Entrepreneurial Risk Taking in Family Firms

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Family firms are widely recognized as a major source of technological innovation and economic progress. Yet, over time, some family firms become conservative and unwilling to take the risks associated with entrepreneurial activities. Adopting a broad definition of entrepreneurial risk taking, this study uses agency theory to highlight key correlates of risk taking among 209 U.S. manufacturing family firms. The results show that family ownership and involvement promote entrepreneurship, whereas the long tenures of CEO founders have the opposite effect. These results urge managers to capitalize on the skills and talents of their family members in promoting entrepreneurship and selective venturing into new market arenas.

Family businesses play an important role in creating employment, generating innovative technology, and improving our quality of life (Astrachan, 2003). These companies are also essential for incubating and financing new businesses. Astrachan, Zahra, and Sharma (2003), using data from multiple countries, conclude that family businesses are a key source of funding for new startups that create employment and promote economic and technological progress. These researchers note that the ownership structure of the family business ensures an effective alignment between the goals of the firm and its owners. Family firms' ownership structure also leads to continuity, encouraging their patient investment in developing radically new business and technologies. Long-term planning horizons also pervade family firms' thinking about the future, enabling them to maintain enduring relationships with key stakeholders. These enduring relationships can expedite these firms' recognition of opportunities as well as ways of exploiting to create value for the family and society. These factors have led some to conclude that family businesses are a hospitable environment for entrepreneurial activities (Aldrich & Cliff, 2003; Rogoff & Heck, 2003).

Other researchers have expressed concern that, over time, some family firms become resistant to change and follow conservative strategies that limit their future growth and profitability (e.g., Shepherd & Zahra, 2003). Some founders stay in control for a long period of time, giving little or no attention to grooming capable lieutenants who could assume leadership of the family firm. Founders also favor their own children and other family members, failing to fully integrate and retain competent employees who are not blood relatives. Nonfamily employees and family members who disagree with owners may also find it difficult to stay with the company. Over time,

these departures leave the owner and supporters in control of the firm. When this happens, the organization might experience "strategic simplicity," wherein routines that worked well in the past are used again and again regardless of the strategic challenges facing the family firm (Miller, 1993).

Of course, not all family firms are susceptible to the failings or ills of strategic simplicity. Some family firms have cultures that welcome and reward entrepreneurship (Zahra, Hayton, & Salvato, in press). Others undertake domestic and international strategic alliances to upgrade their existing capabilities or to acquire and develop new skills that expand their growth options. These are important but risky moves for many family firms—ones that require significant resource allocations and demand major changes in these companies' internal decision-making processes, without significant guarantees of financial success. The risks of failure in introducing a new product, entering international markets, or joining strategic alliances are substantial, even for experienced companies.

Objectives and Focus

This article asks the question: Under what conditions do family firms encourage entrepreneurial activities? To answer this question, the article empirically links several family-firm related variables to key strategic choices companies often follow to survive, increase revenue, make profits, and achieve growth. Family firm variables explored include whether the founder serves also as CEO, the length of the founder's tenure, the owner family's involvement in the business, and the cohesiveness of the family's culture. These variables reflect a growing recognition that family firms' ownership matters a great deal in explaining their behaviors (Steier, 2003). Consistent with this view, the article applies agency theory to develop and then empirically test two radically different scenarios of the potential effects of these variables on entrepreneurial risk taking within family firms.

The article contributes to the family business literature in two ways. The first is by exploring several family and ownership-related correlates of entrepreneurial risk taking. Although researchers continue to tout the importance of family-related variables (Astrachan et al., 2003), the exact link between these variables and entrepreneurial risk taking is not well understood. The article offers a glimpse into these relationships, providing an empirical foundation for future research and analyses. The article's second contribution is highlighting the importance of entrepreneurial risk taking within family firms, a topic that has not been systematically studied. We need to understand why certain family firms are willing to engage in such activities when others do not. This study offers an empirical attempt to isolate variables of potential importance in this regard.

Theory and Hypotheses

Entrepreneurial Risk Taking and Family Firms

Family firm managers experience different types of risks as they lead their organizations. One of the most common is business risk that results from the variability in a firm's performance. Some of this risk is industry related, reflecting the pace of change in a firm's competitive landscape. Waves of technological, economic, and social change significantly influence the stream of a company's

earnings. Another part of this risk is firm related, reflecting the unique qualities of the firm and its senior decisionmakers. Family firms have idiosyncratic assets, cultures, and managerial processes that induce uncertainty about the consistency of their earning streams. The intangible qualities that create the “familiness” quality of these firms (Habbershon, Williams, & MacMillan, 2003; Zahra et al., in press) can be a source of this uncertainty.

An important source of risk is the nature of the entrepreneurial activities that family firms undertake in their operations. Entrepreneurship centers on recognizing and exploiting opportunities by reconfiguring existing and new resources in ways that create an advantage. Pursuing such opportunities is risky because their duration and the payoff from them are unknown. Family firm managers who combine resources in new ways do not know a priori which combination will succeed in creating value. These managers have to experiment with different combinations of resources, hoping to uncover a successful recipe that they can use to generate new products, goods, or services. This experimentation is time consuming, expensive, and risky. Even when managers succeed in identifying a winning recipe, protecting the competitive advantage their firms could gain is hard because imitation is commonplace.

As the above discussion makes clear, risks—perceived and real—abound at every stage of the entrepreneurial process. Still, family firm managers understand that entrepreneurship is essential for creating new business, renewing its operations, and building organizational capabilities that improve the company’s responsiveness to the market (for a review, see Zahra, Jennings, & Kuratko, 1999). Entrepreneurship requires recombining various tangible and intangible resources to ensure innovativeness and proactiveness throughout a company’s diverse operations (Sathe, 2003). This process of recombining resources is important for achieving efficiency and conceiving new activities that generate new revenue streams for the firm and its owners. This ongoing process can unfold in ways that can profoundly alter the character and mission of the firm, if not its identity (Hall, Melin, & Nordqvist, 2001).

Entrepreneurship is important for creating and sustaining the firm’s internal “generative capability,” defined as the capacity to renew a firm’s operations through radical innovation in order to create new capabilities. The process of capability building is complex, as several organizational and technological skills have to be integrated. Coordination requires understanding where and how the firm will compete and communicating this vision to members of the organization. New capability building is complicated also by the fact that the firm’s existing systems and routines have to be revamped, upgraded, or even revised. Moreover, building new capabilities might require significant unlearning on the part of the organization and its leadership. These changes can strain existing structures and relationships within the family firm. It might also require a reexamination of existing relationships with the firm’s various stakeholders. The various entrepreneurial initiatives that accompany new capability building, though exciting, may not always lead to successful performance. The market has its own logic and it often determines which capabilities it will reward.

Entrepreneurial activities, as used in this research, are broader in scope than simply using

debt or changing the firm's capital structures, a commonly used proxy for risk taking in some prior family firm research (e.g., Schulze, Lubatkin, & Dino, 2003). The broad definition adopted in the current research highlights those activities that are important for a family firm's renewal and building new capabilities that enable it to pursue new opportunities at home and abroad. It acknowledges the serious tensions that develop within the family firm between the need for change and stability. It also recognizes the importance of entrepreneurship as an antidote to strategic simplicity.

Strategic simplicity is a pathological cognitive condition that causes some managers to overuse ready-made solutions without probing the assumptions underlying the decisions they make (Miller, 1993). Consequently, the firm either fails to act or acts in predictable ways that leave it vulnerable to attacks by more innovative and aggressive rivals. Even when the family firm attempts to counter these competitive attacks, its strategic arsenal is severely limited because of overuse of exiting organizational skills and the limited experimentation with new skills that it could deploy to outmaneuver its competitors. Further, strategic simplicity can fatally undermine the family firm's ability to explore new ideas, innovate, or accept the risks associated with venturing into domestic and foreign markets and industries. Conservatism can undermine the family firm's long-term financial performance and erode its competitive position.

Agency Theory and Risk Taking in Family Firms

Agency theory was born out of the recognition of the growing separation of ownership and control of the larger publicly held corporations (Meckling & Jensen, 1976). A key premise of the theory is that agents (hired managers) have values and goals that differ considerably from their principals (owners). This divergence of goals leads to differences in the priorities attached to different issues or stakeholders (Fama & Jensen, 1983). A central tenet of the theory is that managers' ultimate mandate is to run the organization in a way that maximizes shareholders' value. Yet, disagreements persist in the literature about the definition of shareholders' value and how it could be maximized (Agle, Mitchell, & Sonnenfeld, 1999). To some, this means only maximizing the firm's profits. To others, it means that managers need to reconcile the competing expectations and demands of their different stakeholders.

Some agency theorists believe that family firms represent an ideal organizational form where the objectives of the owner and the firm are aligned (Randøy & Goel, 2003; Schulze et al., 2003). This close alignment ensures effective decision making, perpetuating the continuity of the firm. Agency theorists also note that owners are usually positioned and empowered to make key decisions with an eye on the long term, either because founders want to create a legacy that survives them or because they wish to maximize their families' wealth. Owner-managers, therefore, will act as stewards of their firms' resources by deploying them in ways that create wealth (Steier, 2003). Under this scenario, owner-managers are expected to invest in building the firm's operations and pursue promising entrepreneurial opportunities at home or abroad. Consistent with this view, owner-managers are expected also to support radical innovations that enhance organizational growth, utilizing the firm's own resources

or by joining alliances with companies within or from outside their industries. These alliances bring in more new knowledge, resources, and capabilities. Alliances also provide opportunities to reconfigure the firm's value chain and compete effectively, overcoming strategic simplicity. Through example and action, owner-managers will create a culture that welcomes and promotes calculated entrepreneurial risk taking (Zahra et al., in press).

Four key variables related to founders and their families are expected to influence entrepreneurial risk taking: founder's service as CEO, founder's tenure, family ownership stakes, and family involvement in the company's operations. Reviewing the literature, especially agency theory–based studies, leads to contradictory conclusions about the impact of these variables on entrepreneurial risk taking, as discussed next.

The founder-CEO duality

In many family firms, founders retain their leadership by serving also as the chief executive officers (CEOs). Founders create their companies for a variety of reasons, including making a living, creating jobs for themselves relatives and friends, and leaving an important legacy for their family. As with other entrepreneurs, the need for achievement is high among family business founders, which often compels them to explore innovative ideas and take calculated risks. Serving also as CEOs, founders usually have the formal and informal powers that allow them to devote necessary resources to explore promising ideas and implement them in a timely fashion. The effective alignment of interests between founders and their organizations also makes taking calculated risks worthwhile. Understandably, founders are often more innovative than other managers who follow them in leading the organization. These observations suggest the following hypothesis.

Hypothesis 1a. Being a founder and CEO is positively associated with risk taking.

Duality, as described above, has serious shortcomings. Highly independent in their thinking and action and dedicated to the survival of their companies, some founders may rule their organization without input from others. This can limit the types and quality of information founders receive about potential opportunities in their industries or elsewhere. Further, founders are often concerned about the survival of their firms and protecting their legacy for future generations. Consequently, founder-CEOs might shy away from investing in new business development or venturing activities. Some founder-managers would act in ways that create serious agency problems that reduce the firm's willingness to take risks or undermine its existence (e.g., Schulze, Lubatkin, Dino, & Buchholtz, 2001). Some founder-managers place their own needs ahead of the well-being of their organizations. They may also centralize the decision making in the firm to the point that it paralyzes their employees and reduces their ability to undertake entrepreneurial activities. Other founder-managers may provide little political or financial support for experimental innovative ventures. These observations suggest the following alternative hypothesis.

Hypothesis 1b. Being a founder and CEO is negatively associated with risk taking.

Founder tenure

Founder-CEOs often enjoy long tenures and accrue significant formal and informal powers.

With their control so firmly established in their organizations, founder-managers can orchestrate, nurture, and support promising entrepreneurial initiatives. Knowing that they are at the helm of the firm for the long run, these managers are apt to focus on those innovative activities that can rejuvenate their firms' operations and improve their competitive positions. Paramount among these activities is creating an organizational culture that fosters a willingness to take calculated risks. Founders with long tenures are more apt to invest in building the relationships, systems, and infrastructure necessary to make risk taking possible. These observations suggest the following hypothesis.

Hypothesis 2a. Long CEO tenure is positively associated with risk taking.

Some research indicates that as CEO tenures increase, companies become less willing to support or pursue entrepreneurial initiatives. Hambrick and Finkelstein (1987) observe that longer CEO tenures are conducive to strategic conformity and compliance with industry norms and practices, rather than upsetting the status quo through entrepreneurial activities. When founders serve also as CEOs, employees are unlikely to challenge their views of the industry and competition. This problem is compounded by the fact that, as CEO tenures advance, their sources of information become "increasingly narrow and restricted, and the information is more finely filtered and distilled" (Finkelstein & Hambrick, 1996, p. 82). This can deprive the firm of a key, indeed vital, source of information that can stimulate entrepreneurial activities. These observations suggest the following alternative hypothesis.

Hypothesis 2b. Long CEO tenure is negatively associated with risk taking.

Family ownership

Agency theorists suggest that as ownership increases, a greater alignment between the owner and the firm is achieved (Fama & Jensen, 1983; Meckling & Jensen, 1976). This alignment is likely to happen when a family owns a large share of the family business. Alignment of interest between the firm and the family should encourage the exploration of innovative ideas that stimulates growth and improves performance. Members of the owner family have an incentive to do this in order to improve the value of their shares, create opportunities for employment for themselves and their children, and protect the family firm from aggressive competitors. Ownership also gives the family power to bring forth ideas for innovation and strategic change and have them formally examined and implemented in a timely fashion. These observations suggest the following hypothesis.

Hypothesis 3a. Higher family ownership is positively associated with risk taking.

Families that own a large percentage of shares may also exercise their voice by preventing or sabotaging radical changes that might change their company's mission and strategic direction. Strategic change is risky and requires significant investments in redesigning the firm's culture, processes, and organizational structures. Companies often have to make these changes without any guarantees of financial success. As the family's ownership stake increases, it might become difficult to support the major organizational changes necessary to promote entrepreneurship. With the family's wealth so closely tied to the company's

future, the desire to support radical changes (e.g., investments in unproven and emerging technologies or venturing into foreign markets) is likely to decline. These observations suggest the following alternative hypothesis.

Hypothesis 3b. Higher family ownership is negatively associated with risk taking.

Family involvement

Owner-managers often involve other family members in the business (Aldrich & Cliff, 2003; Olson et al., 2003). This involvement improves family members' understanding of the competitive challenges and opportunities facing the company. This also enables the family to explore various alternatives, discuss the risks associated with these options, and decide how to best execute the chosen strategy. Consistent with this view, a recent study of internationalization observes that family involvement leads to better sharing (and bearing) of risks (Zahra, 2003). This is likely to occur when the family owns a large percentage of the firm's shares because ownership provides an incentive to share the risks associated with entrepreneurial risk taking. These observations suggest the following hypothesis.

Hypothesis 4a. Family involvement is positively associated with risk taking.

One of the persistent challenges some family firms face is to fully integrate nonfamily employees into the business. When family members are heavily involved, nonfamily employees may feel excluded from key decisions and they have little discretion or freedom to act. These employees also have to go through family members to secure support for their ideas. If family firm employees feel isolated or their voices are not sufficiently heard, they may withdraw and not explore entrepreneurial opportunities that can help their firms grow and achieve profitability. This isolation may lead some nonfamily employees to leave the company—depriving the business of a rich source of ideas for innovation and entrepreneurial risk taking. Under this scenario, the family's involvement in the business becomes a barrier to successful adaptation by displacing talented nonfamily employees. These observations lead to the following alternative hypothesis.

Hypothesis 4b. Family involvement is negatively associated with risk taking.

Method

Data collected from 209 companies that classified themselves as family firms were used to examine the above two competing scenarios and test the hypotheses. Initially, the largest 50 and smallest 50 companies from 20 different manufacturing industries were identified from *Compustat Research Insights* (1999). Thus, 2,000 companies were targeted in the survey. This design introduced a high degree of variability in industry types and structures as well as company size and profitability. Two mailings were used, yielding 497 completed replies, for a response rate of 24.85%. The t and X^2 tests were used to establish the representation of the sample to its population based on known attributes such as size (assets and employees), performance (return on assets), age (in years), and state where the company was located. There were no significant differences between responding and nonresponding companies on these variables.

The survey targeted the company's CEO or highest senior executive, who are usually the most informed people about the companies' entrepreneurial and strategic operations (Zahra, 1991). The survey focused on key managerial activities in order to minimize respondents' faulty recall. Data from secondary references were also used to validate the measures developed based on the survey. Copies of the original survey were sent also to a second senior manager from the responding companies. Two mailings yielded 141 completed responses, which were then matched with original replies from CEOs. A simple correlation between these two sets of extensive responses was 0.60 ($p < 0.001$). This modest but significant correlation indicated a high level, although imperfect, agreement between senior informants. As Finkelstein and Hambrick (1996) observe, managers pay attention to very different parts of their firm's business environment. Personality and value variables also attenuate differences in executive respondents' perceptions, views, and beliefs.

Identification of Family Firms

Researchers disagree on what constitutes a family business (Chua, Chrisman, & Sharma, 1999; Litz, 1995; Sharma, Chrisman, & Chua, 1996, 1997). Consequently, this study adopted a two-step approach to identify family firms. The first step examined companies' responses to the question: "Is this company family owned?" A total of 209 firms responded affirmatively to this question. The second step examined responses received from the survey and classified firms whose equity was owned by a family. This process identified 241 firms. The 209 that described themselves as family firms were also identified in the second step. Given these different figures, it was decided to err on the side of conservatism by examining the smaller set of firms ($N = 209$).

Measures

Data gathered from the 209 family firms were used to construct the study's measures. Further, secondary sources were used to validate the survey-based measures, as described next.

Dependent variables: Measures of entrepreneurial risk taking

This study used six measures of entrepreneurial risks. Joining alliances, whether domestic or international, can be risky and might undermine the firm's market position by leaking information to the competition. Developing new markets at home or in other countries is an expensive and long-term process that may not bear fruit. The firm's existing skills also may not transfer well to these new markets. Similarly, investing in new and emerging technologies may not pay off because they may not reach commercialization or the market may fail to accept them. By canvassing these varied activities, the study has sought to capture the difficult choices family firm managers make as they position their operations. The study's measures were as follows.

1. *Use of domestic alliances*. A four-item index ($\alpha = 0.70$) gauged the firm's use of domestic alliances. Items followed a five-point Likert-type scale (5 = very true vs. 1 = very untrue), with a neutral point in the middle (3). Items were as follows: "This company has made extensive use of alliances and joint ventures in: (a) Marketing; (b) Distribution; (c) Research & Development; and (d) Production." Responses to the four items were summed and the

total was divided by 4. The resultant simple mean was used in the analyses. To establish the validity of this index, company announcements of domestic alliances over the three years of the study were collected. This data came from trade associations and company websites. Data were available for 81 companies. The total number of announcements of domestic alliances was then correlated with the index ($r = 0.61$, < 0.01), supporting the validity of the study's survey based measures.

2. *Use of alliances in foreign markets.* A four-item index ($\alpha = 0.72$) also captured a firm's use of alliances in foreign markets. Items followed a five-point Likert-type scale (5 = very true vs. 1 = very untrue), with a neutral point in the middle (3). Items were as follows: "This company has made extensive use of alliances and joint ventures to: (a) Enter foreign markets that are new to the firm; (b) Expand in existing foreign markets; (c) Manufacture products abroad; and (d) Sell its products abroad." Responses to the four items were averaged and used in the analyses. To validate this index, company announcements of foreign alliances over the three years of the study were collected from trade associations and company websites. The total number of announcements of foreign alliances was then correlated with the index ($r = 0.63$, $N = 76$, < 0.01), supporting the validity of the study's measure.

3. *Entering new domestic markets.* Managers' responses to a survey item captured a firm's entry into new domestic markets. The survey item was: "How many new domestic markets has your company entered over the past three years? ____ Markets."

4. *Entering new foreign markets.* Managers' responses to a survey item also captured a firm's entry into new foreign markets. The survey item was: "How many new foreign markets has your company entered over the past three years? ____ Markets."

5. *Investment in emerging radical technologies.* A five-item index ($\alpha = 0.69$) measured this variable. Items followed a five-point Likert-type scale (5 = a great deal of emphasis vs. 1 = little or no emphasis), with a neutral point in the middle (3). Items were: (a) Acquiring radically new technologies developed by other U.S. firms; (b) Acquiring radically new technologies developed outside the United States; (c) Investing in developing emerging technologies; and (d) Supporting experimental R&D on emerging new technologies. Items were developed based on prior research (Christensen & Raynor, 2003; Zahra, 1991).

6. *Radical product innovation and introduction.* A five-item index ($\alpha = 0.67$) was used to capture this variable. Items followed a five-point Likert-type scale (5 = a great deal of emphasis vs. 1 = little or no emphasis), with a neutral point in the middle (3). Items were: "To what extent has your company focused on the following activities over the past three years? (a) Developing radically new products; (b) Introducing radically new products to the market; (c) Incrementally upgrading existing products (reverse scored); and (d) Leading the industry in introducing breakthrough products to the market." Items were extracted from prior research (Christensen & Raynor, 2003; Zahra, 1991). Data on new product announcements were available for 79 companies; information came from trade publications, newspapers, and websites. These announcements were coded into radical versus incremental innovations. The number of radical innovations was then correlated with the study's measure ($r = 0.66$, $N = 79$, $p < 0.001$).

Predictor (family-related) variables

The following four measures were constructed to capture the study's independent variables, using information obtained from the survey.

1. *CEO is also the founder* was measured using dummy codes (yes = 1; no = 0).
2. *CEO tenure* was measured by the number of years the current CEO held this position.
3. *Family ownership* was measured by the percentage of company stock held by the owner family, as is consistent with prior research (Sharma et al., 1996; Zahra, 2003).
4. *Number of family generations* involved in the business was measured using responses to the survey items: "Currently, how many generations of the owner family is participating in the company's business? Please Circle ONE response only: 1 2 3 4 or more."

Control variables

The analyses also controlled for the variables that could influence the association between ownership and entrepreneurial risk taking.

1. *Company age*. Older companies are often unwilling to change (Sathe, 2003). Yet, the need to enter new markets increases with company age. Venturing enables older firms to avoid inertia and build new capabilities that improve performance (Zahra, 1991). In this study, company age was measured by the number of years the firm has been in existence. Data came from *Compustat Research Insights* as well as company and trade publications.
2. *Company size*. Larger companies might resist change and innovation (Sathe, 2003). These bureaucratic organizations subject ideas for new ventures and radical innovation to detailed and iterative reviews, stifling entrepreneurial ventures (Sathe, 2003). However, larger companies usually have slack resources that encourage entrepreneurial activities. Larger family firms also have well-established connections within and outside their industries, making it possible for them to join strategic alliances and intensify entrepreneurial activities. In this study, the natural log of full-time employees measured a company's size. Data came from *Compustat Research Insights* as well as from company and trade publications.
3. *Past performance*. Successful past performance can reduce managers' willingness to change or pursue entrepreneurial activities. When companies are doing well, their managers may have little or no incentive to disrupt the status quo. However, successful past performance provides the slack resources that encourage managers to explore new strategic options. Family firms that are doing well are also likely to attract domestic and foreign alliance partners. In this study, a family firm's average return on assets (ROA) over the preceding three-year period measured past performance. Data came from *Compustat Research Insights* and company publications.
4. *Industry growth*. In growing industries, opportunities are abundant and managers seek to harvest these opportunities by building new capabilities by undertaking entrepreneurial activities (Zahra, 1991, 1996). This study measured growth by the change in an industry's sales over the past three years. Data came from *Compustat Research Insights.*

Analysis and Results

Table 1 presents the means and standard deviations for the study's variables. The 209 family firms averaged 890 employees (*SD* = 1,289), were

Table 1 Means, Standard Deviations, and Intercorrelations Among the Study's Variables[1]

Variables	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Invest in emerging tech.	2.87	1.45													
2. Radical product innovation	2.65	1.61	0.43												
3. New domestic markets	1.7	0.82	0.37	0.23											
4. Foreign markets (logged)	0.89	1.78	–0.09	–0.29	0.44										
5. Domestic alliances	1.45	1.02	0.38	0.31	0.29	–0.19									
6. International alliances	0.62	0.81	0.23	0.20	–0.08	0.43	0.27								
7. CEO is also founder	0.68	0.31	0.09	0.18	0.23	0.29	0.09	0.12							
8. CEO tenure	14.13	10.72	–0.39	–0.29	–0.29	–0.20	–0.29	–0.24	0.43						
9. Family ownership	26.94	23.81	0.23	0.30	0.25	0.31	–0.34	–0.29	0.37	0.29					
10. Generations in business	1.89	1.06	0.37	0.34	0.13	0.18	0.17	0.24	0.12	0.19	0.26				
11. Company age	30.98	24.41	–0.41	–0.23	0.32	0.28	0.31	0.29	0.31	0.33	0.39	0.41			
12. Company size	890.21	1289.0	–0.30	–0.29	0.31	0.27	0.28	0.31	0.23	–0.05	0.31	0.39	0.28		
13. Past ROA	4.56	7.91	0.33	0.31	0.40	0.31	0.27	0.26	0.26	0.27	0.21	0.20	0.24	0.19	
14. Industry sales growth	3.91	7.16	0.39	29	–0.30	–0.28	0.30	0.28	0.21	0.11	0.008	10	0.09	0.13	0.27

[1] Simple correlations of 0.13 or higher are significant at $p < 0.05$.

about 31 years of age (SD = 24), achieved an average sales growth rate of 3.9 (SD = 7.16) percent, and reported an average return on asset of 4.56% (SD = 7.91). The founder also served as CEO of 68% of the companies, averaging 16 years in tenure (SD = 17). Families owned nearly 26.94 (SD = 23.81) of these companies' equity.

Given that some of the variables were skewed, their original values were logged. In addition, because differences in ranges and types of measures used might influence the results, all variables were standardized (mean = 0; SD = 1) based on the company's main four-digit SIC group. The exception was the industry sales growth where standardization was based on the samplewide average. Table 1 displays the intercorrelations among the variables; correlations were based on standardized values. An examination of the magnitude of the correlations suggests that the study's measures of entrepreneurial risk taking are interrelated, as would be expected. The correlations among the study's predictors also show a lack of statistical independence. In this case, canonical analysis (CANCOR) is the appropriate analytical tool; it is most useful when a set of variables is applied to predict or explain another set of variables (Hair, Anderson, Tatham, & Black, 1998).

CANCOR produces multivariate functions whose number cannot exceed the number of the variables in the smaller set (in this case, the dependent variables). In this case, CANCOR generated three statistically significant functions ($p < 0.05$ or better), as shown in Table 2. The other functions were not significant and therefore are not reported. The key to interpreting the results of canonical analysis was the loadings, also known as structure coefficients (Hair et al., 1998). Loadings reflected the correlation between a given variable and the canonical function. Canonical loadings with absolute values of 0.40 and higher were significant; they were interpreted in a manner that is similar to the more familiar factor loadings. These loadings are bolded in Table 2. Judging by the significant coefficients (loadings), the first

Table 2 Correlates of Family Firms' Entrepreneurial Risk Taking: Results of Canonical Analysis

Set	Variables	Function I Innovation	Function II Venturing	Function III Alliances
Criterion	Investments in emerging technologies	**0.69**	0.13	–0.17
	Radical product innovation	**0.57**	–0.21	0.07
	Entering new domestic markets	0.11	**0.73**	0.26
	Entering foreign markets	0.20	**0.54**	0.25
	Joining domestic alliances	0.25	**–0.21**	**0.56**
	Joining international alliances	0.27	0.16	**0.51**
Predictors	Founder is CEO (= 1)	0.10	0.25	0.19
	CEO tenure in years	**–0.64**	**–0.54**	–0.30
	Family ownership	0.27	**0.51**	**–0.53**
	Number of family generations in business	**0.51**	0.20	0.29
	Company age	**–0.50**	0.25	**0.58**
	Company size	–0.13	0.22	**0.53**
	Past ROA	**0.51**	**0.57**	0.31
	Industry sales growth	**0.53**	–0.31	**0.50**
***p* < Canonical**		0.001	0.001	0.01
Corr (CR)		0.82	0.73	0.57
Root (CR^2)		0.67	0.53	0.32

function covered family firms' investments in emerging technologies and promoting radical innovations and was significant ($p < 0.001$). The second function captured a firm's venturing into new markets at home and abroad and was significant ($p < 0.001$). The third function covered a firm's use of domestic and international strategic alliances and was significant ($p < 0.01$).

Examining the significant loadings in Table 2 shows that the length of the CEO's tenure is negatively and significantly associated with innovation and venturing, and lacks significance with joining alliances. Family ownership is positively and significantly associated with venturing and negatively associated with joining alliances. The association of family ownership with emphasis on innovation is positive but not significant. Having multiple generations of the family actively involved in the business is positively and significantly associated with innovation but lacks statistical significance with venturing and joining alliances. The CEO being the founder is not significantly associated with any of the study's measures of entrepreneurial risk taking.

Control Variables

The results in Table 2 also suggest that a company's age is negatively and significantly associated with a focus on innovation but positively associated with joining domestic and international alliances. The association between company age and venturing is not statistically significant. Company size is significantly and positively associated with joining alliances, but not significant in the case of innovation or venturing. The reverse pattern is true with past company performance, which is positively and significantly associated with innovation and venturing but lacks statistical significance with domestic and international alliances. Industry sales growth is positively associated with innovation and domestic and international alliances, but lacks statistical significance with a company's emphasis on venturing.

Discussion

Entrepreneurial risk taking is important for family firms' survival and successful performance (Rogoff & Heck, 2003), even though these activities are time consuming and their payoffs are uncertain. Past studies that have used agency theory have reported contradictory findings on the effect of family ownership and characteristics on entrepreneurial risk-taking behavior. Most prior research has used single indicators of risk (e.g., using debt to finance organizational expansion), ignoring the fact that family firms often experience numerous risks when they initiate and implement entrepreneurial activities. The study's key findings are summarized in Table 3 and discussed below.

CEO-Founder Duality

As Table 3 indicates, the duality of being a founder and CEO does not appear to have any bearing on entrepreneurial risk taking in this study. Although the signs observed in Table 2 show a positive correlation between duality and risk taking, the results are not significant. Thus, as indicated in Table 3, the results contradict both Hypothesis 1a and Hypothesis 1b. Duality could be a double-edged sword. Although it preserves the experiences and values of the founder, it also centralizes authority in the hands of the CEO and prevents others from contributing to entrepreneurial activities. The results, which do not support this latter

Table 3 Summary of Key Findings

Effect	Variable			
	Founder Is CEO	**CEO Has Long Tenure**	**High Family Ownership**	**Family Involvement**
Promotes	None		Venturing into domestic and international markets	Investing in new technologies Radical innovation
Inhibits	None	Investment in radically new technologies Radical innovation Venturing		
Conclusions about the study's key predictions	Neither H1a nor H1b is supported	H2b is supported	H3a is partially supported	H4 is partially supported

view, should be validated in future research. Although no one can contest the importance of the founder in shaping the family firm's culture (Gersick, Davis, Hampton, & Lansberg, 1997; Schein, 1995), the concentration of powers in his or her hands might intensify conservatism and stifle entrepreneurship. Much depends on how founders use their formal and informal powers vis-à-vis their companies' entrepreneurial activities.

CEO Tenure

The length of a CEO's tenure is negatively associated with entrepreneurial risk taking, especially a family firm's emphasis on innovation and venturing in domestic and international markets. This finding contradicts Hypothesis 2a. However, as indicated in Table 3, it supports Hypothesis 2b and the results from earlier studies that show that long CEO tenures create a setting in which strategic simplicity and inertia often take hold of the organization and inhibit responsiveness to changes in the environment (Hambrick & Finkelstein, 1987). Long tenures give CEOs time to institutionalize their systems and processes, possibly reducing a company's ability to adapt and change. Long CEO tenures might also drive competent managers, both relatives and nonrelatives, to seek employment opportunities elsewhere where they can use their talents. This can lead to strategic simplicity, which limits entrepreneurship.

Family Ownership

The results (Table 2) show that family ownership is important for understanding entrepreneurial risk taking. Specifically, high family ownership is conducive to venturing into new domestic and international markets in order to create new revenue streams that enrich family members. As shown in Table 3, the results contradict Hypothesis 3b but support Hypothesis 3a and are consistent with recent findings that family ownership is conducive to the internationalization of a firm's operations (Zahra, 2003). However, as Table 3 shows, family ownership is negatively associated with the use of domestic and foreign alliances, which is consistent with Hypothesis 3b. Perhaps, it is easier for the owner family to appreciate the

financial and strategic benefits of market expansion than it is to form an alliance where they have to share their knowledge and capabilities with other companies. Alliances can leak information about a company's operations to other firms; they also require a great deal of integration and coordination among partners and take time to contribute to the family firm's profitability.

Family Involvement

As noted in Table 3, the results show that the higher the number of generations from the same owner family that are active in the company, the higher the firm's focus on innovation. This is consistent with Hypothesis 4a. One interpretation of this finding is that different and multiple generations bring fresh insights and experiences and therefore new knowledge into the family firm, thereby promoting innovation. Innovation usually requires diverse knowledge bases. Members of the owner family have an incentive to encourage a firm's focus on innovation because the success of their company increases their wealth. The results echo the call for greater participation by the family in the life of the firm as a way of achieving strategic renewal (Gersick et al., 1997; Miller, Steier, & Breton-Miller, 2003; Ward, 1987).

Limitations

The above observations should be interpreted with caution because family firms have a wide range of ownership structures and the current data do not fully capture these different structures. The data used are from U.S. manufacturing companies and the results may not apply to companies from other countries whose goals and strategies are different. The results may not generalize to those manufacturing and service industries that were not examined in this research. The study's design also precludes making inferences about causality among the variables examined in this research, especially about the dynamics of family relationships and how they influence the family's involvement in the business.

Implications for Managerial Practice and Family Firms

The results document the negative impact of long CEO tenures on family firms' innovation and new market entry, key pathways to organizational profitability. The transition from founders to other leaders entails serious risks, the most significant of which is overlooking entrepreneurial activities. This risk could be minimized by grooming successors and nurturing their ability to innovate. These hands-on experiences can help successors to hone their skills in identifying promising entrepreneurial activities. These experiences also sharpen successors' skills in creating an organizational culture that welcomes and encourages risk taking.

A key challenge facing family firms lies in the complexity of entrepreneurial risk taking. Risk taking is multifaceted and managers need to pay attention to its different manifestations. Innovation, venturing, and alliances form an important constellation of variables that can keep family firms' skills current and allow them to adapt to, and profit from, changes in their environment. Family businesses need to develop the generative capability necessary to promote entrepreneurship within their operations.

The literature highlights the importance of involving different family members in the com-

pany as a means of preparing them to lead the firm. The results indicate that family firms that have multiple generations involved in their operations tend be more innovative than other firms. Given that innovation is important for improving organizational performance, family firms need to better integrate their members into the business. Capitalizing on the talents, skills, and connections of different family members can spur innovation and facilitate venturing into new market arenas that support companies' growth.

Implications for Theory and Future Research

The results highlight a need to better understand the nature of entrepreneurial risk taking among family firms. For example, there is a need for a broader definition of entrepreneurial risk taking than that used in prior studies. Entrepreneurial risk taking is a complex construct and therefore is likely to have multiple dimensions. Considering the multiple dimensions of entrepreneurial risk taking can promote thoughtful analyses of the potential complementarities and tradeoffs that might exist among these dimensions.

Entrepreneurial risk taking might manifest the cultural variables that exist in and dominate the family firm. The effect of a family firm's culture on its systems (e.g., controls) and decision-making processes (e.g., resource allocations) can be profound (Zahra et al., in press). Therefore, there is a need for greater attention to these cultural variables and their links to the various dimensions of entrepreneurial risk taking. To do so, it is important to study family firms over time or across the various stages of their life cycles and clarify how family firms' cultures might influence risk taking at the different stages of the organizational life cycle.

Future use of agency arguments in framing research on family business decision making and strategic choices needs to recognize the complex web of relationships that exist in these companies. The ownership structures and incentive systems that pervade these firms pose serious challenges to traditional agency assumptions. Researchers would benefit from looking into the various contingencies that influence agency-based effects. Researchers need also to consider alternative theories (e.g., stewardship) to motivate future empirical studies of family firms' entrepreneurial activities.

Conclusion

Family firms' acknowledged role in creating new technologies, jobs, and wealth rests on their ability to innovate and takes risks. Motivated by a concern that some family firms become conservative over time, this study has explored the influence of the founder and owner family on entrepreneurial risk taking. Founder and family-related variables clearly exert an important influence on risk taking but in ways that have not been captured in the literature. Given that entrepreneurial risk taking is a complex construct that has important implications for family firms' survival, there is a need to better understand these dimensions and determine their effects on organizational performance. Insights gleaned from this research can help us develop a greater appreciation of how some family firms develop the "regenerative capability" that allows them to renew their operations, grow new markets, develop new skills, and adopt new strategies.

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