The pursuit of international opportunities in family firms: Generational differences and the role of knowledge-based resources

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This is the peer reviewed version of the following article:

Fang, H. C., Kotlar, J., Memili, E., Chrisman, J. J., & DeMassis, A. (2018). The Pursuit of International Opportunities in Family Firms: Generational Differences and the Role of Knowledge-based Resources. *Global Strategy Journal¸ 8(1)*, 136-157. doi: 10.1002/gsj.1197,

which has been published in final form at http://dx.doi.org/10.1002/gsj.1197. **This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.**

Abstract:

Research Summary: We argue that willingness (attitude toward risk, return, and socioemotional wealth), ability (extent of control), and resource availability influence the internationalization of family firms. We hypothesize that the internationalization of family firms led by founding and later generation family members differs from the internationalization of nonfamily firms and from each other and that knowledge-based resources moderate the relationship. Longitudinal analysis of 4,925 firm-year observations of S&P 1500 manufacturing firms from 2002 to 2008 shows that compared to nonfamily firms, family firms run by founding (later generation) family members internationalize less (more). Knowledge resources increase (decrease) the internationalization of founder-led (later generation) family firms. Overall, how family ownership influences firm behavior is likely to vary as much by its type as its amount.

Managerial Summary: We explore the internationalization of family firms based on a sample of S&P 1500 manufacturing firms from 2002 to 2008. Compared to nonfamily firms, family firms run by founding family members internationalize less, and family firms run by later generation members internationalize more. However, as knowledge resources increase, the internationalization of founder-led family firms increases, whereas the internationalization of firms led by later generation family members decreases. Therefore, our findings suggest that knowledge resources can facilitate or hamper international expansion in family firms, depending on the generation of family control. These findings underscore the role of goals, governance, and resources as important drivers of differences in internationalization between family and nonfamily firms, as well as of variations in internationalization among family firms.

Keyword: family business | generational difference | international asset investment | knowledge-based resource | R&D investment

Article:

1 INTRODUCTION

Internationalization represents a critical strategic decision for large firms (Hitt, Hoskisson, & Ireland, 1994; Hitt, Hoskisson, & Kim, 1997; Wan & Hoskisson, 2003). Expanding into foreign markets can potentially provide many benefits, such as economies of scale and scope, market power, and learning from foreign partners and competitors (Geringer, Beamish, & DaCosta, 1989; Hitt et al., 1997; Rugman & Verbeke, 2001). However, internationalization also represents a high-risk strategic commitment that may dilute family control and destabilize the achievement of the noneconomic goals of family owners. Prior research shows that differences in firm ownership can result in variations in internationalization (e.g., Tihanyi, Johnson, Hoskisson, & Hitt, 2003). Moreover, prior family business literature points to important differences in internationalization between family and nonfamily firms (Gallo & Garcia Pont, 1996; Gallo & Sveen, 1991; Pukall & Calabrò, 2014). This research stream generally shows a negative relationship between family ownership and internationalization (e.g., Banalieva & Eddleston, 2011; Boellis, Mariotti, Minichilli, & Piscitello, 2016; Fernández & Nieto, 2005; Gomez-Mejia, Makri, & Larraza-Kintana, 2010), suggesting that family firms are often risk averse and reluctant to expand beyond domestic boundaries.[1] Although internationalization of family firms has received attention (Gallo & Garcia Pont, 1996; Gallo & Sveen, 1991; Gomez-Mejia et al., 2010; Pukall & Calabrò, 2014; Singla, Veliyath, & George, 2014; Zahra, 2003), important gaps in the literature remain.

Previous studies often draw upon either a willingness or, more usually, an ability perspective to explain strategic decision making in family firms, but both perspectives are needed to thoroughly understanding the strategic behavior of family firms (De Massis, Kotlar, Chua, & Chrisman, 2014). The *ability* perspective suggests that the extent of ownership provides family members with power and discretion to make strategic decisions (e.g., Anderson & Reeb, 2003; Carney, 2005). However, given equal ability, the *willingness* of family owners to engage in international activities is based on the extent to which such decisions are consistent with their economic and noneconomic goals (Gomez-Mejia et al., 2010), which are likely to differ from those of nonfamily firms (Chrisman, Chua, Pearson, & Barnett, 2012). Furthermore, family involvement in business may influence the investments family firms make in knowledge-based resources in comparison to nonfamily firms (De Massis, Kotlar, Frattini, Chrisman, & Nordqvist, 2016; Habbershon & Williams, 1999). Depending on their nature, investments in these resources can facilitate or hamper international expansion.

The separation of the ability and willingness perspectives can lead to divergent theoretical predictions and inconsistent empirical findings. Noting that these perspectives are complementary rather than mutually exclusive, we theorize that given similar levels of family ownership and, therefore, similar ability, the willingness to internationalize is likely to vary among family firms depending on whether the founding or later generations of the family are in control. Likewise, given similar levels of willingness, the ability of family firms to internationalize is likely to vary according to the level of ownership held by the family. Thus, owing to differences in goals and the discretionary power to act, family firms owned and managed by founding and later generation family members are expected to differ in their levels of internationalization. Furthermore, family firms are expected to differ from each other and from nonfamily firms in their capacity to utilize knowledge-based resources, which should have interactive effects on internationalization.

Our article contributes to the literature by combining the willingness and ability perspective with the knowledge-based resource perspective to argue that the proclivities of different types of family firms to engage in international markets vary and that these proclivities are moderated by the availability of critical resources for internationalization. With the exception of a few studies, such as Memili, Fang, and Welsh (2015), past research often does not take into account the heterogeneity that exists between family firms run by founding and later generations of a family. Although the family business literature has largely recognized that family firms owned and managed by founders tend to have better performance than either family firms owned and managed by later generations of the family or nonfamily firms (e.g., Le Breton-Miller & Miller, 2013; Miller, Le Breton-Miller, Lester, & Cannella, 2007), inquiries regarding how these differences occur are limited. Thus, we further contribute to the literature by showing how founder-led family firms differ from other family firms.

The purpose of this article is to examine how variations in the extent of control (a determinant of ability) combined with differences in the goals of founding and later generation family owner-managers (a determinant of willingness) influence their engagement in international activities and how the availability of knowledge-based resources moderates these relationships. Our longitudinal analysis of Standard & Poor's (S&P) 1500 manufacturing firms shows that in comparison to nonfamily firms, as the ownership of family firms managed by the founding generation of a family goes up, internationalization goes down, whereas the amount of family ownership of firms managed by later generation family members has the opposite effect. Moreover, we show that knowledge-based resources moderate the relationship between founding and later generation family ownership and internationalization. We find that the level of knowledge-based resources and founding (later) generation ownership positively (negatively) influences internationalization. Overall, our results provide support for both the ability and willingness perspective (De Massis et al., 2014) and the knowledge-based view as it applies to family firms (Barney, 1991; Grant, 1996; Habbershon & Williams, 1999; Nahapiet & Ghoshal, 1998). Our results are also consistent with the notion that goals, governance, and resources are primary sources of heterogeneity in family firms (Chua, Chrisman, Steier, & Rau, 2012). Hence, our article contributes to the family business, knowledge-based view, and internationalization literatures.

In the reminder of the article, we review the literature on the influence of family involvement and knowledge-based resources on internationalization. We then develop hypotheses, describe our methods and results, and finally, discuss the implications and limitations of the study.

2 THEORETICAL BACKGROUND

The willingness and ability perspective of De Massis et al. (2014) is based on the premises, derived from the behavioral theory of the firm, that: (a) different coalitions of owners tend to have divergent interests and goals; (b) the salience of owners' goals in strategic decision making is dependent upon their power (control rights) to negotiate on behalf of their interests; and (c) owners have multiple goals, that can be either economic or noneconomic (Cyert & March, 1963). Thus, the willingness and ability perspective predicts that international strategy is driven primarily by the extent to which firm owners (a) believe that their economic and noneconomic utilities can be better achieved by implementing such a strategy and (b) have the authority to make decisions concerning the execution of the firm's strategy.

The willingness and ability perspective indicates that the authority and desire of owners to act is critical, but new strategic actions also require that the firm have the capacity to act. Put differently, organizational resources are believed to shape strategic decisions, and this is true for family (De Massis, Di Minin, & Frattini, 2015; Habbershon & Williams, 1999) as well as nonfamily firms (Barney, 1986, 1991). Thus, this perspective focuses on firm resources as drivers of strategic behavior (Hitt & Ireland, 1985), particularly those accruing from family involvement (Habbershon & Williams, 1999). Resources must also be integrated and deployed effectively in order to achieve superior performance (Sirmon & Hitt, 2003; Sirmon, Arregle, Hitt, & Webb, 2008). Firms need to develop advanced yet flexible control and evaluation systems to ensure that complex, knowledge-based resources can be added, shed, and bundled as required. Indeed, as Hansen, Perry, and Reese (2004, p. 1280) conclude, "What a firm does with its resources is at least as important as which resources it possesses."

While we recognize the fundamental distinctions between these two tracks, we also believe they deal with complementary factors that influence decision making in organizations. Put differently, we argue that family control of firm governance (ability), goals (willingness), and resources all affect family firm decision making. Here, "willingness" is defined as the inclination of family owners to use strategies that may be idiosyncratic in nature to achieve family-centered (economic and noneconomic) goals. In turn, "ability" is defined by the extent of family ownership that provides the family with the power and discretion to control firm decision aking. Thus "ability" is necessary to translate family-centered goals into firm behaviors and to apply resources to obtain the desired ends from those behaviors. Theoretically, this means that the effect of firm resources on strategic behaviors in family firms is contingent upon the extent of family ownership in business. In this study, we focus on whether ownership is held by the founding generation or a later generation of the family, as these disparate family owners tend to have heterogeneous goals (Chrisman & Patel, 2012; Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Miller et al., 2007) and resources (Sirmon & Hitt, 2003) that lead to differences among those firms as well as in comparison to nonfamily firms.

2.1 Family ownership and internationalization

As noted earlier, the willingness and ability perspective in family business research suggests that the drivers of decision making in family business are, respectively, (a) the economic and noneconomic goals of family owners (Berrone, Cruz, & Gomez-Mejia, 2012; Chrisman et al., 2012; Chrisman & Patel, 2012) and (b) the power and discretion to govern the firm conferred by the extent of ownership the family holds (Carney, 2005). In terms of international strategy, family owners have an economic incentive to diversify the firm in order to reduce overall variance in expected returns, increase expected returns (Alessandri & Seth, 2014; Boellis et al., 2016; Chen, Hsu, & Chang, 2014; Goranova, Alessandri, Brandes, & Dharwadkar, 2007; Pukall & Calabrò, 2014; Zahra, 2003), and/or conform to industry norms (Miller, Le Breton-Miller, & Lester, 2013). Accordingly, family owners should have economic incentives to internationalize in order to increase returns, reduce dependence on a single source of revenues in the domestic market, and/or justify the family's control to external constituencies by conforming to the actions of competitors. Although compelling, Gomez-Mejia et al. (2010) argue that family owners' choices about internationalization are more likely to reflect their concerns for attaining family-centered noneconomic goals or preserving socioemotional wealth (SEW). Socioemotional wealth encompasses the noneconomic benefits that family owners can obtain through the control of the firm, including the ability to exercise authority and influence, the emotional value of owning a firm, family members' identification with the firm, and renewal of family bonds to the firm through dynastic succession (for a review, see Berrone et al., 2012). According to Gomez-Mejia et al. (2010), internationalization leads to the dilution of such benefits. Hence, internationalization poses a dilemma for family firms that is not faced in nonfamily firms, as such decisions may require a trade-off between economic benefits associated with risk and returns and noneconomic benefits associated with preserving socioemotional wealth.[2]

Consistent with the notion of family owners' desire to increase returns, to diversify their economic risk, and/or conform to prevailing norms, some studies have shown that family ownership will increase internationalization (Alessandri & Seth, 2014; Chen et al., 2014; Goranova et al., 2007; Pukall & Calabrò, 2014; Zahra, 2003). Conversely, other research has demonstrated that family ownership is negatively related to internationalization, confirming family owners' desire to preserve SEW (Arregle, Naldi, Nordqvist, & Hitt, 2012; Banalieva & Eddleston, 2011; Boellis et al., 2016; Gomez-Mejia et al., 2010). We argue that these conflicting results might be reconciled through an analysis of the differences between founding and later generation family firms. In particular, we believe that even if founding and later generation family firms are characterized by similar ability to influence firm behavior, founding generation family firms would be more willing to preserve socioemotional wealth than later generation family firms. Since the importance of SEW tends to diminish in later generations (Gomez-Mejia et al., 2011), economic goals associated with risk and returns and/or conforming to industry norms should hold greater sway when control is held by later generations of family owners (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Thus, examining the differences in internationalization of founding and later generation family firms holds much promise to enhance current understanding of heterogeneity of family firms.

2.2 Differences between founding and later generation family owners

The family business literature has long emphasized that in addition to a distinction between family and nonfamily firms, there is a fundamental distinction between firms run by founding and later generation family owners (e.g., Morck & Yeung, 2003; Pérez-González, 2006). Research shows that family attachment to the firm is highest when the firm is owned and managed by members of the founding generation of the family, whereas it tends to weaken as the business is passed onto subsequent generations (Chua et al., 1999; Gómez-Mejía et al., 2007; Le Breton-Miller & Miller, 2013). Founding family owners who have invested their time, energy, and funds in the firm since its inception are characterized by a strong personal attachment, commitment, and identification with the firm and, thus, are likely to place high emphasis on protecting their socioemotional endowments that can be passed on to members of their immediate family by favoring strategies consistent with their noneconomic goals (Gómez-Mejía et al., 2007). In this regard, internationalization may not appear as an appealing strategy for founding family owner-managers compared to owner-managers from later generation family firms or firms that are not owned or managed by family members.

Internationalization often relies upon external funding through the issuance of new stocks or debt. In either case, obtaining external funds allows parties from outside the family to exert influence and control over the governance and strategic direction of the firm and, thus, erodes the authority of the owning family (Gomez-Mejia et al., 2010). Also, internationalization may require sending trusted administrators to foreign countries for the purpose of managing foreign operations. In family firms, these administrators are likely, to the extent possible, to be family members. However, the pool of family managers is limited by the size of the family, which is likely to be particularly constrained in the founding generation. Furthermore, internationalization can engender higher administrative complexity. Family firms may lack family members who are qualified and willing to manage international activities, creating a need to hire professional managers with international expertise from outside the firm, which can corrode the family's authority and identification with the firm (Cruz, Gómez-Mejia, & Becerra, 2010). Hence, in comparison to family firms owned and managed by later generations or nonfamily firms, internationalization is likely to encounter greater resistance in family firms run by founding family owners who have a greater interest in preserving SEW (Gomez-Mejia et al., 2010). This is expected to lead to less internationalization. Recalling that ownership and the ability to govern firm behavior are positively correlated, we propose:

Hypothesis 1 (H1) *There will be a negative relationship between the extent of firm ownership held by founding generation family members and internationalization*.

Later generation family owner-managers, however, are not expected to place as much emphasis on SEW considerations since family influence is thought to diminish as ownership passes out of the hands of the founding generation (Gómez-Mejía et al., 2007). The emergence of family branches weakens family ties and identification with the firm (Le Breton-Miller & Miller, 2013). When ownership is held by later generations of an extended family system (i.e., in sibling partnerships or cousin consortiums), blood ties among family members tend to be diluted, and the number of family members dependent upon the firm tends to increase (Kotlar & De Massis, 2013). As such, the salience of economic goals is likely to rise, reducing the aversion to the loss of control associated with external funding and professional management. Thus, internationalization should be more attractive to later generation family owners than founding family owners.

In addition, later generation family firms are often exposed to higher pressure for strategic conformity (Miller et al., 2013). Strategic conformity refers to firm behaviors that follow prevailing routines and strategies in the market. Later generation family owners and managers are likely to be scrutinized more closely by the public because of a fear that their positions have been secured through nepotism rather than competence (Bertrand & Schoar, 2006; Morck, Wolfenzon, & Yeung, 2005). Therefore, later generation family members are likely to consider strategic conformity as necessary to gain legitimacy by signaling to outsiders that they can run the firm as effectively as founders or nonfamily managers. As a result, when ownership is held by later generations of the family, the family firm is more likely than firms owned by the founding generation to internationalize to convince nonfamily stakeholders that they are capable of achieving acceptable, if not, superior performance.

Indeed, owing to an enhanced need to prove their competence to outsiders and because they have greater discretion to act, as the ownership held by later generations increases, family firms are expected to respond to pressures to reduce risk and improve returns through strategic conformity by engaging in strategies such as internationalization even more aggressively than nonfamily firms. Thus, we propose:

Hypothesis 2 (H2) *There will be a positive relationship between the extent of firm ownership held by later generation family members and internationalization*.

2.3 Knowledge-based resources and internationalization

As discussed, the ability perspective assumes that discretion and control determine a firm's strategic choices. However, according to the knowledge-based view, organizational knowledge is the most important resource, and strategic decisions—such as internationalization—are influenced by both the availability and composition of knowledge within the firm's boundaries (Kogut & Zander, 1992). Organizational knowledge is different from and more complex than tangible resources because it is a socially constructed, intangible resource. According to Leonard and Sensiper (1998), organizational knowledge is more than the sum of individual members' knowledge. Rather, it is a collective resource at the organizational level that stems from the exchange and integration of the knowledge of many individuals (Nahapiet & Ghoshal, 1998).

One purpose of this study is to examine how knowledge-based resources created through R&D activities moderate the effect of founding and later generation family ownership on internationalization. Knowledge-based resources in general are expected to facilitate internationalization for several reasons. First, knowledge-based resources created through participation in domestic markets can have positive externalities on foreign markets activities. Given the globalization of world economies, it is likely that at least some foreign customers share the same tastes and needs as domestic customers. In this regard, products resulting from domestic knowledge-based activities may also be popular in foreign markets (Kumar, 2009), which may facilitate international activities in foreign domains. Second, aside from the products and brands, the knowledge gained through their development may also be used beyond domestic boundaries. Third, domestic R&D activities may help a firm develop processes, routines, and practices that can be used in international contexts (Galan & Sanchez-Bueno, 2009; Hitt et al., 1994; Macher & Boerner, 2012). The development of routines that can be applied to new situations reduces the need to continually creating new routines (Nadolska & Barkema, 2014), which facilitates entry into foreign markets (Nadolska & Barkema, 2007).

However, the relationship between knowledge-based resources and internationalization can be complex because firms may vary in terms of their capacity to add, shed, unbundle, and leverage resources (Sirmon & Hitt, 2003; Sirmon, Hitt, & Ireland, 2007). In this regard, value creation requires firms to coordinate and integrate knowledge (Amit & Zott, 2001; Eisenhardt & Martin, 2000; Sirmon et al., 2007; Teece, Pisano, & Shuen, 1997). Nahapiet and Ghoshal (1998) further suggest that the social connections of individuals within the firm are positively related to value creation (Smith, Collins, & Clark, 2005). Overall then, knowledge-based resources assist firms in disengaging other resources from prior uses and rebundling them for new uses. This means that the firm must be able to reorganize knowledge gained in domestic markets in order to make it applicable to competition in foreign markets.

2.4 Interaction effects of knowledge-based resources and family ownership on internationalization

Although founding generation family owners may be reluctant to diversify internationally, when they decide to do so, their close monitoring and control, binding ties, emotional attachment, and identification with the firm may provide them with an advantage in coordinating and integrating available knowledge-based resources compared to either nonfamily firms or later generation family firms. We argue that these advantages can facilitate internationalization for firms managed by owners from the founding generation.

In founding generation family businesses, family members tend to identify with the firm and perceive it as an extension of the family (Berrone et al., 2012; Steier & Miller, 2010). This often motivates family members to place a higher priority on common goals than on their self-serving interests (Corbetta & Salvato, 2004). A focus on common goals can also mitigate relational conflict among family members (Eddleston & Kellermanns, 2007) and enhances the communication, sharing, and integration of knowledge, leading to greater value creation (Chirico & Salvato, 2008; 2016). Moreover, to the extent that the founding generation acts with future generations in mind, their motivation to create value by exploring alternative uses of knowledge-based resources should be greater. Because family bonds are generally stronger in a single family than an extended family, this long-term orientation is more common in founder-generation family firms than nonfamily firms or later generation family firms. Hence, compared to later generation family owners, firms run by the founding generation are more likely to pursue strategic initiatives such as internationalization as knowledge-based resources increase. Thus, although less willing to internationalize in general, firms run by the founder generation should be more willing to utilize knowledge-based resources for that purpose as the level of those resources increases. In addition, shared experiences through working together in the entrepreneurial and adolescence stages of the firm help build high levels of cohesiveness and emotional attachment among family members that contribute to their capacity to utilize knowledge-based resources (Chirico & Salvato, 2016; Gersick, Davis, Hampton, & Lansberg, 1997).

In contrast, the above advantages contributing to the coordination and integration of knowledge in family firms are likely to diminish in later generations. As family influence and control are diluted through ownership dispersion among family members (Gómez-Mejía et al., 2007), coordination becomes more difficult (Berrone et al., 2012). This coordination problem is different from that found in nonfamily firms where ownership dispersion is more extensive and individual owners cede control to top management and the board of directors. Relational conflict is also more likely to arise in second or later generations (Eddleston, Otondo, & Kellermanns, 2008; Gersick et al., 1997), leading to weakening of emotional attachments, identification with the firm, family bonds, and social ties. Such conflicts can interfere with the coordination and integration of knowledge-based resources. Moreover, later generation family members may be less concerned with transgenerational continuity, which is likely to promote more short-sighted and exploitative use of knowledge-based resources. Whereas the founding generation's legitimate power can help direct the focus toward firm performance, descendants may be preoccupied with power struggles among themselves, shifting the focus from strategy to politics, which can harm the application of knowledge-based resources to international initiatives. This “race to the bottom” (Bertrand, Johnson, Samphantharak, & Schoar, 2008) may lead to the use of knowledge-based resources for the private benefit of different coalitions of family owners. Principal-principal agency conflicts can, thus, be exacerbated as knowledge resources increase and the range of strategic options available to recalcitrant and self-serving family owners becomes larger.

Even though the concern for the socioemotional wealth of the family as a whole may decrease in later generation family firms, the preferences among different branches of the family or between those involved in the firm as opposed to those who are simply owners may result in higher goal diversity (Kammerlander & Ganter, 2014; Kotlar & De Massis, 2013), leading some family members to pursue self-centered individual interests rather than common goals and strategies (Gómez-Mejía et al., 2007). Again, this can have a deleterious impact because different coalitions of family owners can wield considerable power. When the coalitions are also represented within the firm, internationalization can retard firm-wide coordination and integration of knowledge-based resources (Chirico & Salvato, 2016). Importantly, goal and relational conflict are likely to make agreements on whether and how the knowledge gained through R&D investments can or should be used for international activities more difficult, making the relationship between the two negative rather than positive in later generation family firms.

As a result, we expect that even though on average later generation family firms are expected to internationalize more, higher levels of knowledge-based resources can actually lead to decreasing levels of internationalization due to the rise of relational and goal conflict and diminished concerns for transgenerational succession (Memili et al., 2015). Thus, we expect the levels of internationalizations in firms owned by later generations of a family compared to those in nonfamily firms or family firms with founding generation owners to decrease as knowledge resources increase. Hence:

Hypothesis 3 (H3) *There is an interactive effect of family ownership and knowledge-based resources on the internationalization of founding and later generation family firms, such that*:

Hypothesis 3a (H3a) *Higher levels of both founding generation family ownership and knowledge-based resources have a positive impact on internationalization; and*

Hypothesis 3b (H3b) *Higher levels of both later generation family ownership and knowledge-based resources have a negative impact on internationalization*.

3 METHODS

Consistent with prior studies investigating publicly traded family firms, the sample includes both family and nonfamily manufacturing firms listed in the S&P 1500 from 2002 to 2008 that have at least 5 years of continuous information available. To ensure homogeneity in the sample, we exclude utility and service firms due to differences in government regulations and the feasible international actions of these firms compared to manufacturing firms. In addition, large publicly traded firms often generate substantial revenues from international activities. Such firms also invest extensively in knowledge-based resources and utilize those resources to facilitate international initiatives. In this case, the "spillover" effect of knowledge-based resources should be salient. The 2002–2008 period is intentionally chosen, as firms' international strategies and knowledge-based resources should vary over such a dynamic period that includes both growth and recession. The S&P 1500 includes nonfamily as well as founding and later generation family firms (Miller et al., 2007) and has been used previously in the family business literature (e.g., Chrisman & Patel, 2012).

The data are longitudinal in nature. To identify founding families and their role in a firm, we examined *Hoover's, ExecuComp*, Fundinguniverse.com, ancestry.com, firm websites, and company proxy statements. Measures related to corporate governance and family business such as family ownership and family management are obtained from annual firm proxy reports. Other variables, including internationalization, come from the Compustat and *Hoover's* databases. To ensure the direction of causality, 1-year lags between the dependent variable and other variables are used, meaning that the independent, moderator, and control variables are measured from 2002 to 2007, whereas the dependent variable is measured from 2003 to 2008.

Missing data reduce the sample size to 4,925, which is unbalanced in nature and includes 758 firms across 7 yearly periods. The sample includes 421 (8.6%) founding generation family business observations, 827 (16.8%) later generation family business observations, and 419 (8.5%) lone founder-controlled business observations. These proportions are comparable to similar studies exploring publicly traded firms in the United States (e.g., Miller et al., 2007).

3.1 Dependent variable

Internationalization is measured as the ratio of foreign sales to total sales, adjusted by industry medians to mitigate industry-specific effects (Pukall & Calabrò, 2014). By law, companies that are publicly traded in North America are required to report the extent of revenues originating from foreign countries. On average, about 35.4% of the total sales come from foreign countries.

3.2 Independent variables

Consistent with our definition of family firms, we use family ownership to measure our independent variables. We measure *family ownership* as the percentage of equity ownership held by family members if: (a) the family has at least 5% ownership; and (b) there are at least two family members who are or have been involved as significant owners, top managers, or directors in the firm's history (Miller et al., 2007). Such a measure signals either the presence of a desire for intra-family succession intention or indicates that intra-family succession intention has occurred in the past (Chrisman & Patel, 2012). In addition, this measure differentiates family firms from lone founder firms—which, by definition, do not have multiple family members involved in the business—and from firms controlled by nonfamily blockholders in which the significant owners are neither family members nor founders (Cannella, Jones, & Withers, 2015).

We build our independent variables by combining family ownership with information about who is in control of the firm. In particular, we differentiate between *founding* and *later generation family ownership* by specifying whether there are second or later generation family members involved in the business as significant owners, top managers, or directors. *Founding generation family ownership* is measured by the extent of family ownership when there is no family member beyond the founding generation, while *later generation family ownership* is measured by the extent of family ownership when there is involvement by second or later generation family members in the firm. Such a classification has been used previously in the family business literature (Miller et al., 2007). Nonfamily firms are all coded as 0 for these two measures.

3.3 Interaction variable

Following Chatterjee and Wernerfelt (1991), we used the ratio of R&D expenses to sales to measure *knowledge-based resources*. We use this variable along with the family generational ownership measures to investigate their interactive effects on internationalization. This variable has been used widely in the family business literature (Chen & Hsu, 2009) and is continuous. The measure reflects that investments in R&D increase the knowledge of the firm. By using a lagged measure of R&D, we capture previous investments in knowledge-based resources that would be available to support a firm's internationalization.

3.4 Controls

Several control variables are included in the analysis to account for alternative explanations: *Family management, TMT size, CEO duality, lone founder ownership, nonfamily blockholder ownership, firm size, firm age, firm risk, past performance, debt ratio, advertisement ratio, plant and equipment newness, inventory ratio,* and *previous international sales*. These controls are related to corporate governance, firm attributes, and firm's strategic actions. Again, all are measured 1 year prior to the dependent variable (time t − 1).

Family management is measured by the number of family members serving in the top management team (TMT). *TMT size* is measured by the number of top managers in the TMT. *CEO duality* is a binary variable (0/1) in which “1” denotes the situation where the CEO also serves as the chair of the board of directors and “0” otherwise. *Lone founder ownership* is measured as a percentage of voting shares outstanding held by a founder where no other family members are involved in the firm (Miller et al., 2007). *Nonfamily blockholder ownership*is measured by the percentage of ownership controlled by nonfamily and non-founder insiders. We used logged annual sales to control for *firm size*. *Firm age* is measured by the number of years the firm has been in existence since founding. *Firm risk* is measured by the standard deviation of stock returns for the previous 3 years. *Past firm performance* is measured by Tobin's *q* in time t −

1, which is a market-based measure of firm performance (Anderson & Reeb, 2004). All of the variables listed above are continuous. We also control for the firm's strategic actions beyond internationalization, such as the *debt ratio* (debt/sales), *advertising ratio* (advertising/ sales), *plant and equipment newness* (net P&E/gross P&E), and *inventory ratio* (inventories/sales). *Previous international sales* is measured as the proportion of international sales to total sales in time t − 1. Descriptive statistics and correlations are shown in Table 1.

Table 1. Descriptive statistics and correlation matrix

	Mean	**S.D.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
1. Internationalization (ratio)	0.35	2.27	1.00																				
2. Founding generation family ownership %	2.31	9.68	−0.01	1.00																			
3. Later generation family ownership %	5.60	16.36	−0.01	−0.04	1.00																		
4. Knowledge-based resource (ratio)	0.04	0.08	0.05	−0.06	−0.12	1.00																	
5. Family management (family TMT member #)	0.31	0.65	−0.03	0.32	0.45	−0.12	1.00																
6. TMT size	5.73	1.18	0.02	−0.09	−0.06	0.00	−0.13	1.00															
7. CEO duality	1.02	1.12	0.03	−0.04	−0.04	−0.09	−0.07	0.14	1.00														
8. Lone founder ownership	1.74	8.22	0.01	−0.05	−0.06	0.09	−0.10	−0.02	−0.07	1.00													
9. Nonfamily ownership	2.09	7.52	−0.02	0.01	−0.03	−0.02	−0.02	−0.05	−0.08	0.03	1.00												
10. Firm size	7.32	1.64	0.03	−0.08	−0.01	−0.28	−0.12	0.23	0.36	−0.12	−0.16	1.00											

11. Firm age	53.06	62.56	0.01	−0.05	−0.01	−0.17	−0.05	0.08	0.17	−0.10	−0.01	0.19	1.00										
12. Firm risk	8.12	10.91	−0.02	−0.02	−0.04	0.11	−0.04	0.00	0.02	0.10	−0.03	0.07	−0.03	1.00									
13. Previous performance	2.18	1.34	−0.03	−0.03	−0.07	0.16	−0.05	−0.05	−0.05	0.12	0.03	−0.16	−0.08	0.19	1.00								
14. Debt ratio	0.03	0.05	0.01	−0.05	0.10	−0.12	0.03	0.02	0.12	−0.05	0.00	0.20	0.09	−0.03	−0.13	1.00							
15. Advertisement ratio	0.01	0.03	0.00	0.09	0.14	−0.05	0.10	0.00	−0.01	0.02	0.05	0.07	−0.02	0.02	0.15	0.00	1.00						
16. Plant newness	0.50	0.14	−0.05	0.01	0.08	−0.23	0.12	−0.01	0.04	−0.05	0.04	0.10	−0.01	0.10	0.00	0.07	0.05	1.00					
17. Inventory ratio	0.11	0.12	0.00	0.12	−0.01	−0.04	0.10	−0.05	−0.01	−0.03	0.03	−0.03	0.06	0.02	−0.18	0.07	−0.02	0.05	1.00				
18. Previous international sales	0.34	2.65	0.02	−0.01	0.01	0.04	0.00	0.05	0.01	0.01	−0.02	0.02	0.00	0.01	−0.02	0.01	−0.01	−0.03	−0.01	1.00			
19. Family trust holdings	0.34	0.47	−0.04	0.32	0.36	−0.07	0.58	−0.14	−0.16	0.16	0.12	−0.16	−0.08	0.02	0.00	−0.05	0.11	0.06	0.08	−0.01	1.00		
20. Family sales ratio by industry	0.17	0.29	−0.04	0.19	0.27	−0.19	0.46	−0.09	−0.07	−0.06	−0.02	−0.05	−0.04	0.03	−0.05	0.02	0.18	0.16	0.13	−0.03	0.35	1.00	
21. Family advertisement ratio by industry	0.17	0.33	−0.03	0.16	0.27	−0.19	0.38	−0.05	0.00	−0.04	−0.03	0.03	−0.02	0.03	−0.04	0.03	0.18	0.12	0.14	−0.03	0.29	0.68	1.00

All correlations above 0.02 are significant at .10 or better for a two-tailed test.

3.5 Instrumental variables

We use three sequential steps to control for the possible endogeneity of family ownership due to unobservable organizational or environmental characteristics that are not captured in the control variables, or reverse causality between independent and dependent variables. First, as noted earlier, we use longitudinal data and apply a 1-year lag between the dependent variable and other variables so that the direction of causality can be ensured. Second, we include previous international sales (t − 1), which further mitigates the influence of reverse causality in the analysis (Arellano & Bond, 1991). Finally, we use the Heckman's (1979) two-stage procedure (e.g., Gómez-Mejía et al., 2007). To do so, we first run a probit model where a family business variable based on a 5% family ownership threshold is the endogenous variable, and we estimate the inverse Mills ratio. We then estimate the regression of internationalization using the inverse Mills ratio from the probit model as another control.

We use three instrumental variables. The first is *family trust holdings* affiliated with the largest owner in the firm in a given year, measured as a binary variable in which "1" indicated that the owner holds either family trusts or foundations and "0" that the owner does not. Indeed, family owners often choose to use trusts or foundations to take care of family members. Family trust holdings can signal the owners' vision for how the firm will benefit the family but should not be related to internationalization. This variable is obtained from annual proxy statements.

The second instrument is the fraction of industry sales that comes from family firms (i.e., *family firm sales/total industry sales*), which is naturally related to the probability that a firm in the industry is a family firm, yet is independent of the second-stage dependent variable (internationalization) because the latter is industry adjusted. Similar measures have been used in previous studies in the family business (Amit, Ding, Villalonga, & Zhang, 2015) and finance literatures (Campa & Kedia, 2002). Similarly, the third instrument is the fraction of advertisement expenditures made by all family firms in a given industry (i.e., *family firm*advertising expenditures */total industry advertisement expenditures)*.

All three instrumental variables are significantly and positively related to family ownership variables. As mentioned earlier, this study uses the Heckman's two-stage approach to control for endogeneity. Model 1 (Table 2) is the first-stage probit treatment model in which the binary variable of family business is regressed against the instrumental variable, moderator, and other controls. The lone founder variable is not included as a control in this model, as it is mutually exclusive from the family business variable. All three instrumental variables are significantly and positively related to the family business variable. Combined, these three instruments are significant (F-statistics = 197.80, $p < .001$). The probit model also shows a reasonable level of model fit (McFadden $R^2 = 0.76$). We conclude that the selection of instrumental variables is appropriate.

Table 2. Fixed effect panel regression on internationalization

	Model 1		**Model 2**	
Dependent variables	**Family business (Family ownership > =5%) Probit regression**		**International sales**	
Variable	**B**	**S.E.**	**B**	**S.E.**
Constant	−1.626***[a]	(0.331)	−0.050	(1.317)
Founding generation family ownership			**−0.004****	**(0.002)**
Later generation family ownership			**0.004****	**(0.002)**
Knowledge-based resources	−4.193***	(0.788)	0.285	(0.866)
Founding generation family ownership × Knowledge-based resources			**0.057***	**(0.027)**
Later generation family ownership × Knowledge-based resources			**−0.114***	**(0.046)**

Family management	1.762***	(0.101)	0.064†	(0.059)
TMT size	−0.050	(0.035)	−0.023*	(0.022)
CEO duality	0.041	(0.036)	0.139	(0.102)
Lone founder ownership[b]			0.028*	(0.017)
Nonfamily ownership	−0.033***	(0.008)	−0.0001**	(0.002)
Firm size	−0.023	(0.029)	−0.208†	(0.051)
Firm age	0.002***	(0.000)	0.037*	(0.026)
Firm risk	−0.011***	(0.003)	−0.002***	(0.001)
Previous firm performance	−0.105**	(0.035)	−0.030*	(0.013)
Debt ratio	1.146†	(0.603)	−0.400	(0.635)
Advertisement ratio	−1.298	(1.432)	1.698	(0.737)
Plant newness	−0.609*	(0.257)	−0.236	(0.448)
Inventory ratio	0.695†	(0.358)	−0.584	(0.165)
Previous international sales	−0.009	(0.010)	−0.103†	(0.074)
Inverse Mills ratio			−0.006*	(0.020)
Family trust holdings	2.307***	(0.102)		
Family sales ratio by industry	0.848***	(0.205)		
Family advertisement ratio by industry	0.233***	(0.057)		
Periods	7		7	
Cross-sections (firms)	758		758	
Sample size (firm-years)	4,925		4, 925	
McFadden R square	0.76			
R square			0.18	
F-statistic			1.56***	
Absolute log likelihood	684.90			

[a] †$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$. Unstandardized coefficients are reported. [b] The variable of lone founder ownership is not included in the probit regression because family business and lone founder firms are mutually exclusive.

4 RESULTS

Due to the nature of longitudinal data, OLS regression analysis is unable to control for both periodic and cross-sectional influences. A Hausman test (chi square = 506.72, $p < .001$) suggests that the fixed effect model is more appropriate than the random effect model for this study. Thus, we use fixed effect panel regression for the analysis. Cross-sectional White estimators are used in controlling for serial correlation and heteroskedasticity. Model 2 (Table 2) reports the regression results.

The inverse Mills ratio (B = −0.006, $p < .05$) is found to be significantly related to the dependent variable, which further demonstrates the appropriateness of our two-stage procedure. Family management (B = 0.064, $p < .10$), TMT size (B = −0.023, $p < .05$), lone founder ownership (B = 0.028, $p < .05$), nonfamily ownership (B = −0.0001, $p < .01$), firm size (B = −0.208, $p < .10$), firm age (B = 0.037, $p < .05$), firm risk (B = −0.002, $p < .001$), previous performance (B = −0.030, $p < .05$), and previous international sales (B = −0.103, $p < .10$) are significantly related to internationalization.

In support of H1 and H2, family firm ownership held by the founding generation (B = −0.004, $p < .01$) has a negative impact on internationalization, while family firm ownership held by later generations has a positive impact on internationalization (B = 0.004, $p < .01$).

Both H3a and H3b are supported. Knowledge-based resources are *positively* related to internationalization as the level of ownership by the founder generation of a family increases (B = 0.057, *p*-value < .05) and is *negatively* related to internationalization as the level of ownership by later generations of a family increases (B = −0.114, *p*-value < .05). Figure 1 offers a graphical representation of the findings. At relatively low levels of knowledge-based resources, ownership by founding generation family members is associated with lower internationalization, whereas ownership by later generation family members is associated with higher levels of internationalization. Nevertheless, as knowledge-based resources increase, firms owned by the founding generation of a family show a greater increase in internationalization than firms owned by later generations. When knowledge-based resources reach a relatively high level, founding family ownership is associated with higher internationalization compared to later generation family firms.

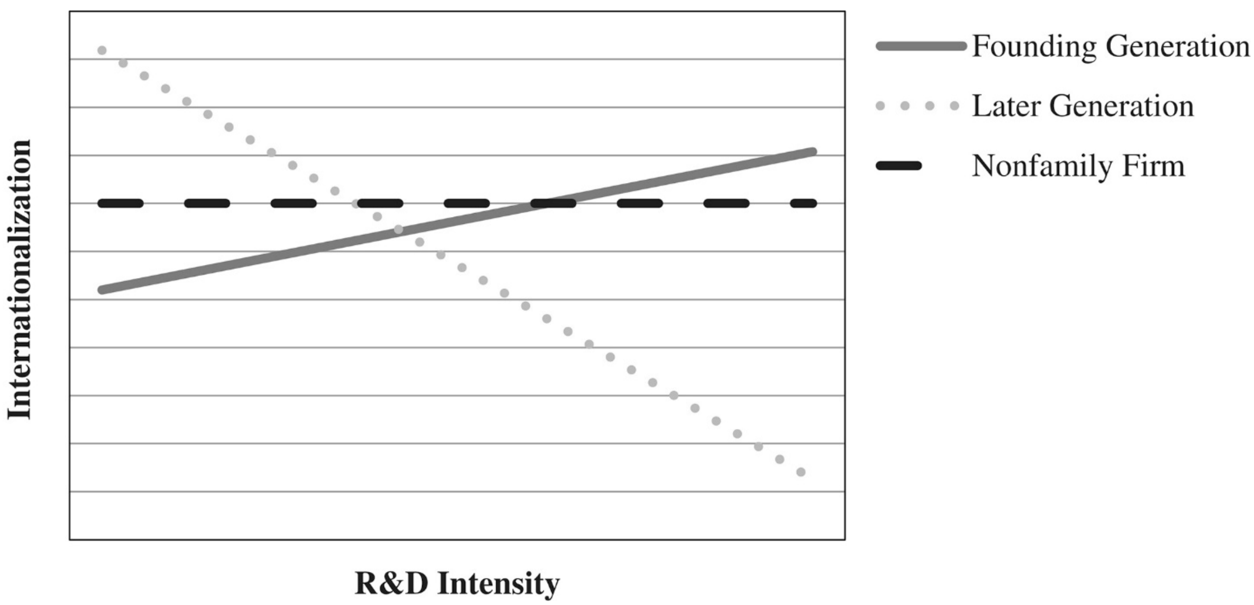

Figure 1

The joint effects of founding and later generation family firms and R&D intensity on internationalization *Notes*: Founding and later generation are plotted based upon means of founding and later generation family ownership. Insignificant estimated coefficient of knowledge-based resource is treated as 0

4.1 Robustness tests

We ran additional tests to investigate the robustness of our results. First, instead of using family ownership, we use binary measures of founding and later generation family business, classified by the 5% family ownership threshold. Such an approach may overlook the fact that the execution of the owning family's "willingness" is dependent upon the extent of the family's ability (ownership). Nonetheless, the results are qualitatively consistent with the primary analysis. However, although the signs of the coefficients for the founding generation family business variable and its interaction with knowledge-based resources are the same, the coefficients become insignificant. In a second robustness test, we use international asset investments instead of international sales as our dependent variable. Since the Compustat database does not include a measure of international asset investments, we collected those data from the Thomson Reuters database. We then replicated the analysis using 377 firm-year observations from the S&P 500 from 2002 to 2007. In this case, the regression results are consistent with our primary results in both the signs and significance of our variables, providing further support for our main regression results.

5 DISCUSSION AND CONCLUSIONS

The contention of our study is that firms governed by founding family owners differ from firms governed by later generation family owners as well as from firms with nonfamily governance in their goals and the strategies used to achieve those goals. In other words, we argue that various aspects of goals, governance, and resources are primary sources of family firm heterogeneity (Chua et al., 2012). We respond to calls for studies on how the adoption of family goals change across different generations of family ownership (Berrone et al., 2012). At the same time, our results help reconcile some mixed findings in past research (e.g., Arregle et al., 2012; Gomez-Mejia et al., 2010; Sciascia, Mazzola, Astrachan, & Pieper, 2012) by offering a more complete view of the influence of family ownership on internationalization. In sum, this study provides a better understanding of how different types of family owners and managers influence internationalization, as well as the heterogeneity of family firms' behavior (Chrisman & Patel, 2012). In other words, this study shows that considering *how much* an owning family is able to influence firm behavior does not adequately capture *how* that influence is exercised (Chrisman, Fang, Kotlar, & De Massis, 2015) because how the influence of family ownership translates into firm behavior is likely to vary in *type* as well as *degree* according to the goals of key family stakeholders, their power to govern the firm in a particularistic way, and the amount of resources available to pursue those goals.

Longitudinal regression analyses based on 758 of the S&P 1500 manufacturing firms covering 4,925 firm-years of data from 2002 to 2008 yields several important and interesting insights. First, we found that founding generation family ownership is negatively associated with internationalization, whereas later generation family ownership has the opposite effect. Second, we found that knowledge-based resources moderates these relationships in nonobvious ways. Family firms with founding generation ownership and high levels of knowledge-based resources appear more willing to use those resources to pursue internationalization than family firms owned and managed by later generations.

These findings contribute to the family business and knowledge-based view literature in several ways. First, most previous family business studies seem to assume that the willingness of family firms to pursue specific strategic behaviors is invariant and all that matters is their ability to do so. By investigating the internationalization of family firms owned by founders versus later generation family members, we demonstrate that strategic behaviors can vary substantially among different types of family firms, implying that their mix of economic and noneconomic goals are also highly variable (e.g., Chrisman & Patel, 2012; Kotlar, Signori, De Massis, & Vismara, in press).

Second, we demonstrate that the use of knowledge-based resources from R&D investments can influence firms' internationalization and moderate the relationship between those strategies and the amount of family ownership held by different types of family firms.

Third, the standard premise is that SEW reduces a family firm's willingness to assume risk and adopt innovative firm strategies. We make a similar argument when hypothesizing about the relationship between founding family ownership and international strategy. Nevertheless, we argue and show that family firms owned and managed by the founding generation with high levels of knowledge-based resources may be better suited and more likely to effectively implement international strategies. Hence, our results point to a *paradox*concerning founding and later generation family firms: founding generation family firms generally appear to be less willing to internationalize, but more willing as the level of knowledge-based resources increase; conversely, later generation family firms are generally more willing to internationalize, but this willingness declines as knowledge-based resources increase. We argue that in the case of founder-owned firms, as the levels of knowledge-based resources increase, their concern for the positioning of the firm they will pass on to future generations rises commensurately, representing a convergence of economic and noneconomic goals. But, we argue that increased levels of knowledge-based resources exacerbate the potential for principal-principal conflicts among relationally distant later generation owners (i.e., family members are more likely to fight the more there is to fight about), thereby reducing propensities to internationalize. This intriguing set of findings not only sheds light on the heterogeneity of family firms, but offers important opportunities for further research on the discordant influences of different family owners related to strategic decision making.

5.1 Limitations and future research directions

Despite the contributions of this study to the family business, knowledge-based view, and internationalization literatures, it is also important to acknowledge its limitations. First, we used a sample of firms listed in the S&P 1500 (and the S&P 500 in a robustness test), suggesting that our data may restrict the generalizability of our findings in a global context. It has been noted that the spillover of knowledge and mobility of employees are both determined by contextual conditions (Campbell, Coff, & Kryscynski, 2012). Hence, our findings may be contingent upon the external environment. Future research could examine our model across different countries, especially those with varying legal regimes (e.g., common versus civil law).

Second, we test our hypotheses using a sample of publicly traded firms. Although S&P data are commonly used to explore strategic decision making in family firms (e.g., Block, 2010), we recognize that the generalizability of our findings may be limited to large firms only. We encourage scholars to examine internationalization in small- and medium-sized and privately held family firms.

Third, we measured knowledge-based resources based on prior investments in R&D. Although such investments can certainly increase knowledge-based resources, other forms of investment in innovation are possible. For example, Patel and Chrisman (2014) measure exploratory versus exploitative innovation as well as patents in their study of the risk abatement R&D strategies of family firms. Knowledge resources and entrepreneurial inclinations can also be represented by other variables such as the background and characteristics of the top management team (cf., Pérez-González, 2006; Sirmon & Hitt, 2003). Future studies should consider a broader array of variables to capture the development and use of knowledge resources in family firms.

In addition, the findings may vary by time period. For example, 2007–2008 represented the start of a major recession, which may have subsequently altered the preferences and strategies of family firms. Therefore, we welcome future research on different time periods.

Aside from the future research directions suggested in the discussion of findings and limitations, there may be other factors that affect internationalization in publicly traded family firms. The imminence of succession (Chua, Chrisman, & Sharma, 2003) and the family firm incumbents' attitudes toward intra-family succession (De Massis, Sieger, Chua, & Vismara, 2016) are two. The effects of generational differences on internationalization might also vary in family firms depending upon other variables such as their entrepreneurial orientation (Dess & Lumpkin, 2005; Dess, Lumpkin, & McGee, 1999; Lumpkin, Wales, & Ensley, 2007).

Furthermore, internationalization in family firms might vary depending upon the top management team, board composition (Anderson & Reeb, 2004), board independence (Klein, Shapiro, & Young, 2005), leadership styles (Bass, 1990), social capital (Sirmon & Hitt, 2003), strategic networks (Arregle, Hitt, Sirmon, & Very, 2007), and a host of other factors. Although partially captured through our control variables, these contingencies suggest additional ways in which the willingness, ability, and knowledge-based resource perspectives can be applied to study the goals, governance, and resources of family firms.

Finally, internationalization may take many forms (e.g., joint ventures, foreign acquisitions, foreign direct investments, etc.). Future work is needed to determine whether the preferences for different methods of international expansion of family and nonfamily firms, as well as different types of family firms, vary in a systematic way.

ACKNOWLEDGEMENTS

We are grateful to the associate editor and the three anonymous reviewers for their helpful comments and guidance.

- 1Family firms are defined by a family's involvement in a firm, which allows it to pursue family-centered goals as well as utilize family-based resources in its strategic initiatives (Bennedsen, Pérez-González, & Wolfenzon, 2010; Chua, Chrisman, & Sharma, 1999).
- 2The terms noneconomic goals and socioemotional wealth are used interchangeably in this study since achievement of the former creates the latter and the latter influences the former (Berrone et al., 2012; Chrisman et al., 2012; Chrisman, Memili, & Misra, 2014).

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