	Family member	More than 56	Male
	Family member	25–35	Female
	Family member	Less than 25	Female
IBF =.95 (very strong faultlines)	Family member	46–55	Male
	Family member	46–55	Male
	Family member	46–55	Female
	Non-family member	25–35	Male
	Non-family member	25–35	Male
	Non-family member	25–35	Female

	Experience	Functional background	Degree major
KBF =.00 (no faultlines)	0–3	General management	Management
	0–3	General management	Management
	0–3	General management	Management
KBF =.04 (very weak faultlines)	3–6	Sales & marketing	Management
	3–6	Manufacturing	Engineering
	10+	Finance & accounting	Finance
	10+	Human resources	Management
KBF =.15 (weak faultlines)	6–9	Finance & accounting	Insurance
	6–9	Consulting	Law
	0–3	Consulting	Law
	0–3	Human resources	Law
KBF =.42 (strong faultlines)	10+	Sales & marketing	Marketing
	10+	Sales & marketing	Marketing
	10+	Finance & accounting	Management
	10+	Manufacturing	Management

(Continued)

Table 2. Continued

	Family membership	Age	Gender
KBF =.97 (very strong faultlines)	6–9	General management	Marketing
	6–9	General management	Management
	6–9	General management	Management marketing
	3–6	Manufacturing	Management
	3–6	Manufacturing	Management
	3–6	Manufacturing	

Results

Descriptive Statistics

Table 4 reports the mean and standard deviation for each variable considered in the structural equation model and the correlation matrix. It highlights that IBF and KBF are both related to EO and ROA; however, while KBF are positively correlated, the IBF are negatively correlated.

Hypothesis Testing

An illustrative summary of the structural equation model is presented in Figure 1.

EO is the unique latent variable of the model. Accordingly, we examined the indicator loadings and Cronbach's α coefficient to assess the reliability and validity of our measurement. All the loadings were above 0.70, indicating that the construct explained over 50% of the indictor's variance. The Cronbach's α coefficient was 0.85, and thus superior to the minimum requirement (.70), indicating satisfactory reliability. Convergent validity was examined by measuring the extent to which a construct converges in its indicators by explaining the item variance. Convergent validity is assessed by the average variance extracted (AVE), calculated as the mean of the squared loadings for all items associated with a construct. An acceptable AVE is 0.50 or higher, as it indicates that, on average, the construct explains over 50% of the variance of its items. The AVE for EO is 0.63 (Table 1).

Table 3. Faultline Strength Score and Type of TMT.

		Family—TMT	Non-family—TMT	Mixed—TMT
Identity-based faultlines (score)				
0.0–0.25	2.70%	33.33%	66.67%	0.00%
0.25–0.5	31.53%	0.00%	17.15%	82.85%
0.5–0.75	37.84%	4.77%	9.52%	85.71%
0.75–1.0	27.90%	51.61%	9.67%	38.72%
Knowledge-based faultlines (score)				
0.0–0.25	9.72%	31.47%	62.73%	5.80%
0.25–0.5	17.15%	3.7%	21.56%	74.74%
0.5–0.75	27.65%	10.41%	23.57%	66.02%
0.75–1.0	45.48%	62.44%	8.32%	29.24%

Table 4. Descriptive Statistics and Correlation Matrix.

	1	2	3	4
1. EO	1			
2. ROA	.33*	1		
3. IBF	−.21**	−.13*	1	
4. KBF	.38***	.32*	.12	1
Mean	.47	19.42	.60	.65
SD	.33	9.44	.04	.06

Note. *p < .05; **p < .01; ***p < .001.

The complete model was a close fit to the data: RMSEA was 0.04 (90% CI: 0.03, 0.06); CFI was 0.96. Hypothesis 1 is supported, demonstrating the positive effect of EO on ROA (β = 0.24, p-value < .01) and hence that higher levels of EO foster firm performance. In support of Hypotheses 2 and 3, the interaction terms were significant (EO × IBF β = −0.37, p-value < .05; EO × KBF β = 0.43, p-value < .001). A plot of the interactions (Figures 2 and 3) illustrates that the positive effect of EO on performance is mitigated (negative moderation) in TMTs with stronger IBF, while with KBF, the positive effect of EO on performance is strengthened (positive moderation).

Robustness Tests

To ensure the robustness of our results, we replicated the analysis using the change in ROA (ROA 2013–ROA 2012/ROA 2012) and the ROA recorded in 2012 (1-year time lag) as alternative, dependent variables. We also replicated the analysis for the subsample of TMTs composed

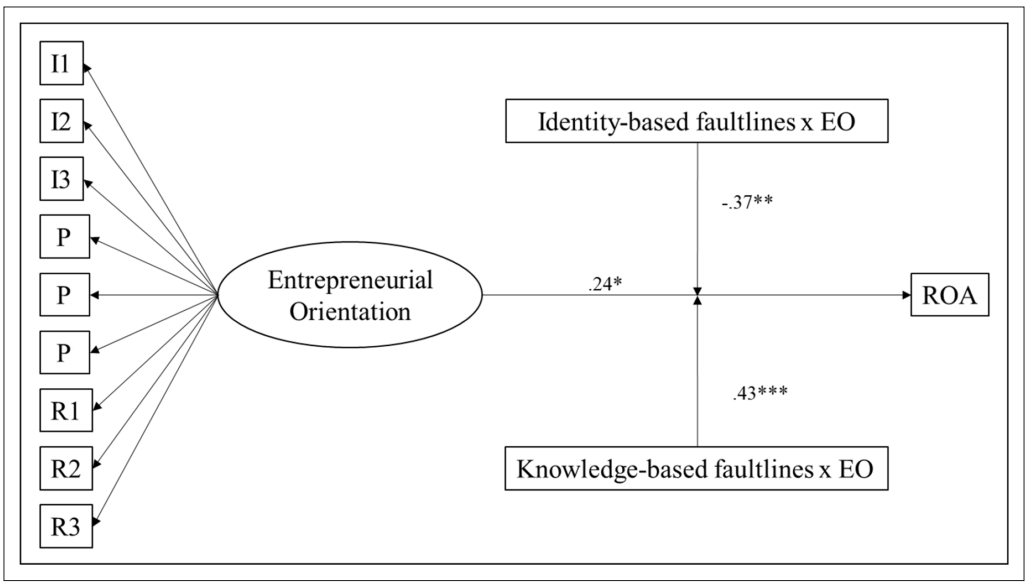

Figure 1. Structural equation model. *p < .05; **p < .01; ***p < .001.

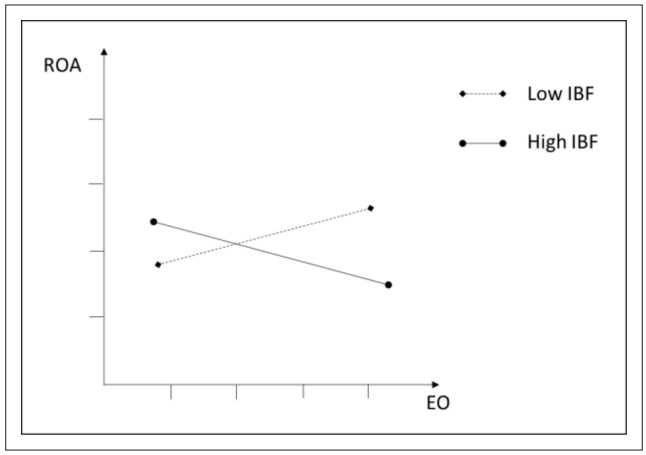

Figure 2. Moderating effect of identity-based and knowledge-based faultlines.

of only family members. In all cases, we obtained similar results (available upon request from the authors) as in our main model.

We also tested a moderating multiple regression model (Aguinis & Gottfredson, 2010). In more detail, we first included the following control variables in Model 1: *past performance*, *firm age*, *firm size*, *industry*, *debt/equity ratio*, *TMT size*, *family ownership*, *generation in ownership*, and variety and disparity measures of diversity. *Past performance* was measured as average firm ROA over the last 3 years before the year of the questionnaire (2008, 2010) (Shen & Cannella, 2002). This variable introduces the effect that past performance may have had on decision-making (Tversky & Kahneman, 1986) and allows the potential threat of "regression to the mean" to be controlled (Brown, 1982). All analyses controlled for the logarithm of *firm age* (the number of years since foundation), as older firms are expected to be more conservative in their EO (Zahra et al., 2008).

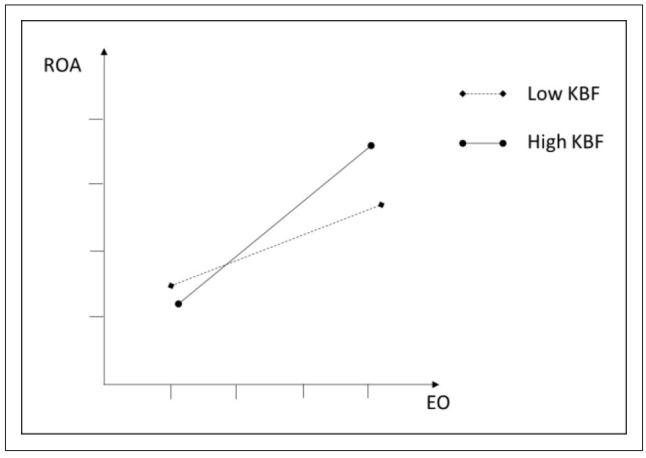

Figure 3. Moderating effect of identity-based and knowledge-based faultlines.

We controlled for the logarithmic transformation of *firm size* (the number of employees), which may determine the enhancement or erosion of firm performance (Miller et al., 2013). Firm size is considered one of the most powerful proxies of decision-making style and quality (Certo et al., 2006). We also controlled for *industry* because the effect of TMT on performance should be assessed in relation to the intensity of the competition within industries (Randøy et al., 2009). We used a dummy variable with a value of 1 for firms operating in the manufacturing industry and 0 otherwise. The *debt/equity ratio* was also included as a control variable (Anderson & Reeb, 2003; Miller et al., 2007). Another control variable that may affect the decision-making processes is *TMT size* (Bray et al., 1978). TMT size is crucial for the study of faultlines, as the simultaneous alignment of different dimensions is more difficult for larger teams, and thus large TMTs are unlikely to have strong faultlines (Thatcher & Patel, 2012). Instead, the perception of differences is amplified in small TMTs and, accordingly, it is more likely that faultlines will emerge (Harrison & Klein, 2007).

We considered the percentage of *family ownership* as a variable that affects TMT dynamics (Minichilli et al., 2010), EO, and *firm performance*. To determine the *generational stage* of ownership, we asked respondents to indicate the generation currently controlling the firm (Bammens et al., 2008). Forty-five firms are controlled by the first generation, 30 by the second generation, and 36 by the third. We considered this as a discrete variable. Finally, as we measured diversity as separation through faultlines, we needed to control for other forms of TMT diversity (Harrison & Klein, 2007).

Following Rico et al. (2007), we measured age-diversity and gender-diversity using Allison (1978) coefficient of variation and Blau (1977) index to capture diversity as variety. We also measured shareholder diversity by using the coefficient of variation to capture diversity as disparity. We considered these controls and other independent variables as mean-centered to test for moderation and avoid collinearity issues (Aguinis & Gottfredson, 2010; Aiken & West, 1991). We also tested potential collinearity problems among the variables by estimating variance inflation factors (VIF) test and condition indexes. VIF values ranged from 1 to 1.79, and condition indexes did not overcome the value of 8.73, thus indicating that multicollinearity was not a problem for the study (Neter et al., 1996). In the second step (Model 2), the explanatory variables (EO, IBF, and KBF) were added to verify the direct effect on ROA. Finally, the interaction terms (EO × IBF and EO × KBF) were included in the third model (Model 3). Therefore, we also evaluated the existence of a moderating effect through a hierarchical multiple regression model. The results are reported in Table 5.

All the estimated models are highly significant at .001, and the adjusted R^2 is increasing (Model 1: 0.38; Model 2: 0.42; Model 3: 0.46). The analysis highlights that EO is positively and significantly associated with ROA ($\beta = 0.29$, $p < .01$; Model 2), thus confirming the results of the structural equation models and supporting Hypothesis 1. The interaction terms are both significant, but while the effect of EO × IBF is negative ($\beta = -0.41$, p-value $< .01$), the effect of EO × KBF is positive ($\beta = 0.47$, p-value $< .001$), thus supporting Hypotheses 2 and 3 and confirming the results obtained using SEM.

Discussion and Conclusions

To shed new light on the EO-firm performance relationship, we have relied on the specific context of FFs, whose features provide a different twist to the manifestation of a firm's EO and its impact on firm performance. As TMT members are key actors determining the EO of a firm (Wales et al., 2020; Wood & Michalisin, 2010), we focused on the internal contingent effects of TMT diversity attributes. We have considered the joint effect of multiple salient TMT diversity attributes, which result in TMT faultlines (Lau & Murnighan, 1998), by integrating arguments

Table 5. The Results of Moderated Multiple Regression Model.

	ROA		
	Model 1 β	Model 2 β	Model 3 β
Past performance	.341*	.325*	.321*
Firm age	.088*	.089*	.092*
Firm size	.147**	.123**	.115**
Industry	.007	.010	.008
Debt/equity ratio	.015	.011	.013
TMT size	.133	.128	.129
Family ownership	.126*	.117*	.116*
Generation in ownership	.069	.064	.064
Age-diversity	.052†	.051†	.048†
Gender-diversity	.134*	.137*	.129*
Shareholder diversity	−.071	−.068	−.064
Entrepreneurial orientation (EO)		.293**	.211**
Identity-based faultlines (IBF)		−.427*	−.364*
Knowledge-based faultlines (KBF)		.455**	.392**
EO × IBF			−.414**
EO × KBF			.473***
Adjusted—R^2	.38	.42	.46
F-change	10.642***	12.527***	14.971**
N	111	111	111

Note. †$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

from the social cognitive theory of team behavior (Turner, 2010) with those from an information/decision-making perspective (Williams & O'Reilly, 1998). In so doing, we theorize and capture the negative and positive effects of TMT faultlines on the EO–FF performance relationship.

Our first finding suggests that there is a positive relationship between EO and FF performance. This finding is in line with previous studies arguing that businesses with higher levels of EO perform better (e.g., Wiklund, 1999), and confirms that FFs can experience an entrepreneurial boost that fosters their performance (Hernández-Linares & López-Fernández, 2018).

However, we find that the effect of EO on FF performance is hampered when subgroups form in the TMT due to strong IBF. This finding suggests that when TMT demographic diversity attributes become salient, align, and foster the emergence of internally homogeneous subgroups, the whole TMT is less cohesive and suffers from "in-group bias" (Ndofor et al., 2015). Supporting the predictions of identity and self-categorization theories, we demonstrate that with strong IBF, TMT members will identify more with their respective subgroup than with the TMT as a whole (Bezrukova et al., 2007) and will prefer to work with similar (in-group) members rather than dissimilar members (out-group; Tajfel & Turner, 1986). This reduction of mutual attraction and interpersonal connection may translate into an out-group member hostility (Li & Hambrick, 2005), which makes it more likely to have conflicts that are emotional (or affective, relationship-related) in nature (Amason & Schweiger, 1994). Emotional conflicts are especially detrimental for highly complex tasks requiring interaction, collaboration, and coordination (De Dreu & Weingart, 2003), such as entrepreneurial oriented decisions. This renders TMTs with strong IBF less effective in generating new ideas (Kunze & Leicht-Deobald, 2014) and less willing to pursue

new opportunities and investments in risky activities (Ucbasaran et al., 2003), thus reducing the firm's EO and its positive impact on FF performance.

It is also important to note that the negative effect of IBF also occurs in family TMTs (comprising family members only, see Table 1), when the only shared identity-based attribute is family membership, while other attributes (gender and age) align within subgroups but diverge between them. This suggests that family TMTs are not "cohesive" factional groups, and treating them as homogenous can be misleading. Family TMTs may be more diverse than initially perceived (Cruz & Nordqvist, 2012) and suffer from faultlines. Being part of the same family does not necessarily mean that there will be cohesion among family managers. For example, let us imagine a situation in which within a family TMT, there are two old brothers and two young women, who are cousins. They are all family members but, based on age, subgroups could emerge and conflict, especially if diverging views develop between senior and younger generations. Differences within the family TMT can also emerge from gender and create tensions because of negative stereotyping, as within the FF, women are often seen as caregivers more focused on nurturing the family (Gimenez-Jimenez et al., 2020). This evidence illustrates the need to go beyond family membership as the most salient social identity attribute to consider (Vandebeek et al., 2016).

Conversely, our findings suggest that the formation of TMT subgroups based on the alignment of team members' knowledge and competence attributes (strong KBF) amplifies the positive effect of EO on FF performance. Knowledge-based subgroups are more prone to support each other by recognizing the other's competence (Gibson & Vermeulen, 2003), promoting information sharing, and encouraging creativity and a healthy debate (Bezrukova et al., 2009; Carton & Cummings, 2012). This working environment favors innovativeness, allows TMT members to capture entrepreneurial opportunities in a more proactive manner, and leads to invest in risky projects thanks to reciprocal trust. In summary, strong KBF enables TMTs, even when they are divided into subgroups, to consider more sources of knowledge (Carton & Cummings, 2012), which is fundamental to putting EO in motion and letting it actively contribute to FF performance. Most importantly, this finding suggests that EO needs to be properly managed through the competence and knowledge of TMTs to reap its potential for supporting the strategic role of internal influencers (Hughes, Filser, et al., 2018; Hughes, Hodgkinson, et al., 2018).

Contribution to Theory and Implications for Practice

This article makes theoretical, methodological, and practical contributions to the field. First, we advance research on the EO-firm performance relationship by drawing attention to TMT diversity in general, and integrating in particular TMT faultlines as an influential boundary condition that scholars and practitioners should consider (Hughes, Filser, et al., 2018; Hughes, Hodgkinson, et al., 2018; Slevin & Terjesen, 2011). The novelty specifically lies in adding, through the faultlines theory (Lau & Murnighan, 1998), the concept of the alignment of multiple TMT diversity attributes that, when salient, leads to the creation of distinct and competing intra-group and inter-group dynamics and interactions. The salience of these attributes, their simultaneous alignment, subgroup polarization, and the consequent lack of cohesiveness of the whole TMT are all concepts that could advance the understanding of EO dynamics in TMTs and the consequent effect on FF performance. We enrich the studies on the complexity of the EO–FF performance relationship by observing only KBF (based on knowledge and competence attributes) foster positive TMT subgroup formation, as cohorts that enable EO to express its potential for FF performance (Gardner et al., 2012; Martin & Javalgi, 2019).

Second, to the best of our knowledge, this is the first study exploring whether and to what extent TMT faultlines moderate the EO-firm performance relationship, contributing to the

exploration of the impact of faultlines theory on team/group decision-making processes; in this case, FFs pursuing growth and new value creation. Our findings suggest that different types of faultlines can have both negative and positive effects on the EO-performance relationship in FF, and we downsized the commitment of the faultlines literature to only the negative and dysfunctional consequences of faultlines. We thus open-up further directions+ on the explorations of when and how faultlines can be beneficial to TMTs by integrating arguments from social identity (Tajfel & Turner, 1986) and self-categorization theories (Turner et al., 1987) with the information/decision-making perspective on diversity (Williams & O'Reilly, 1998) under the umbrella of the social cognitive theory of team behavior (Turner, 2010). This helps to understand how TMT faultlines can inhibit (when they foster social categorization, stereotyping, distance, and inter-subgroup differentiation) or favor (when they foster information diversity and task interdependence) the contribution of EO to FF performance and reveal the deep structure of TMT faultlines (Zhang et al., 2017).

Third, we extend the application of the faultlines theory within the FF context (e.g., Minichilli et al., 2010) by providing a measure of TMT faultlines that goes beyond the use of family membership as the only splitting criterion, an approach more aligned to the original construct formulated by Lau and Murnighan (1998) two distinct types of faultlines (IBF and KBF). We also strengthen the approach of looking more deeply at specific subgroups, known as "faultlines depth" (Thatcher & Patel, 2012), by demonstrating that faultlines can also occur in TMTs comprised solely of family members which are often viewed as homogeneous teams. The alignment of diversity attributes (such as gender and age) and the existence of dual role identities can foster category-based identifications (Brewer, 1998) that are relevant for the self-esteem of family managers belonging to a specific subgroup (e.g., family business women, young generation members) in opposition to those belonging to other subgroups (e.g., family business men, senior generation members).

Lastly, our findings have practical and managerial implications for FF owners and managers. They suggest that having TMTs composed exclusively of family members is not a guarantee that FFs will avoid the emergence of competing subgroups. IBF also arises within apparently homogenous family TMTs, inhibiting the contribution of EO to FF performance. From an applied viewpoint, family owners and leaders could prevent the formation of identity-based subgroups within their TMTs by taking into account the composition of their teams and assessing whether IBF is likely to occur. This study speculates that family business owners and managers need to put aside their need to "keep it all in the family" and include highly qualified non-family managers in the TMTs. They can bring the necessary knowledge and competence that favor the formation of KBF, which amplifies the positive effect of EO on FF performance. Family owners and managers need to be aware that placing less emphasis on similarities, more emphasis on knowledge differences across subgroups, and consolidating subgroup members around mutual goals could all de-emphasize their demographic differences and enhance their identification with the TMT. This empowers EO to achieve its potential for firm performance (Gardner et al., 2012; Martin & Javalgi, 2019).

Limitations and Future Research Directions

This study has certain limitations and directions for future research. First, although we focused on how IBF and KBF impact the EO–FF performance relationship, there might be additional intervening actors and mechanisms. Future studies could, for example, distinguish the CEO from other TMT members, as the CEO is the most powerful executive and provides a greater imprint to the functioning of TMTs. CEO characteristics (such as gender, age, family membership, functional background, knowledge, and experience) could play a special role in amplifying or

reducing the effects of IBF and KBF on the EO–FF performance. For example, a CEO, on the basis of his/her expertise, role and experience, could affect the exchange and integration of information within the TMT (Buyl et al., 2011) and foster or hinder the positive moderating effect of KBF and the negative moderating effect of IBF. Similarly, as research suggests that the CEO–TMT interface, that is, the interaction between the CEO and other top managers (Georgakakis et al., 2020), alters the effect of KBF on performance (Georgakakis et al., 2017), it would be interesting to investigate whether and how such an interface may also change the moderating effect of IBF and KBF on the EO–FF performance relationship. Furthermore, it is worth investigating what happens when the CEO is separated by the board chair. Can board chairs alter the dynamics of subgroup formation? Some studies suggest that the board chair could be oriented toward control or collaboration (Krause et al., 2019), and this could shape how IBF and KBF impact the EO–FF performance relationship.

Second, we focused only on TMT faultlines without considering that there are strong relationships between TMTs and the board of directors, especially in the context of FFs. Evidence already exists about the effects of strong faultlines emerging within the board of directors on CEO compensation and CEO turnover-performance sensitivity (Van Peteghem et al., 2017), and about the negative relationship between faultlines occurring within boards and the control and service role performed toward TMTs (Vandebeek et al., 2016). Future research could examine whether and how board member characteristics and board dynamics can influence how subgroups are created within boards and how they impact TMT faultlines by also including the interactions between managers and directors. Moreover, faultlines could emerge within both boards of directors and TMTs. What would happen to the EO–FF performance relationship when "double faultlines" occur? Answering this question might help understand how faultlines in different groups interact and might identify the mechanisms to mitigate the negative effect and amplify the positive effects (Veltrop et al., 2015).

Third, it would be interesting to consider mechanisms that help overcome IBF's negative effect, such as the presence of "crisscrossing" actors (Mäs et al., 2013). These are individuals who share at least one demographic attribute with members of different subgroups. The demographic similarity of these cross-subgroups means they are seen as members of all subgroups and can reconcile conflicting positions and function as a bridge.

Fourth, we did not consider the role of family relationships among TMT members, which could create an additional layer of diversity that could create schisms within the TMT. There are often dual-role identities (being a father from the senior generation versus being a daughter from the younger generation), which might make IBF even at times detrimental.

Fifth, faultlines could evolve, and IBF could become weaker due to the socialization process among TMT members happening across time. Qualitative studies through longitudinal case studies and ethnographic and phenomenological approaches (in addition to quantitative ones) would allow the dynamic nature of the faultlines construct to be captured and shed more light on how TMT faultlines develop over time. For example, changes in the number of subgroups in a TMT and variation in the size of TMT subgroups (that are configurational features) could be important drivers of how TMT dynamics affect the EO–FF performance relationship. Variations in faultlines can occur when there are changes in a firm's organizational culture (Bezrukova et al., 2012), which could play a specific role. Culture is a normative order that motivates behaviors in an organization, as a "guide" to relating to others (O'Reilly, 1989). Cultural alignment across organizational levels, and thus outside the subgroups, is consistent with the principle of functional antagonism (Turner et al., 1987) when salient implies that people will focus less on their differences than on their similarities. Investigating the effects of cultural alignment in future research could help in understanding how to mitigate IBF, especially for results-oriented versus socially oriented cultures.

Sixth, our measure of EO was based on a single type of respondent, and in this regard TMT members might perceive the dimensions of EO differently (Finkelstein & Hambrick, 1996) based on their functional background, which might lead to a functional bias. Accordingly, we invite future studies to administer the survey to larger samples of TMT members.

Lastly, Germany is a representative country in terms of FFs and economic activities, and its two-tier governance system makes the investigation of TMT faultlines sound and intriguing. However, this is still a single country study, and future studies could explore the validity of our theoretical contention in a multi-country study to understand whether different institutional and cultural contexts could have an impact.

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Notes

1. Annual turnover (the amount of sales in 1 year) of more than €10 million and more than 50 employees, according to the European Union recommendation 2003/361 on the definition of Small and Medium-sized Enterprises (SMEs; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003H0361).
2. Each board has different roles: the management board (TMT) deals with strategies and operational issues; the supervisory board, usually independent members elected by shareholders, monitors the management board.
3. According to Shaw (2004), FLS is equal to IA*(1-CGAI), where IA is a subgroup's internal alignment, that is, the extent to which members within a particular subgroup are similar to one another with respect to all other relevant attributes; CGAI is the cross-subgroup alignment, that is, the extent to which the group members of different subgroups formed by one attribute share the same category for all other attributes.

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