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Learning to be entrepreneurial: Do family firms gain more from female leadership than nonfamily firms?

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Abstract

Research Summary: We integrate social learning theory with gender role congruity theory to propose that family firms gain more from female leadership than nonfamily firms due to the congruence of female communal values with those of a family business. Results of our empirical study, based on a sample of 322 Spanish small- and medium-sized enterprises (SMEs), show that while all three dimensions of learning orientation (commitment to learning, shared vision, and open-mindedness) are positively related to an entrepreneurial orientation, significant differences exist based on the CEO's gender and whether the SME is a family or nonfamily firm. Strongest differences were found between female-led family and nonfamily SMEs whereby the entrepreneurial orientation of female-led family SMEs benefited significantly more from their firm's commitment to learning and open-mindedness.

Managerial Summary: To cultivate entrepreneurship, a small- and medium-sized enterprise (SME) leader must create an organization that fosters learning. Yet, surprisingly, we know little about male and female leaders' ability to translate their SME's learning into entrepreneurship. Our

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study reveals that in comparison to nonfamily firms, family firms offer an environment that is more conducive to supporting women leaders, which allows their female leaders to direct their SME's learning more effectively toward entrepreneurship. However, while female-led family SMEs were as effective as male-led family- and nonfamily-led SMEs in directing learning toward entrepreneurship, female-led nonfamily SMEs struggled. Our study therefore suggests that while women have an advantage leading family SMEs, gender biases hamper female leaders' ability to transform learning into greater entrepreneurial orientation in nonfamily SMEs.

KEYWORDS

entrepreneurial orientation, family firms, female leadership, learning orientation, SME

1 | INTRODUCTION

Due to growing global competition and the fast pace of technological change, a strong entrepreneurial orientation (EO) is increasingly seen as necessary for the growth and survival of small- and medium-sized enterprises (SMEs; e.g., Covin & Lumpkin, 2011; Putninš & Sauka, 2020; Rauch et al., 2009). Because today's business environment requires firms to constantly adapt and seek new opportunities, an EO is one of the few qualities that SMEs can rely on to create and sustain a competitive advantage (Altinay et al., 2016). An EO captures a firm's strategic posture toward entrepreneurship, including innovation (Lumpkin & Dess, 1996). Firms with a higher degree of EO have greater growth, profitability, internationalization, new product development, and performance (e.g., Gupta & Wales, 2017; Javalgi & Todd, 2011; Wales et al., 2013; Wang, 2008). While a strong EO can benefit *all* SMEs, research on family-owned SMEs (referred to as “family SMEs”) has noted how it can prevent family SMEs from becoming “stuck in the past” and resistant to change (Chirico et al., 2011; Cruz & Nordqvist, 2012; Mostafiz et al., 2022). Family SMEs exhibiting a strong EO are forward looking and able to sustain a competitive advantage and grow as they pass from one generation to the next (Casillas et al., 2011; Cruz & Nordqvist, 2012). Accordingly, an important behavior for leaders of both family and nonfamily SMEs to develop and manage is their firm's EO (e.g., Altinay et al., 2016; Cruz & Nordqvist, 2012; Verdú-Jover et al., 2023).

To develop and support an EO, SMEs' leadership must create an organization that fosters learning (Altinay et al., 2016; Baker & Sinkula, 2009; García-Morales et al., 2006; Hernández-Linares et al., 2018). Organization learning is the process of acquiring, distributing, integrating, and creating knowledge among an organization's members (Dixon, 1992; Huber, 1991). It is key in progressing from knowledge creation to entrepreneurial behavior (Arzubiaga et al., 2022). Learning allows a firm to change or modify its mental models, processes, and knowledge to pursue innovation and entrepreneurial endeavors (Alegre & Chiva, 2013; Querbach et al., 2022). Firms that have a strong learning orientation improve faster and more effectively than their competitors and achieve superior new product and service development (Altinay et al., 2016).

Although learning is often depicted as a vital determinant of an organization's entrepreneurial behavior (Crossan & Apaydin, 2010), insight into why some leaders of SMEs are more effective than others in directing learning toward entrepreneurship is limited (Alegre & Chiva, 2013; Hernández-Linares et al., 2018; Querbach et al., 2022). Such research is important since leaders of SMEs play a crucial role as “gatekeepers of learning processes” (Querbach et al., 2022, p. 377). Additionally, there is little research on the entrepreneurial behaviors of male and



female leaders of SMEs despite numerous calls in the literature to explore gender differences in their ability to cultivate entrepreneurship in their firms (Brush et al., 2022; Jennings & Brush, 2013; Nair, 2020). Rather, the few studies that exist offer conflicting results, with some depicting women leaders as contributing to their firm's innovation and entrepreneurship (e.g., Foss et al., 2022; Lyngsie & Foss, 2017; Nair, 2020) and others depicting women as less entrepreneurial and innovative than their male counterparts (e.g., Greene & Brush, 2018; Gupta et al., 2014; Marvel et al., 2015). However, recent research suggests that family firms may offer an environment that is more conducive to developing and supporting women as leaders (EY, 2017; Maseda et al., 2023; Montemerlo et al., 2013). Family SMEs, defined as SMEs "owned and managed by a nuclear family" (Chua et al., 1999, p. 22), may therefore be more effective in capitalizing on women's leadership than nonfamily firms (Eddleston & Sabil, 2019; Paustian-Underdahl et al., 2014). As such, more research is needed to identify when female leaders are most effective in cultivating entrepreneurship in their SMEs (Brush et al., 2022), focusing on how women and men leading family versus nonfamily SMEs direct their SME's learning toward entrepreneurship.

Accordingly, we draw from social learning theory and gender role congruity theory to develop a framework that explains gender differences in the effectiveness of family and nonfamily SMEs' leaders in directing their firm's learning orientation toward greater EO. We begin by proposing that due to social learning, leaders (i.e., CEOs) of SMEs direct their firm's learning toward developing and supporting greater EO. Social learning theory explains how leaders influence their employees' behaviors via modeling and vicarious reinforcement (Bandura, 1977, 1986). However, it also recognizes that leaders who are more credible and legitimate are more effective role models (Bandura, 1986; Brown et al., 2005). Because entrepreneurship is depicted as a masculine endeavor (Jennings & Brush, 2013) and women entrepreneurs are often perceived as less legitimate than their male counterparts (Balachandra et al., 2019; Eddleston et al., 2016), gender role congruity theory suggests that female leaders may struggle to channel their firms' learning toward entrepreneurship. Gender role congruity theory explains how perceived incongruity between the female gender role and roles associated with leadership and entrepreneurship create gender biases (Balachandra et al., 2019; Eagly & Karau, 2002).¹ However, a social constructivist view of gender emphasizes how the social context can alter perceptions of gender role congruity and how behaviors of men and women are evaluated (Deaux & Major, 1987; Ridgeway & Correll, 2004). Integrating these theoretical insights, we therefore argue that in comparison to nonfamily SMEs, family SMEs offer a more supportive environment for women that allows female leaders to more effectively direct their SME's learning toward greater EO.

To test our hypotheses, we performed an empirical study based on a sample of 322 Spanish SMEs. Our results show that the three dimensions of learning orientation (commitment to learning, shared vision, and open-mindedness) are positively associated with family and nonfamily SMEs' EO. Additionally, in support of our framework, we find that family SMEs gain more from female leadership than nonfamily SMEs. Our study therefore identifies a social context where female leaders are more effective in promoting their firm's EO: family SMEs.

Our study offers three contributions to the literature. *First*, by examining the three dimensions of a learning orientation independently, our study reveals how commitment to learning, shared vision, and open-mindedness contribute to EO. This provides additional support for the importance of developing a learning orientation to foster EO in both family and nonfamily SMEs (e.g., Baker & Sinkula, 2009; Hernández-Linares et al., 2018).

Second, while research is increasingly acknowledging the important role women play in their family firms (e.g., Amore et al., 2014) and their gain in leadership positions (EY, 2017; Montemerlo et al., 2013), the study of women's leadership in family firms is still in its infancy (Campopiano et al., 2017; Chadwick & Dawson, 2018; Nelson & Constantinidis, 2017). We contribute to this dearth of research by integrating social learning theory with gender role congruity theory to develop a framework that explains why family firms offer an environment that is supportive of female leadership. Our findings reveal significant differences between female-led family and nonfamily SMEs, as well as gender differences within family and nonfamily SMEs that support our framework.

Finally, this is one of the first studies to compare how male and female leaders of family versus nonfamily SMEs encourage an EO, thus going beyond the majority of research that has focused on comparing the performance of male- and female-led SMEs (e.g., Alsos et al., 2006; Gupta et al., 2013) to instead focus on how they lead their SMEs.

As such, we contribute to research characterizing entrepreneurship as a gendered process (Eddleston & Powell, 2008, 2012; Poggesi et al., 2016) and answer calls in the literature to explore differences in how men and women lead family versus nonfamily SMEs (e.g., Jennings & Brush, 2013; Maseda et al., 2023; Powell & Eddleston, 2013). Our study suggests that while women have an advantage in leading family SMEs, gender biases hamper female leaders' ability to transform learning into greater EO in nonfamily SMEs. We therefore highlight the importance of the social context (i.e., family vs. nonfamily SME) in understanding when female leaders are most effective in guiding their firm's learning toward greater entrepreneurship. Figure 1 displays our hypothesized relationships.

2 | THEORY AND HYPOTHESES

An important behavior for leaders of SMEs to develop and manage is their firm's EO. EO captures a firm's ability to combine innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy (Lumpkin & Dess, 1996; Miller, 1983). It encompasses strategic decision-making activities aimed to increase new product development and foster organizational behaviors that support entrepreneurship (Mostafiz et al., 2022; Wales et al., 2020). An EO allows a firm to be entrepreneurial across a range of situations, thus acting as an essential resource that helps firms to create a sustainable competitive advantage (Rauch et al., 2009). With today's business environment becoming increasingly competitive, a strong EO is therefore seen as a “key ingredient to firm success” (Wang, 2008, p. 635). Accordingly, to develop and support an EO, leaders of SMEs should seek to create an organization that fosters learning (Altinay et al., 2016; Baker & Sinkula, 2009; Hernández-Linares et al., 2018). For example, while many family SMEs become attached to the past and outdated processes, those that make learning an integral part of the firm appear to escape the “power of the past” and embrace entrepreneurship (Querbach et al., 2022; Stanley et al., 2019). Surprisingly, however, few studies have considered why some leaders of family and nonfamily SMEs are more effective in directing learning toward entrepreneurship than others (Querbach et al., 2022; Verdú-Jover et al., 2023) and whether the gender of an SME's leader is a significant factor in channeling firm learning toward entrepreneurship.

Given growing evidence demonstrating the positive effect women in a firm's upper echelon have on entrepreneurial and innovative behaviors (e.g., Foss et al., 2022; Lyngsie & Foss, 2017; Nair, 2020), more research is needed on female leaders of family and nonfamily SMEs to better understand the opportunities and challenges they face in fostering entrepreneurship (Bauweraerts et al., 2022; Brush et al., 2022). Although studies of R&D teams, top management teams, and boards of directors have demonstrated how women contribute to their firm's entrepreneurship through their unique perspectives (e.g., Díaz-García et al., 2013; Kim & Starks, 2016; Torchia et al., 2011), innovation research has been criticized for neglecting the role of women entrepreneurs (Alsos et al., 2013; Brush et al., 2022). By emphasizing the risks of entrepreneurial behavior and the associated outcomes on firm performance, the gender

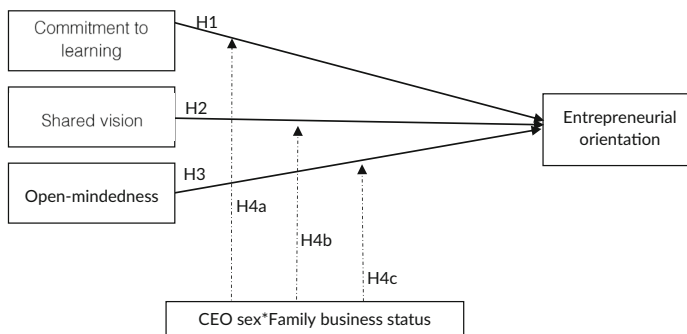


FIGURE 1 Model and hypotheses.



of the SME's leader is rarely recognized in studies (Alsos et al., 2016). Yet, gendered norms and attitudes shape and inform women entrepreneurs' approach toward innovation, including their motivation and preferred processes (Pecis & Berglund, 2021). For example, as explained by gender role theory, women leaders' expectation for cooperation may help to promote entrepreneurial behaviors, innovation, and creativity in their firms (Brush et al., 2022), especially family-owned firms (Bauweraerts et al., 2022).

Despite the increase in women entrepreneurs (GEM, 2017), however, research tends to emphasize how SMEs led by women have significantly lower revenue, sales, and assets than those led by men (Alsos et al., 2006; Coleman & Robb, 2012; Davis & Shaver, 2012; Gupta et al., 2013). Female-led SMEs also tend to be slower growing and less profitable than male-led SMEs (Alsos et al., 2006; Davis & Shaver, 2012; Powell & Eddleston, 2008, 2013), although evidence suggests that the performance gap has begun to narrow (Jennings & Brush, 2013; Lee & Marvel, 2014). While there is much research that compares the firm performance of male- and female-led SMEs, scholars have criticized this stream of research for its dependence on a male-definition of success that emphasizes status and short-term financial achievements (Eddleston & Powell, 2008; Jennings & Brush, 2013). Rather, entrepreneurship should be viewed as a gendered process whereby research goes beyond comparing the firm performance of male- and female-led SMEs to instead investigate how gender shapes the management of their businesses and how men and women lead (Cliff et al., 2005; Eddleston & Powell, 2008; Jennings & Brush, 2013).

In addition to the paucity of research on how male and female entrepreneurs lead their firms (Cliff et al., 2005; Eddleston & Powell, 2008, 2012; Jennings & Brush, 2013), research on women in family firms has predominantly focused on succession (e.g., Ahrens et al., 2015; Bloom & Van Reenen, 2007; Dumas, 1998; Hytti et al., 2017; Kubiček & Machek, 2019; Vera & Dean, 2005) and their role as spouse to the CEO (Martínez Jiménez, 2009; Poza & Messer, 2001; Sharma, 2004) and nurturers of the next generation (Freudenberger et al., 1989; Martínez Jiménez, 2009). Recently, however, research has begun to identify advantages women appear to have in family firms relative to nonfamily firms, including greater access to promotions, involvement on the board of directors, and participation in decision-making (Eddleston & Sabil, 2019; Montemerlo et al., 2013; Nekhili et al., 2018). In comparison to nonfamily firms, family firms often have work environments that are more inclusive, long-term oriented, and supportive of female role models which helps to develop and support women leaders (Eddleston & Sabil, 2019). Further, there has been an increase in the number of women starting family firms and being chosen as successors (EY, 2017), and an increase in family firms adding the phrase "and daughters" to their business name (Vadnjal & Zupan, 2011). Findings also suggest that family firms are increasingly considering a woman as their next CEO (EY, 2017). As such, some scholars have argued that family firms may offer women a more favorable environment to lead than nonfamily firms (Chadwick & Dawson, 2018; Eddleston & Sabil, 2019), thereby fostering diversity of perspectives that enhances the family SME's entrepreneurship (Bauweraerts et al., 2022). We put this idea to the test by exploring the ability of male and female leaders of family versus nonfamily SMEs in transforming their firm's learning into a stronger EO.

Below, we first present our baseline hypotheses linking learning to a firm's EO. We then turn to the focus of our study—exploring differences in male and female leaders' ability to direct learning toward their family versus nonfamily SMEs' EO.

2.1 | From learning orientation to entrepreneurial orientation

If an SME is to be entrepreneurial, its leadership must channel learning toward strengthening its EO (Alegre & Chiva, 2013; Querbach et al., 2022). Social learning theory explains how firm leaders guide their employees' behavior via role modeling and vicarious reinforcement (Bandura, 1977, 1986). Because SMEs usually do not have the privilege of a top management team (Querbach et al., 2022), their leader (i.e., CEO) is likely an important source of social learning by virtue of their status. As leaders of their SME, CEOs need to ensure that organizational members are learning from their peers, learning from the feedback of customers and suppliers, learning through experimentation, imitation and problem-solving, learning by doing, and learning from mistakes (Gibb, 1997). By promoting a learning

orientation, an SME's leader therefore encourages employees to be alert and open to new knowledge and opportunities via modeling.

Learning orientation is described as the set of organizational values that influence the propensity of a firm to create and use knowledge, and the degree to which proactive learning occurs (Sinkula et al., 1997). Learning orientation implies a firm's capacity to learn, to constantly challenge assumptions in use, and to promote change or adaptation over time because organizations can only adapt as fast as they can learn (Mavondo et al., 2005). Thus, a learning orientation is considered a facilitator of innovativeness (Calantone et al., 2002; Hult et al., 2004; Hurley & Hult, 1998; Salavou et al., 2004), strategic renewal (Crossan & Berdow, 2003), and opportunity recognition (Lumpkin & Lichtenstein, 2005). Indeed, high levels of learning orientation are associated with high levels of EO (Hernández-Linares et al., 2018). However, because a learning orientation is a multidimensional concept, scholars have called for research to explore how each of its dimensions affect EO (Altinay et al., 2016; Hernández-Linares et al., 2018). Therefore, in line with the proposal of Sinkula et al. (1997), and later adopted by others (e.g., Calantone et al., 2002; Real et al., 2014; Wang, 2008), our research considers a learning orientation as comprised of three dimensions: commitment to learning, shared-vision, and open-mindedness. However, as opposed to Sinkula et al. (1997), we deconstruct learning orientation into its three core dimensions to explore how each is related to an SME's EO.

Commitment to learning reflects the attitude a firm holds toward learning, and its ability to promote a learning culture (Sackmann, 1991; Sinkula et al., 1997). Firms with a higher commitment to learning are better able to accumulate knowledge from diverse sources, thus fostering their ability to identify opportunities (An et al., 2018) and innovate (Calantone et al., 2002). Shared vision reflects the extent to which a firm develops and holds a sense of collective direction and purpose that thereby guides its learning (An et al., 2018; Baker & Sinkula, 1999; Day, 1994). A shared vision ensures that organizational knowledge spreads across the firm and can be combined for collective identification of unique opportunities (An et al., 2018), thereby enhancing innovation (Pearce & Ensley, 2004) and entrepreneurship (García-Morales et al., 2006; Wang & Rafiq, 2009). Open-mindedness is defined as “the willingness of the organization to proactively question long-held routines, assumptions and beliefs and to accept new ideas” (Sinkula et al., 1997, p. 309). Those firms that question long-held routines and beliefs and are open to new ideas and experimentation appear to support entrepreneurship and innovation (Fitjar et al., 2013; Hernández-Mogollón et al., 2010).

Therefore, SMEs with strong commitment to learning, shared vision, and open-mindedness have knowledge-based resources and capabilities that can be effectively channeled to promote a greater EO (Covin & Lumpkin, 2011; Hult et al., 2004). Through social learning, employees develop a shared mental model of the organization that conveys the importance of learning and directs their attention toward pursuing entrepreneurial behaviors (Altinay et al., 2016). Accordingly, our baseline hypotheses propose a positive association between the three dimensions of learning orientation and EO.

Hypothesis 1. An SME's commitment to learning is positively related to its EO.

Hypothesis 2. An SME's shared vision is positively related to its EO.

Hypothesis 3. An SME's open-mindedness is positively related to its EO.

2.2 | The moderating effect of leaders' gender in family and nonfamily SMEs

Integrating social learning theory and gender role congruity theory, we now explore differences in male and female leaders' ability to increase their SMEs' EO by leveraging the learning orientation dimensions. Social learning theory (Bandura, 1977, 1986) proposes that people “learn by observing and imitating attractive role models” (Kraft & Bausch, 2016, p. 688). Attractive role models are cognitively accepted by individuals because they are seen as



“fitting in their role” and as demonstrating relevant behaviors that can help them achieve their goals (Gibson, 2003, 2004). Role models are also more effective in influencing employees' behaviors when they are perceived as credible and legitimate in their roles (Brown et al., 2005). However, gender role congruity theory suggests that gendered expectations about men's and women's competence as leaders often put women at a disadvantage due to a distorted assessment of their abilities and greater scrutiny (Eagly & Karau, 2002; Eddleston et al., 2016; Thébaud, 2010). Research further highlights how the masculine stereotype of entrepreneurship biases individuals' assessment of women's abilities as entrepreneurs (Eddleston et al., 2016; Gupta et al., 2009). As such, gender may affect how well an SME's leader is able to direct learning toward entrepreneurship.

Gender role congruity theory explains how perceived incongruity between the female gender role and leadership role leads to prejudice and bias against female leaders (Eagly & Karau, 2002; Heilman, 2001). Gender roles refer to the established beliefs about the stereotypical attributes of men and women and dictate appropriate attitudes and behaviors for each sex (Eagly & Wood, 2011; Ruble et al., 1998).² At a young age, children learn the behaviors expected of each sex (Bem, 1981; Ruble et al., 1998) and encounter different social experiences and expectations that shape the way males and females view the world (Carter & Williams, 2003). In line with traditional gender roles, men are expected to display more agentic and masculine characteristics such as assertiveness, dominance, risk-taking, competitiveness, and confidence. In contrast, women are expected to display more communal and feminine characteristics such as sympathy, helpfulness, kindness, interpersonal sensitivity, and cooperativeness (Bem, 1981; Eagly, 1987; Eagly & Karau, 2002). Indeed, research shows that while male leaders of SMEs are stronger in agentic, masculine traits, female leaders of SMEs are stronger in communal, feminine traits (Eddleston & Powell, 2008). In turn, gender roles likely shape how leaders manage their SME and also how they influence their followers' behaviors through social learning (Bandura, 1986; Eddleston & Powell, 2008; Hechavarría et al., 2017; Lemoine & Blum, 2021; Tekleab et al., 2021).

Social learning theory emphasizes how the desire to emulate and model a leader requires leader credibility and legitimacy (Brown et al., 2005; Brown & Treviño, 2014). As applied to gender research, it also explains how employees are less receptive to influence when a leader's behavior is not congruent with employees' gendered expectations (Lemoine & Blum, 2021). Further, when female leaders engage in behaviors seen as stereotypically masculine, gender role congruity theory predicts that employees will experience dissonance (Eagly & Karau, 2002; Hogg et al., 2006). Taken together, social learning theory and gender role congruity theory therefore suggest that leaders of SMEs will be less effective in modeling and inspiring behaviors when those behaviors do not reflect gender stereotypes.

Although women are increasingly starting and leading their own businesses, entrepreneurs tend to be described in masculine terms such as “heroic self-made man” (Ahl, 2006, p. 599) and “conqueror of unexplored territories” (Bruni et al., 2004, p. 407), such that when individuals “think entrepreneur, they think male” (Eddleston et al., 2016). This stereotype is further fostered by the greater prevalence of men in positions of power and authority than women (Powell, 2011), the tendency to associate entrepreneurial behavior and innovations with men (Alsos et al., 2016; Brush et al., 2022), and the fact that most entrepreneur role models are men (BarNir et al., 2011; Gupta et al., 2009; Jennings & Brush, 2013). As such, women entrepreneurs often experience a stereotype threat whereby the incongruence between being female and leading an SME lessens their perceived credibility and legitimacy (Eddleston et al., 2016; Hoyt & Murphy, 2016).

Indeed, because of the masculine lens of entrepreneurship, women are perceived as less legitimate, serious, and committed to their ventures than their male counterparts (Balachandra et al., 2019; Eddleston et al., 2016). Further, because individuals *perceive* female entrepreneurs to be less willing to take risks and pursue aggressive growth strategies than male entrepreneurs (Gupta et al., 2009, 2019), female leaders may experience more difficulties in leveraging their SME's commitment to learning, shared vision, and open-mindedness to increase its EO. That is, because employees react to leaders in terms of gendered expectations (Eagly & Johannesen-Schmidt, 2001; Lemoine & Blum, 2021), and social learning is hampered when leaders are perceived as less credible (Bandura, 1986; Brown et al., 2005), female leaders directing their firm's learning toward increasing EO are likely to experience resistance. In

contrast, gender role expectations that dictate men should be agentic, task-oriented, and competitive (Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002) suggest that their emphasis in promoting greater EO from their firms' learning orientation will be gender role congruent and thus, supported by employees. Therefore, female leaders are expected to have a less positive effect in transforming their SME's commitment to learning, shared vision, and open-mindedness into greater EO than male leaders.

However, for women leading their family's SME, we expect a different moderating effect due to the communal values that tend to characterize family firms and their insider status as family members (Chadwick & Dawson, 2018; Eddleston & Sabil, 2019). A social constructivist view of gender highlights how the social context can alter gendered expectations for behavior and how a behavior is evaluated (Deaux & Major, 1987). In support of this view, scholars have sought to identify contexts where the female gender stereotype and leadership role are seen as more congruent (e.g., Hoyt & Burnette, 2013; Wang et al., 2019). For example, in developing gender role congruity theory, Eagly and Karau (2002) recognized how some social contexts may offer greater congruity between the female gender role and the leadership role, thus making women's acceptance and credibility as leaders on par with that of men. Research further suggests that when gender and a leadership style closely align, the leader is seen as more credible and legitimate, increasing their employees' social learning (Lemoine & Blum, 2021). Indeed, in comparison to nonfamily firms, family firms appear much more supportive and accepting of female leaders, as evidenced by their higher participation on family firm boards and greater efforts to promote women into leadership positions (e.g., Eddleston & Sabil, 2019; Montemerlo et al., 2013). Evidence suggests that female leaders have a more positive impact on the performance of family firms than nonfamily firms (Bjuggren et al., 2018). Research also shows that greater involvement of women on family firm boards significantly contributes to R&D investment (Bauweraerts et al., 2022) and strengthens the positive link between EO and firm performance (Arzubiaga et al., 2018). Accordingly, family SMEs may offer a social context where the female gender and leadership role are more congruent, thereby enhancing female leaders' effectiveness in harnessing greater EO from their firm's learning.

Family firms are often described as communal, relationship-oriented, and caring of stakeholders which suggests that they offer a social context that aligns well with female leadership (Chadwick & Dawson, 2018; Eddleston & Sabil, 2019; Martínez Jiménez, 2009). Family firms tend to focus on being inclusive and supportive of internal stakeholders, extending the sense of "family" and community beyond the family's bounds (Jennings et al., 2020; Miller & Le Breton-Miller, 2005). They also prioritize the preservation of socioemotional wealth which leads them to emphasize the continuity of the family firm and a long-term orientation (Berrone et al., 2012; Lumpkin et al., 2010; Stenholm et al., 2016). Additionally, research suggests that women's ability to effectively disseminate family values throughout the family firm encourages their followers to commit themselves to the mission and objectives of the firm (Vallejo, 2008, 2009), suggesting that female leaders' efforts to channel learning toward entrepreneurship will be seen as a way to ensure the family firm's longevity and success. In contrast, female leaders of nonfamily SMEs may struggle to direct learning toward entrepreneurship because the social context of a nonfamily SME is less likely to foster congruity between the female gender role and leadership role. Taken together we therefore argue that due to female leaders' cultural proximity with family firms, they should be at least as effective as male leaders of family SMEs and more effective than female leaders of nonfamily SMEs in directing their firm's commitment to learning, shared vision, and open-mindedness toward greater EO.

Hypothesis 4a. Leader gender and family status of the SME combine to moderate the relationship between commitment to learning and an SME's EO, such that the relationship is more positive for female leaders of family SMEs than for female leaders of nonfamily SMEs.

Hypothesis 4b. Leader gender and family status of the SME combine to moderate the relationship between shared vision and an SME's EO, such that the relationship is more positive for female leaders of family SMEs than for female leaders of nonfamily SMEs.



Hypothesis 4c. Leader gender and family status of the SME combine to moderate the relationship between open-mindedness and an SME's EO, such that the relationship is more positive for female leaders of family SMEs than for female leaders of nonfamily SMEs.

3 | METHODS

3.1 | Research setting

Our study focuses on non-listed SMEs with 10–249 employees. Firms were targeted using the SABI (System of Iberian Balance Sheets) database, which includes information on 1,395,280 Spanish firms (March 2015). This database, previously used in family firm research (e.g., Cruz et al., 2010), provides detailed data of the financial statements filed in commercial registries, which allowed us to supplement our survey data with more objective variables such as firm industry and number of employees. After excluding firms affected by special situations such as insolvency, wind-up, or liquidation, the target population consisted of 91,880 SMEs across all sectors.

3.2 | Research design and data collection

The data for this study, which is part of a wider project, were collected using a survey instrument due to the difficulty in obtaining primary data from privately-held family firms (Eddleston et al., 2013). Our questionnaire was originally created in English, then translated into Spanish, and then back translated into English to check for consistency. Personalized invitations to complete a questionnaire with an offer to share the summary reports were sent to top management teams of 4410 Spanish companies randomly selected from the SABI database. Overall, 603 surveys were returned, resulting in an initial response rate of 13.67%; however, only 509 questionnaires were usable, resulting in a final response rate of 11.54%, which is comparable to similar studies aimed at top management teams in Spain (e.g., Casillas et al., 2011; Cruz et al., 2010). Given the objectives of this study, we only used questionnaires answered by CEOs ($n = 322$), which allowed us to increase the validity of the variables' measurement due to the use of similar informants across all firms included in the sample (Glick, 1985). Thus, with a population of 91,880 firms fitting our criteria in the SABI database, a sample of 322 and a confidence level of 95%, we can state that the sample is representative with a sampling error of $\pm 5.45\%$ ($z = 1.96$), which is lower than that reported in previous family business studies (e.g., Déniz & Cabrera, 2005).

3.3 | Measures and validation

All constructs were measured using Likert-type scales with a five-point response format, ranging from “strongly disagree” to “strongly agree” unless otherwise noted, and all multi-item measures were reflective. The internal consistency was estimated using Cronbach's alpha. Cronbach's alpha values for all measures were acceptable ($\alpha \geq 0.71$), surpassing the threshold point of 0.70 (Nunnally, 1978).

3.3.1 | Entrepreneurial orientation

EO is typically captured in one of two ways. The first adopts an aggregated or higher-order approach to the assessment of EO, following Miller (1983) and Covin and Slevin's (1989) view that combines the three dimensions of EO

(innovativeness, risk-taking, and proactiveness). The second method adopts the operationalization of EO proposed by Lumpkin and Dess (1996), who added two dimensions to the three mentioned above (competitive aggressiveness and autonomy).

While there are several ways to capture EO and each has its benefits, none appear inherently superior (Covin & Wales, 2012). For this reason, some researchers (e.g., Rauch et al., 2009) have called for studies to consider new EO measurement alternatives. Our measure integrates two of the most common approaches whereby EO is considered a linear sum of sub-dimensions, like that of Miller (1983) and Covin and Slevin (1989) but includes the five sub-dimensions proposed by Lumpkin and Dess (1996) (risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy). This integrated approach in measuring EO was recently adopted by Stanley et al. (2019).

In order to test convergent and discriminant validity of the EO measure, we conducted a confirmatory factor analysis (CFA) with AMOS software, whereby 17 of the 18 standardized factor loadings exceeded the 0.50 cut-off for practical significance (Hair et al., 2006), and both first- and second-order paths from the latent constructs to their corresponding indicators were significant at the 0.001 level ($t > 2.0$), providing evidence of convergent validity (Kohli et al., 1998; see Appendix 1). In addition, to testing for discriminant validity, we calculated the average variance extracted (AVE) for EO, commitment to learning, shared vision, and open-mindedness. All constructs exhibited AVE levels higher than 50% and all AVE scores were higher than the squared construct correlations (see Appendix 2), which ranged from 28.0% to 51.8%, confirming discriminant validity (Hair et al., 2010). The Cronbach alpha for our EO measure was 0.86.

3.3.2 | Learning orientation

Learning orientation was measured using a scale created by Sinkula et al. (1997) that is commonly employed in research (e.g., Hernández-Linares et al., 2018; Nasution et al., 2011). According to Sinkula et al. (1997), learning orientation is made up of 11 items grouped into three dimensions: *commitment to learning* (four items, $\alpha = 0.833$), *shared vision* (four items, $\alpha = 0.823$), and *open-mindedness* (three original items, although the third item was eliminated in order to improve the Cronbach's alpha ($\alpha = 0.71$)). Similar to EO, the validity of the commitment to learning, shared vision, and open-mindedness scales was tested by CFA (Appendix 2). The results support the convergent validity of the learning orientation dimensions (Kohli et al., 1998) because all standardized factor loadings exceed 0.66, surpassing the 0.5 cut-off for practical significance (Hair et al., 2006), and all loadings are significant at the $p < 0.001$ level ($t > 2.0$). In regard to discriminant validity, commitment to learning exhibited an AVE of 53.42%, shared vision an AVE of 54.42%, and open-mindedness an AVE of 54.71%. Given that all AVE scores were higher than the squared construct correlations, which ranged from 43.2% to 51.8%, discriminant validity was confirmed (Hair et al., 2010).

The scales of EO, commitment to learning, shared vision, and open-mindedness showed good internal consistency (all Cronbach's alphas > 0.70) as well as convergent and discriminant validity. However, to further assure that our respondents could meaningfully distinguish between the constructs, we undertook a confirmatory factor analysis with AMOS 22 software. Two measurement models were tested using this method. The first model tested operationalized commitment to learning, shared vision, and open-mindedness as one construct each, while the second model operationalized commitment to learning, shared vision, and open-mindedness as dimensions of learning orientation, serving as a second order construct as suggested in the literature (e.g., Sinkula et al., 1997). While allowing for the same within construct error term correlations in both models, the confirmatory factor analysis for our hypothesized three factor model showed significantly better fit (χ^2 difference (2) = 12.222, $p < 0.005$) with ($\chi^2_{(337)} = 644.117$, CFI = 0.915, IFI = 0.916, TLI = 0.905, AGFI = 0.857, and RMSEA = 0.053) than the one factor model ($\chi^2_{(339)} = 656.053$, CFI = 0.913, IFI = 0.914, TLI = 0.903, AGFI = 0.854, and RMSEA = 0.054; e.g., Cheung & Rensvold, 2002).



3.3.3 | Leader gender

Leader gender was captured via self-report on biological sex, as is common in research (e.g., Goktan & Gupta, 2015). We coded female CEOs as “0” (23%) and male CEOs as “1” (77%). We use biological sex as a proxy for gender, although we recognize that gender is more complex, and refers to the psychological and social implications of being male or female (Archer & Lloyd, 2002).

3.3.4 | Family firm

We captured the family and nonfamily status of each SME by employing an objective definitional criterion (family ownership) and a subjective criterion (self-perception). We classified as “family firms” those businesses that were identified as family firms by their CEOs and where the family had at least 50% of ownership (e.g., Casillas et al., 2010). Thus, 189 firms were classified as family SMEs and 133 as nonfamily SMEs. Among family SMEs, 21.16% of the CEO positions were occupied by women, whereas for nonfamily SMEs, 21.05% of the CEOs were women.

3.3.5 | Control variables

Nine control variables were used in this study to isolate the effects of interest. First, to control for how firm size affects access to external resources and the slack that can be invested in growth-oriented efforts, we controlled for the number of employees (De Massis et al., 2014; Eddleston et al., 2013). Number of employees was then logged to address issues with its raw distribution (De Massis et al., 2014). Second, because different industries may exhibit diverse organizational and environmental characteristics that demand faster and more flexible learning (e.g., Wiklund & Shepherd, 2005), we controlled for industry type (e.g., Wang, 2008). Following NACE coding (statistical classification of economic activities in the European Community), we introduced three dummy variables (manufacturing, construction, and service sectors) as control variables, with agricultural sector being used as the default. Third, considering that firm age could improve resources (Cruz & Nordqvist, 2012), we controlled for this variable by measuring the number of years between the firm's establishment and the survey application. Fourth, we controlled for the existence of a board, given that it may influence firm behavior (Pieper et al., 2008). Fifth, we controlled for the existence of a strategic plan since it may help firms to properly exploit their resources and encourage the pursuit of opportunities (Zahra et al., 2004). Sixth, we controlled for the CEOs' education to take into account their knowledge base and cognitive abilities (Colombelli, 2009; Hambrick & Mason, 1984). Education was captured with four levels: primary studies (9.9%), secondary studies (23.3%), university studies (58.7%), and postgraduate studies (8.1%). Finally, we controlled for the CEOs' tenure since it may influence the willingness to take risks and commitment to the status quo (Boling et al., 2016; Zhang & Rajagopalan, 2010). CEO tenure was measured as the number of years s/he worked as CEO of the business. Firm size, age, and industry were collected from the SABI database whereas the other control variables were gathered through the questionnaire. Tables 1 and 2 present sample characteristics and descriptive statistics of the family and nonfamily SMEs in our study.

4 | RESULTS

The descriptive statistics (mean values and standard deviations) and zero order correlations among the variables used in the regression analyses are presented in Table 3. All correlations were less than 0.582, except that between the construction sector and services sector (−0.733). The variance inflation factors (all less than 9.293) and highest

TABLE 1 Sample characteristics: size and industry.

Variables	Sample (n = 322)	Population (n = 91,880)
Number of employees		
Small firms	262 (81.37%)	79,668 (86.71%)
Medium firms	60 (18.63%)	12,211 (13.29%)
Agricultural sector	8 (2.48%)	3140 (3.42%)
Manufacturing sector	65 (20.19%)	20,951 (22.80%)
Construction sector	30 (9.32%)	9197 (10.01%)
Services sector	219 (68.01%)	58,592 (63.77%)

TABLE 2 Sample characteristics: descriptive statistics.

Variables	Family SMEs (n = 189)		Nonfamily SMEs (n = 133)	
	CEO woman (n = 40)	CEO man (n = 149)	CEO woman (n = 28)	CEO man (n = 105)
Number of employees mean (standard deviation)	21 (13)	32 (32)	35 (32)	31 (33)
Firm age mean (standard deviation)	22.65 (12.06)	23.39 (12.23)	16.64 (8.42)	19.28 (11.90)

Abbreviation: SME, small- and medium-sized enterprise.

condition index (7.403) suggest that multicollinearity is not a concern of our study (Hair et al., 1998). Despite this, the variables were converted to z-scores before creating the interaction terms (Aiken & West, 1991).

As with the majority of research on EO (Rauch et al., 2009), our study relies on single informants, which introduces the risk of common method variance (Podsakoff et al., 2003) that can cause measurement error and artificially inflate the relationships between focal constructs. To control and minimize the possible effects, and in line with other studies (e.g., Arend, 2013; Partanen et al., 2020), we used procedural and statistical methods. In particular, three procedural methods were used. First, we performed a pretest with scholars and a small number of companies not included in the final sample to ensure minimum ambiguity through the correct wording of items and questions included in the survey (Arend, 2013; Obeso et al., 2020). Second, although single respondent bias is less of a concern with small organizations (Gerhart et al., 2000), we targeted CEOs who are considered reliable sources of information on enterprise governance dynamics (Glick et al., 1990), thus allowing us to gather most firm information from a single informant (Clark, 2000). Third, the respondents' tendency to make socially desirable responses was minimized by guaranteeing them that they would remain anonymous and that their responses would be treated in an aggregated way.

Notwithstanding these precautions, we then applied statistical methods. First, we conducted Harman's (1967) single-factor test using the procedure suggested by Podsakoff and Organ (1986). All items of the independent, dependent, and control variables were entered into a factor analysis. Nine factors with eigenvalues >1.0 were identified, accounting for 60.28% of the variance. As the first factor (23.13%) does not explain the majority of the variance, this suggests that common method bias is unlikely to distort our results. We then estimated a common method factor model, where all items loaded on one method factor (Podsakoff et al., 2003). The overall statistics for the one factor model were not strong with $\chi^2_{(350)} = 1787.325$; $p = 0.00$, CFI = 0.604, IFI = 0.607, and RMSEA = 0.113, particularly compared to the CFA with EO conceptualized as a second factor model: $\chi^2_{(339)} = 706.489$; $p = 0.00$, CFI = 0.899, IFI = 0.900, and RMSEA = 0.058. However, when imposing a method factor onto the aforementioned CFA (Widaman, 1985; Williams et al., 1989), the fit significantly improved with $\chi^2_{(311)} = 601.751$; $p = 0.00$, CFI = 0.920, IFI = 0.921, and RMSEA = 0.054. These findings suggest some caution when interpreting the main



TABLE 3 Descriptive statistics and pairwise correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. EO	3.811	0.547														
2. Commitment to learning	4.225	0.665	0.582***													
3. Shared vision	4.003	0.729	0.459***	0.540***												
4. Open mindedness	4.036	0.754	0.485***	0.532***	0.555***											
5. CEO sex	0.789	0.409	0.028	-0.005	-0.079	-0.077										
6. Family SME	0.587	0.493	0.097	0.023	0.062	0.061	-0.001									
7. Size ^a	3.100	0.735	0.009	-0.023	-0.119*	-0.007	0.049	-0.024								
8. Manufacturing sector	0.202	0.402	-0.072	-0.037	-0.079	-0.060	0.090	0.076	0.065							
9. Construction sector	0.093	0.291	-0.070	-0.028	-0.016	-0.015	0.061	-0.013	-0.030	-0.161**						
10. Services sector	0.680	0.467	0.124*	0.070	0.083	0.086	-0.094	-0.021	-0.031	-0.733***	-0.467***					
11. Firm age	21.370	12.000	-0.067	0.003	-0.074	0.011	0.052	0.185**	0.202***	0.289***	-0.015	-0.217***				
12. Board	0.463	0.499	0.057	0.110*	0.011	0.039	0.099	-0.082	0.166**	0.107	0.045	-0.098	0.213***			
13. Strategic planning	0.497	0.501	0.120*	0.040	-0.038	0.019	-0.003	-0.163**	0.248***	-0.067	-0.019	0.096	-0.043	0.174**		
14. Academic formation	2.649	0.768	-0.039	-0.069	-0.195***	-0.035	-0.048	-0.071	0.236***	-0.022	0.021	-0.019	0.007	0.197***	0.236***	
15. CEO tenure	15.149	10.066	0.065	0.074	0.061	0.059	0.206***	0.068	-0.042	0.046	0.127*	-0.092	0.183**	0.022	-0.080	-0.249***

Note: n = 322.

^aLogarithmized variable.

*p < 0.05. **p < 0.01. ***p < 0.001.

effects. However, there is less of a concern for our moderation hypotheses. First, common method concerns are mitigated by the complex data relationships and inability to respond in a socially desirable way that could lead to significant interaction effects (e.g., Krishnan et al., 2006). More importantly, it has been shown via Monte Carlo simulations that common method effects cannot create significant interaction terms (Evans, 1985).

The hypotheses were tested using multiple regression analysis; results appear in Table 4. In Model 1, one of the nine control variables was marginally significantly related to firm EO: strategic planning ($\beta = 0.062$, $p < 0.10$), suggesting that having a strategic plan contributes to EO.

In order to test Hypothesis 1 through Hypothesis 3, we entered the three learning orientation dimensions in Model 2. A significant change in R^2 was observed ($\Delta R^2 = 0.367$, $p < 0.001$). Commitment to learning ($\beta = 0.218$, $p < 0.001$), shared vision ($\beta = 0.074$, $p < 0.05$), and open-mindedness ($\beta = 0.105$, $p < 0.01$) were each found to have a significant positive effect on EO, as posited by the respective baseline hypotheses.

Next, in order to test Hypotheses 4a–4c, we first entered the moderator variables (leader gender and family business) in Model 3 and then the three interaction terms between the learning orientation dimensions (commitment to learning, shared vision, and open-mindedness) and leader gender in Model 4. While the change observed in R^2 was significant in Model 3 ($\Delta R^2 = 0.013$, $p < 0.05$), such change was not significant in Model 4 ($\Delta R^2 = 0.004$, *n.s.*). Finally, the interaction terms between the learning orientation dimensions and family firm, and between the two moderator variables, as well as the three-way interaction terms were included in Model 5. A significant change in R^2 was observed ($\Delta R^2 = 0.040$, $p < 0.01$). Of the two-way interactions, the interaction between commitment to learning and family versus nonfamily SMEs ($\beta = 0.080$, $p < 0.01$) and the interaction between CEO sex and family versus nonfamily SMEs ($\beta = -0.062$, $p < 0.05$) were significant. Below, we discuss the three-way interactions in more detail, which test our Hypotheses 4a–4c.

Hypothesis 4a proposes that the relationship between commitment to learning and EO is moderated by the CEO's gender in family versus nonfamily SMEs. The combined moderator capturing leader gender and family firm status has a significant effect on the relationship between commitment to learning and EO ($\beta = 0.074$, $p < 0.01$). Figure 2 presents the plot for the significant moderating effect of the leader gender–family firm status combination on the relationship between commitment to learning and EO. According to *t*-tests performed to compare the slopes of lines in Figure 2, the slope of line 1 for male leaders of family SMEs is significantly different from that of line 2 for male leaders of nonfamily SMEs ($t = 3.455$, $p < 0.01$), that of line 3 for female leaders of family SMEs ($t = 2.680$, $p < 0.01$), and that of line 4 for female leaders of nonfamily SMEs ($t = 2.479$, $p < 0.05$).

Hypothesis 4b proposes that leader gender and family status of the SME combine to moderate the relationship between shared vision of the organization and its EO. However, such a combination was not found to significantly affect this relationship ($\beta = 0.003$, *n.s.*), therefore, Hypothesis 4b is not supported.

Finally, Hypothesis 4c proposes that the relationship between open-mindedness and EO is moderated by the combination of leader gender and family firm status. According to Model 5 (Table 4), the combination of leader gender and family firm status has a significant negative effect on the relationship between the open-mindedness of the firm and its EO ($\beta = -0.065$, $p < 0.05$). Figure 3 presents the plot for the significant moderating effect of leader gender combined with family firm status on the association between open-mindedness and EO. According to *t*-tests performed to compare the slopes of the lines in Figure 3, the slope of line 1 for male leaders of family SMEs is significantly lower than that of line 3 for female leaders of family SMEs ($t = -2.259$, $p < 0.05$). The remaining tests were not significant.³

4.1 | Robustness analysis

As a robustness test, we also employed the aggregated measure for learning orientation (see Table 5). First, we added the learning orientation variable to the control variables and a significant change in R^2 was observed in Model 2 ($\Delta R^2 = 0.34$, $p < 0.001$). Learning orientation ($\beta = 0.328$, $p < 0.001$) was found to be significantly positively

**TABLE 4** Results of linear regression analysis: five models.^a

Variables	Models				
	Model 1	Model 2	Model 3	Model 4	Model 5
Controls					
Size ^b	0.001	0.013	0.012	0.015	0.019
Manufacturing sector	0.024	0.003	−0.019	−0.029	0.002
Construction sector	−0.006	−0.022	−0.037	−0.043	−0.023
Services sector	0.075	0.020	−0.002	−0.013	0.018 [†]
Firm age	−0.041	−0.035	−0.045 [†]	−0.045 [†]	−0.049
Board	0.039	0.000	0.003	0.003	0.000
Strategic planning	0.062 [†]	0.052 [*]	0.060 [*]	0.060 [*]	0.048 [†]
Academic formation of the CEO	−0.30	0.004	0.005	0.002	0.003
CEO tenure	0.046	0.025	0.018	0.019	0.033
Independent variables					
Commitment to learning (Hypothesis 1)		0.218 ^{***}	0.218 ^{***}	0.225 ^{***}	0.232 ^{***}
Shared vision (Hypothesis 2)		0.074 [*]	0.072 [*]	0.072 [*]	0.078 [*]
Open-mindedness (Hypothesis 3)		0.105 ^{**}	0.105 ^{**}	0.102 ^{**}	0.097 ^{**}
Moderators					
CEO sex			0.032	0.034	0.035
Family SME			0.056 [*]	0.056 [*]	0.048 [†]
Interaction effects					
Commitment to learning*CEO sex				0.025	0.025
Shared vision*CEO sex				0.013	0.003
Open-mindedness*CEO sex				−0.041	−0.031
Commitment to learning*Family SME					0.080 ^{**}
Shared vision*Family SME					−0.034
Open-mindedness*Family SME					−0.004
CEO sex*Family SME					−0.062 [*]
Commitment to learning*CEO sex*Family SME (Hypothesis 4a)					0.074 ^{**}
Shared vision*CEO sex*Family SME (Hypothesis 4b)					0.003
Open-mindedness*CEO sex*Family SME (Hypothesis 4c)					−0.065 [*]
ΔR ²	0.045	0.367 ^{***}	0.013 [*]	0.004	0.040 ^{**}
R ²	0.045	0.412	0.425	0.429	0.469
Adjusted R ²	0.017	0.389	0.399	0.397	0.426
F	1.635	18.048 ^{***}	16.192 ^{***}	13.437 ^{***}	10.932 ^{***}

Note: Dependent variable: EO; $n = 322$.

^aStandardized regression weights.

^bLogarithmized.

[†] $p < 0.10$.

^{*} $p < 0.05$. ^{**} $p < 0.01$. ^{***} $p < 0.001$.

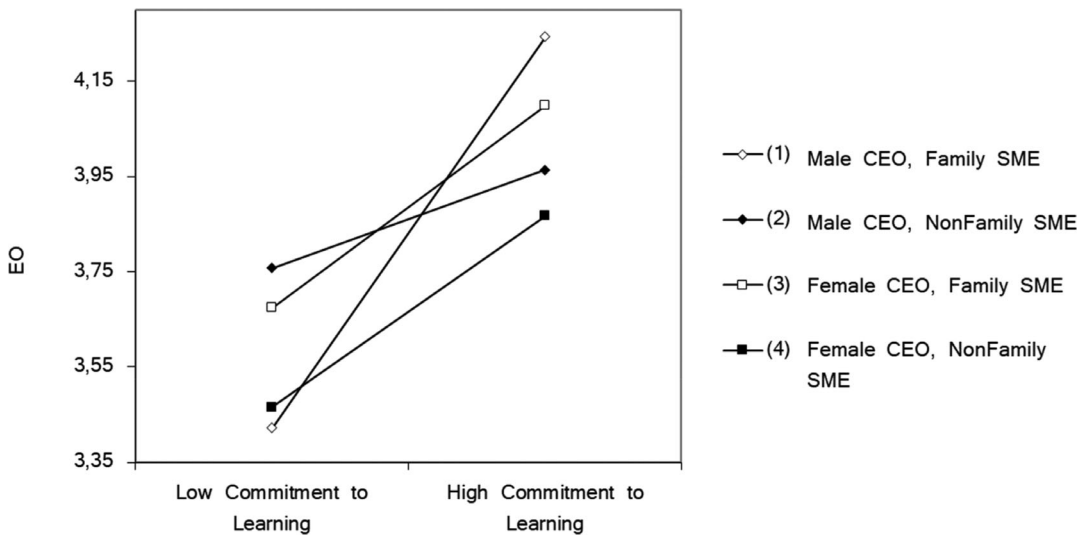


FIGURE 2 Interaction of commitment to learning and CEO sex of family versus nonfamily SMEs on EO.

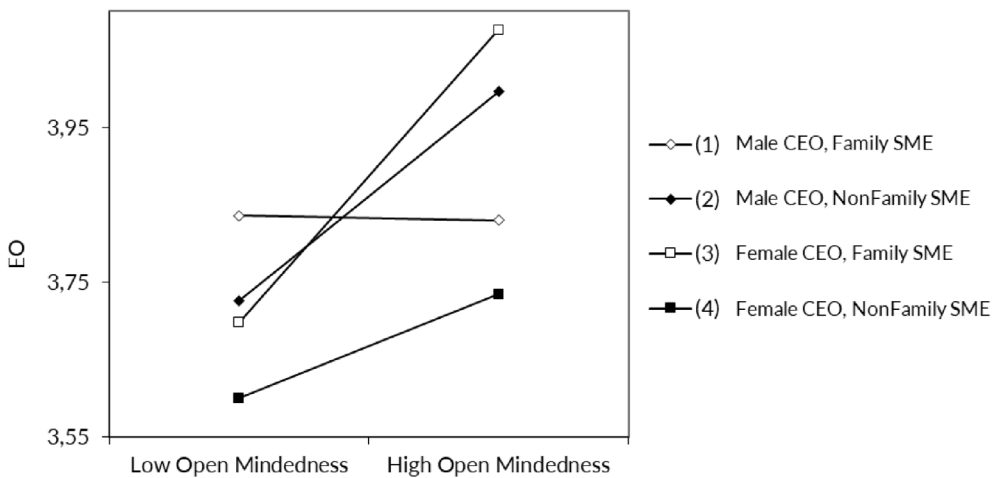


FIGURE 3 Interaction of open mindedness and CEO sex of family versus nonfamily SMEs on EO.

associated with EO. Next, we added the moderator variables (leader gender and family SME status) in Model 3 and then the interaction term between the learning orientation and leader gender in Model 4. While the change observed in R^2 was significant in Model 3 ($\Delta R^2 = 0.013$, $p < 0.05$), such change was not significant in Model 4 ($\Delta R^2 = 0.000$, $n.s.$). Finally, the interaction term between learning orientation and family SME status, between the two moderator variables, and the three-way interaction term were included in Model 5. A significant change in R^2 was observed ($\Delta R^2 = 0.020$, $p < 0.05$). The interaction between learning orientation and leader gender ($\beta = -0.002$, $n.s.$) and the interaction between learning orientation and family SME status ($\beta = 0.029$, $n.s.$) were not significant, whereas the interaction between leader gender and family SME status ($\beta = -0.072$, $p < 0.01$) was significant. Lastly, the



TABLE 5 Results of robustness analysis with learning orientation being considered an aggregated measure.^a

Variables	Models				
	Model 1	Model 2	Model 3	Model 4	Model 5
Controls					
Size ^b	0.001	0.015	0.014	0.014	0.024
Manufacturing sector	0.024	0.010	−0.012	−0.012	0.013
Construction sector	−0.006	−0.020	−0.035	−0.034	−0.026
Services sector	0.075	0.026	0.004	0.005	0.033
Firm age	−0.041	−0.034	−0.042	−0.042	−0.045 [†]
Board	0.039	0.006	0.008	0.008	0.003
Strategic planning	0.062 [†]	0.055 [*]	0.063 [*]	0.063 [*]	0.056 [*]
Academic formation of the CEO	−0.30	0.009	0.010	0.010	0.009
CEO tenure	0.046	0.028	0.020	0.020	0.032
Independent variables					
Learning orientation		0.328 ^{***}	0.328 ^{***}	0.328 ^{***}	0.333 ^{***}
Moderators					
CEO sex			0.038	0.038	0.035
Family SME			0.053 [*]	0.053 [*]	0.052 [*]
Interaction effects					
Learning orientation*CEO sex				−0.005	−0.002
Learning orientation*Family SME					0.029
CEO sex*Family SME					−0.072 ^{**}
Learning orientation*CEO sex*Family SME					0.016
ΔR^2	0.045	0.346 ^{***}	0.013 [*]	0.000	0.020 [*]
R^2	0.045	0.391	0.404	0.404	0.424
Adjusted R^2	0.017	0.371	0.380	0.378	0.393
F	1.635	19.935 ^{***}	17.419 ^{***}	16.033 ^{***}	14.009 ^{***}

Note: Dependent variable: EO; $n = 322$.

^aStandardized regression weights.

^bLogarithmized.

[†] $p < 0.10$.

^{*} $p < 0.05$. ^{**} $p < 0.01$. ^{***} $p < 0.001$.

three-way interaction between learning orientation, leader gender, and family SME status was not significant ($\beta = 0.016$, $n.s.$). Given that in our main analysis, both the three-way interaction between commitment to learning, leader gender and family SME status, and the three-way interaction between open-mindedness, leader gender and family SME status were found to be significantly associated with EO, the results of the robustness analysis reveal that considering learning orientation as an aggregate construct may mask results.

4.2 | Post hoc analysis

In line with previous research that shows a positive relationship between EO and firm performance (e.g., Rauch et al., 2009), we performed a regression analysis with the same control variables previously used, to replicate this



TABLE 6 Results of linear regression analysis: two models.^a

Variables	Models	
	Model 1	Model 2
Controls		
Size ^b	0.067 [†]	0.067*
Manufacturing sector	0.135	0.123
Construction sector	0.024	0.027
Services sector	0.125	0.087
Firm age	−0.090*	−0.069*
Board	0.045	0.025
Strategic planning	0.068 [†]	0.037
Academic formation of the CEO	−0.005	0.010
CEO tenure	0.003	0.011
Independent variable		
Entrepreneurial orientation		0.276***
Δ R ²	0.064*	0.194***
R ²	0.064	0.258
Adjusted R ²	0.037	0.234
F	2.375	10.825***

Note: Dependent variable: performance, $n = 322$.

^aStandardized regression weights.

^bLogarithmized.

[†] $p < 0.10$.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

effect. Considering that firm performance is inherently a multidimensional construct (Cameron, 1978) and that assessing a firm's performance against that of competitors provides greater insights into performance than an assessment based solely on the firm (Birley & Westhead, 1990), we asked CEOs to compare their firm to their main competitors on multiple performance indicators over the last 3 years. We used the eight-item firm performance scale of Arend (2013) which utilizes a five-point response format ranging from (1) “much worse” to (5) “much better” than main competitors. The Cronbach alpha ($\alpha \geq 0.842$) confirmed the internal consistency of the scale. Results of this regression analysis are shown in Table 6. The independent variable was added in the second Model and a significant change in R^2 was observed ($\Delta R^2 = 0.194$, $p < 0.001$), thus showing that EO is positively related to firm performance ($\beta = 0.276$, $p < 0.001$).

5 | DISCUSSION

Our study extends research that links learning to entrepreneurial behaviors (e.g., Altinay et al., 2016; Hernández-Linares et al., 2018; Querbach et al., 2022) by demonstrating how all three dimensions of a learning orientation (commitment to learning, shared vision, and open-mindedness) enhance an SMEs' EO. Although we did not hypothesize the relationship between commitment to learning and EO to vary between family and nonfamily SMEs, our results revealed that commitment to learning is particularly important to enhancing family SMEs' EO. Given that strong ties to the past and traditional modes of operation are common reasons why family firms lack entrepreneurship (e.g., Rondi et al., 2021), our finding suggests that developing commitment to learning may help family SMEs



counteract the “power of the past” by enhancing their EO. As we expected, shared vision and open-mindedness were found to similarly benefit the EO of family and nonfamily SMEs. Therefore, in line with Mavondo et al.'s (2005) assertion that organizations can only adapt as fast as they can learn, our study demonstrates the importance of fostering all three dimensions of learning to increase entrepreneurship in family and nonfamily SMEs.

Additionally, by integrating social learning theory and gender role congruity theory, we developed and tested a framework that explores how female leaders of family versus nonfamily SMEs leverage their firm's learning orientation to enhance its EO. We argued that in comparison to nonfamily SMEs, family SMEs gain more from female leadership because of the congruence between women's communal values and those of a family firm. In line with our theory, our results revealed that in comparison to female-led nonfamily SMEs, female-led family SMEs better leverage their firm's commitment to learning and open-mindedness to support greater EO. Female-led family SMEs had the strongest positive relationship between open-mindedness and EO, and their positive relationship between commitment to learning and EO was only slightly weaker than that of male-led family SMEs. In contrast, our results suggest that female leaders of nonfamily SMEs experience difficulties in transforming their firm's commitment to learning and open-mindedness into greater EO; their SMEs had the weakest positive relationship between these learning orientation dimensions and EO. Therefore, our study highlights the importance of the social context (i.e., family vs. nonfamily SMEs) in understanding when female leaders are most effective in guiding their firm's learning toward greater entrepreneurship.

The importance of the social context to female leaders' effectiveness in fostering EO was further supported by the lack of a direct effect of CEO sex on EO and the significant moderating effect of CEO sex and family firm status on EO. As such, it is not male or female leadership per se that predicts a firm's EO, but rather, whether the male or female CEO is leading a family or nonfamily SME. This supports a social constructivist view of gender which acknowledges how the social context can alter gendered expectations for behavior and how behaviors of men and women are evaluated (Deaux & Major, 1987; Ridgeway & Correll, 2004). Our study adds to research that depicts entrepreneurship as a gendered process (e.g., Eddleston & Powell, 2008; Poggessi et al., 2016) by identifying a specific social context where women appear more effective in directing their firm's learning toward enhancing its EO: family SMEs. The results of our study are important given that they challenge the depiction of entrepreneurship as a male preserve whereby men are assumed to lead more entrepreneurial businesses than women (Ahl, 2006; Eddleston et al., 2016; Jennings & Brush, 2013). Our results also contribute to the literature on women's entrepreneurship by showing how the family firm context provides an environment where women can leverage their strengths, thereby extending research that has found female leaders to have an advantage over their male counterparts in capitalizing on family resources and creating synergies between their family and business (Cruz et al., 2012; Powell & Eddleston, 2013).

Finally, by developing a framework that integrates social learning theory and gender role congruity theory, our study offers an explanation for why female leaders of nonfamily SMEs may struggle to direct their firm's learning toward entrepreneurship: gender biases hurt their credibility and legitimacy as entrepreneurial role models. Further, our framework describes how family firms provide a social context that aligns the female gender role with leadership and entrepreneurship, thus explaining why female leaders of family SMEs are more effective than female leaders of nonfamily SMEs in transforming their firm's learning orientation into greater EO. Future research should build on our study by further exploring how family firms offer a social context that is conducive to female leadership and why they are able to extract greater benefits from female leadership than nonfamily firms. Scholars have long called for research that investigates how women entrepreneurs lead in hopes of identifying when they are most effective and when barriers exist that hurt their effectiveness (e.g., Ahl, 2006; Jennings & Brush, 2013). By demonstrating differences between female leaders of family and nonfamily SMEs, our study contributes to this important research area and hopefully inspires future work.

In addition to highlighting differences between female-led family and nonfamily SMEs, we identified important gender differences. As predicted, we found male-led nonfamily SMEs to have a stronger positive relationship between commitment to learning and EO, and open-mindedness and EO than female-led nonfamily SMEs. Due to

gender role expectations dictating that men should be agentic, task-oriented, and competitive (Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002), male leaders of nonfamily SMEs appear to be more effective in transforming their SME's learning orientation into greater EO, relative to their female counterparts. In line with gender role congruity theory, female leaders of nonfamily SMEs may struggle to direct their firm's learning orientation toward greater EO because employees and other organizational stakeholders (i.e., top managers, board members, investors) may doubt their legitimacy and capability to pursue aggressive growth strategies and entrepreneurial initiatives (Gupta et al., 2009, 2019). Building on our study, more research should explore why female leaders of nonfamily SMEs struggle to gain the same benefits from a capability or resource as their male counterparts, and also, why these struggles may not exist to the same extent for female leaders of family SMEs. Additionally, while our study focused on the relationships between the learning orientation dimensions and EO, it would be interesting to identify other benefits from cultivating a learning orientation, particularly benefits accrued by female leaders of family versus nonfamily SMEs.

Taken together, our study offers several contributions to research on EO, family firms, and women's entrepreneurship. First, we contribute to research exploring the link between learning and EO (e.g., Baker & Sinkula, 2009; Hernández-Linares et al., 2018; Wang, 2008) by demonstrating how the ability to channel learning toward entrepreneurship depends on the family/nonfamily status of the SME and the gender of its leader. Our study supports the contention that learning is key in progressing from knowledge creation to its entrepreneurship application in SMEs (Arzubiaga et al., 2022). It also extends recent research highlighting the important role of an SME's leader in translating learning into entrepreneurship (Querbach et al., 2022) by demonstrating differences between male and female leaders of family versus nonfamily SMEs. More research should therefore explore the importance of leadership in directing learning toward entrepreneurship and the leadership styles that are most effective in encouraging EO.

Second, we contribute to the family firm literature by demonstrating the importance of fostering a learning orientation, particularly the commitment to learning dimension, to promote EO in family SMEs. Because an EO allows a family firm to pursue new initiatives that can contribute to growth and help it to sustain the family firm across generations, identifying factors that foster EO is important (Hernández-Linares et al., 2018; Mostafiz et al., 2022). Further, our research adds to the few studies that have examined learning in family SMEs and answers calls in the literature to explore why some leaders are more effective than others in directing their family SME's learning toward entrepreneurship (Arzubiaga et al., 2022; Hernández-Linares et al., 2018; Querbach et al., 2022). We also add to the little research that has studied women in family firms by proposing that the congruence between female leaders' communal values and those of family firms creates a social context that is more conducive to gains from female leadership. As such, we offer a theoretical explanation for why family firms appear to be more supportive of women in leadership roles than nonfamily firms (e.g., Montemerlo et al., 2013) and why female leaders of family SMEs, relative to female leaders of nonfamily SMEs, can generate a higher EO from commitment to learning and open-mindedness.

Third, in contrast to the vast majority of entrepreneurship research that has focused on gender differences in firm performance (e.g., Alsos et al., 2006; Gupta et al., 2013), we explored how male and female CEOs lead their SMEs to encourage EO. We discovered significant differences between female-led family and nonfamily SMEs, and also between female- and male-led nonfamily SMEs that suggest gender biases in nonfamily SMEs that hamper female leader's ability to direct their firm's learning toward EO. These results offer support for our framework integrating social learning theory with gender role congruity theory. Our framework should therefore be extended to explore how female leaders can mitigate gender biases associated with gender role incongruity and, in turn, promote their effectiveness as role models in fostering social learning. As such, our study highlights how the social context of female leadership matters.

5.1 | Implications for practice

Our study offers several implications for practice. The positive main effect of family firm status on higher levels of EO alludes to the fact that many family SMEs are highly entrepreneurial, and thus adds to the growing stream of research that questions the characterization of family firms as resisting innovation and entrepreneurship



(e.g., Duran et al., 2016; Villani et al., 2023). The positive relationship between EO and firm performance further emphasizes the importance of cultivating an EO for family SME success and survival. This suggests that when choosing a successor, family SMEs should look for potential leaders who can cultivate an EO, which means relying less on primogeniture and more on leaders who can direct learning toward EO.

Additionally, our study reveals gender biases in nonfamily firms that likely contribute to differences in the entrepreneurial behavior, growth, and performance of male- versus female-led SMEs. Given the results of our study as well as other research suggesting that prejudice against women leaders decreases when the female gender role and leadership role requirements align (e.g., Hoyt & Burnette, 2013; Lemoine & Blum, 2021), women entrepreneurs should seek ways to increase their perceived credibility and legitimacy with stakeholders, particularly when pursuing tasks seen as more masculine, like entrepreneurship. For example, contextual factors such as showing more empathy and creating a more relationship-oriented culture appear to weaken unfavorable perceptions of women leaders (Wang et al., 2019), as these behaviors help to enhance employees' self-worth and cooperation (García-Retamero & López-Zafra, 2006). As such, in directing learning toward EO, female leaders of nonfamily SMEs could potentially increase their effectiveness by characterizing this behavior as communal, developmental, and cooperative.

Female leaders of family SMEs can also serve as role models for female leaders of nonfamily SMEs, offering guidance on how to build organizations that support female leadership. Policy makers should be encouraged by the findings of our study regarding women leading family SMEs and work to better design policies that promote women to leadership positions and offer opportunities for female leaders of family SMEs to serve as role models. Further, given the tradition of primogeniture that remains in many family firms (e.g., Ahrens et al., 2015), our findings should challenge gender biases that persist in family firms (e.g., Campopiano et al., 2017; Eddleston & Sabil, 2019) by demonstrating the effectiveness of female leaders in transforming their family SME's learning into greater EO.

5.2 | Limitations and opportunities for future research

This study presents a set of limitations that offer opportunities for future research. First, although cross-sectional designs are common in the management and entrepreneurship literatures (e.g., Crook et al., 2010; Cruz et al., 2010; Partanen et al., 2020) and our tests for common method variance did not show any concerns (Harman, 1967; Podsakoff & Organ, 1986), employing a cross-sectional design constrains our ability to make causal inferences. Therefore, future research can add to the findings of our study by utilizing a longitudinal design. For example, it would be interesting to explore how changes in the external environment and business climate can alter the relationships between the different learning orientation dimensions and EO over time. It would also be interesting to explore how the exploitation of entrepreneurial opportunities affects an SME's learning orientation.

Second, we focused on SMEs in Spain. Consequently, caution should be exercised in generalizing these findings to other countries because they may be shaped by the economic conditions of the country (Madrid-Guijarro et al., 2013) and its national culture (Hofstede, 2001). Further, because gender roles may manifest differently in different cultures (Shinnar et al., 2012), future studies should test our framework across cultures. Therefore, in line with Campopiano et al. (2017), we call for more cross-country research on women's involvement in family firms, and hope future research continues to explore under which circumstances family firms benefit from female leadership. For example, our framework could be extended to study the effect of women on family versus nonfamily firms' board of directors and top management teams. Additionally, it would be interesting to explore if our results change when family SMEs are led by nonfamily CEOs because insider status as family members appears to offer women greater influence in directing their firm's entrepreneurial behaviors (Bauweraerts et al., 2022).

Third, we assumed that family firms are social contexts characterized by their cultural proximity with female leadership. However, ideologies or cultural characteristics often attributed to family firms (e.g., Chirico et al., 2012), such as paternalism, understood as “the practice of exhibiting excessive concern for others in a way that interferes with their decisions and autonomy” (Mussolino & Calabrò, 2014, p. 198), seem to have both positive and negative

effects in an organization (Mussolino & Calabrò, 2014). Therefore, we call for research to explore how a family business's culture can align with the characteristics typically ascribed to female leadership, such as communal values and cooperativeness (Eagly & Karau, 2002; Eddleston & Powell, 2008), and to specifically research how paternalism affects women's leadership opportunities and the way in which women lead.

Finally, we speculated about the potential influence of unmeasured gender-related processes (e.g., gender roles, gendered socialization processes) in developing our arguments related to male and female leaders. To overcome this limitation, we recommend that future research incorporate measures of gender-related influences (i.e., masculine/agentive traits, feminine/communal traits) as well as the influence of CEO sex in studying how the dimensions of a learning orientation influence EO in family versus nonfamily SMEs. Such research would add to the very few entrepreneurship studies that have captured both sex and gender (i.e., Eddleston & Powell, 2008) and greatly contribute to the growing interest in studying female CEOs of family firms (Amore et al., 2014). It is particularly important to understand women's effectiveness as role models and leaders of family firms as the survival of many family SMEs might depend on female successors attaining leadership of these firms. Relatedly, and as suggested in previous studies, future research should also explore differences in how female and male leaders characterize entrepreneurial behavior and EO (Alsos et al., 2016; Fellnhöfer et al., 2017; Verheul et al., 2005). Perhaps a more feminine characterization of entrepreneurial behaviors (i.e., creativity, collaboration) can improve female leaders' ability to direct learning toward EO in nonfamily SMEs.

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ENDNOTES

- ¹ While male and female refer to biological sex, gender refers to the psycho-social ramifications of biological sex (Unger, 1979). Although gender roles have evolved as societies advance, gender stereotypes, and social roles continue to proliferate because they are both descriptive of men's and women's behavior, and also prescriptive in regard to how men and women are expected to behave (Eagly & Sczesny, 2009).
- ² Similar to other scholars, we use the term *gender* to refer to the psychological and social implications of being male or female and the term *sex* to refer to the biology-based categories of male and female, with the recognition that these categories are not all inclusive (Archer & Lloyd, 2002).
- ³ Given that a small percentage of family SME CEOs were not part of the owning family (3% of female and 13% of male CEOs were nonfamily), we tested our hypotheses with nonfamily CEOs of family SMEs removed. Our results remained consistent with our reported findings.

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APPENDIX 1: CONFIRMATORY FACTOR ANALYSIS

	Paths ^a	Standardized estimates	t-value
Entrepreneurial orientation			
First order	V1 ← RT	0.424	5.930
	V2 ← RT	0.565	7.344
	V3 ← RT	0.703 ^b	
	V4 ← I	0.697	12.304
	V5 ← I	0.844	14.753
	V6 ← I	0.783 ^b	
	V7 ← P	0.629	9.706
	V8 ← P	0.767	11.324
	V9 ← P	0.702 ^b	
	V10 ← CA	0.781	10.171
	V11 ← CA	0.716	9.811
	V12 ← CA	0.649 ^b	
	V13 ← A	0.717	9.127
	V14 ← A	0.718	9.133
	V15 ← A	0.734	9.239
	V16 ← A	0.560	7.768
	V17 ← A	0.558	9.392
	V18 ← A	0.581 ^b	
Second order	RT ← EO	0.752	5.260
	I ← EO	0.858	5.661
	P ← EO	0.874	5.524



	Paths ^a	Standardized estimates	t-value
Learning orientation	CA ← EO	0.714	
	A ← EO	0.445 ^b	
Commitment to learning	V1 ← CL	0.775	12.180
	V2 ← CL	0.755	11.936
	V3 ← CL	0.667	14.366
	V4 ← CL	0.722 ^b	
Shared vision	V5 ← SV	0.686	11.254
	V6 ← SV	0.741	12.097
	V7 ← SV	0.791	12.778
	V8 ← SV	0.729 ^b	
Open-mindedness	V9 ← OM	0.770	10.419
	V10 ← OM	0.708 ^b	

Abbreviations: A, autonomy; AC, competitive aggressiveness; CL, commitment to learning; EO, entrepreneurial orientation; I, innovativeness; OM, open-mindedness; P, proactiveness; RT, risk-taking; SV, shared vision; V, variable.

^a Goodness-of-fits statistics: $\chi^2 = 644.117(337)$, CFI = 0.915, IFI = 0.916, TLI = 0.905, AGFI = 0.857, RMSEA = 0.053.

^b Fixed parameter.

APPENDIX 2: DISCRIMINANT VALIDITY OF THE CONSTRUCTS^a

Construct	EO	CL	SV	OM
EO	0.555			
CL	0.514	0.534		
SV	0.280	0.432	0.544	
OM	0.413	0.461	0.518	0.547

Abbreviations: CL, commitment to learning; EO, entrepreneurial orientation; OM, open-mindedness; SV, shared vision.

^a Diagonal elements (bold) are the square root of the variance shared between the constructs and their measures (AVE). Off-diagonal elements are the squared correlations among constructs. For discriminant validity, diagonal elements should be larger than off-diagonal elements.