The Temporal Evolution of Proactiveness in Family Firms: The Horizontal S-Curve Hypothesis

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Introduction

Proactiveness, the firms' efforts to seize new opportunities, anticipating future market demands, and actively shaping the external environment (Lumpkin & Dess, 2001), is an important trait of family firms' entrepreneurial behavior (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007; Nordqvist & Melin, 2010) and a key source of sustained growth and performance for many family firms (e.g., Casillas, Moreno, & Barbero, 2010). But to what extent are family firms proactive? Empirical evidence suggests that family involvement may play a bivalent role in determining the degree of proactiveness embraced by a firm (e.g., Casillas et al., 2010; Short, Payne, Brigham, Lumpkin, & Broberg, 2009) so that family firms cannot be consistently considered strong proactive organizations. More recently, scholars have suggested that the answer to the above question may vary along the firm's life cycle (Hoy & Sharma, 2010; Sharma & Salvato, 2011; Zellweger & Sieger, 2012). For instance, Sharma and Salvato (2011) argue that "family firms vary with regards to success achieved in terms of opportunity creation and exploitation over time" (p. 1199). More specifically, in a qualitative study of long-lived family firms, Zellweger and Sieger (2012) note that proactiveness in family firms is barely stationary, and that the proactive attitude of family firms may change over time, with "periods of rather low levels of proactiveness, interrupted by phases of carefully selected proactive moves" (p. 78). Inspired by these works, we take the next step in developing an understanding of the temporal evolution of proactiveness in family firms and explore the nonlinear relationship between firm age and proactiveness. Specifically, drawing on the work of Corbetta and Salvato (2004), that addresses the coexistence of agency and stewardship behaviors in family firms, we predict a horizontal S-shaped effect of aging of family firms on proactiveness. That is, proactiveness first declines, then increases, and finally decreases again as the family firm ages.

Moreover, to advance our understanding of the relationship between firm age and proactiveness in family

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firms, we provide a contingency perspective that shows how the dispersion of managerial control among family members moderates this relationship. The decision-making process changes depending on whether managerial control is focused or dispersed among family members, and this can alter how proactive attitudes and behaviors change over time.

This study makes a number of contributions to family business research and to managerial practice in family firms. We advance the understanding of firm age as an important predictor of entrepreneurial behavior in family firms by showing *when* proactiveness is stronger and *when* it is weaker along the firm life cycle. Also, we bring new evidence about organizational age as an additional dimension of heterogeneity among family firms (Chrisman, Chua, Pearson, & Barnett, 2012), and identify the dispersion of managerial control as an important contingency to these differences. Theoretically, recognizing the sources and contextual factors of family firms' entrepreneurial behavior is important to avoid conceptual inadequacies and empirical indeterminacies (Chrisman et al., 2012). Overall, our work outlines the critical challenges for family firms to prosper and nurture their proactive posture as they age, and provides some important insights for family firm owners and managers, consultants, and policy makers interested in fostering entrepreneurship in family firms.

The structure of the article is as follows. We first define proactiveness and review prior research on proactiveness in family firms. Drawing on this literature, we introduce the temporal dimension into this debate and present our hypotheses. It follows the description of the methods adopted and the presentation of the empirical results. Finally, we discuss our findings, limitations, and contribution to family business theory and practice.

Theory and Hypotheses Development

Scholars since Schumpeter (1954) have emphasized the importance of initiative in the entrepreneurial process. Penrose (1959) argued that entrepreneurs are important to the growth of firms because they provide the vision and imagination needed to engage in opportunistic expansion. Proactiveness is a forward-looking perspective characterized by the pursuing and anticipation of future wants and needs in the marketplace (Lumpkin & Dess, 2001). Thus, proactive firms capitalize on emerging opportunities and beat competitors by shaping the environment. Indeed, prior research on firm proactiveness has centered on the organizational pursuit of favorable business opportunities (Lumpkin & Dess, 2001) such that, as suggested by Venkatraman (1989), proactive firms aim at anticipating and acting on future needs by "seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle" (p. 949).

Proactiveness is also regarded as a distinctive aspect of family firms' entrepreneurial behavior (Short et al., 2009) and one of the most important dimensions of entrepreneurial orientation in the context of family firms (Nordqvist, Habbershon, & Melin, 2008). Conceptual and empirical work suggests that family involvement may play a bivalent role in determining the degree of proactiveness embraced by a firm (e.g., Casillas et al., 2010; Nordqvist et al., 2008; Short et al., 2009). In particular, persisting divisions in the literature stem from a fundamental schism among scholars regarding the prevalence of stewardship or agency behaviors in family firms.

On one hand, stewardship proponents argue that family and business goals converge, that family relationships tend to embrace affective trust, unselfish altruism, and that contracts take a relational nature. Family owners and managers are thus seen as committed to the well-being of their companies, and emotionally tied to the long-run survival and reputation of their firms because they identify with their organizations, and their fortunes, careers, and recognition, as well as those of their children and ancestors, are strongly linked to their firms (e.g., Le Breton-Miller & Miller, 2009). From this perspective, stewardship behaviors are likely to be prevalent among family owners and managers who will eventually see the proactive exploration of opportunities as an important means for achieving both corporate and family growth (James, 1999). In such cases, generous investment in the future of the business, substantial funding of that investment and an inclination to sacrifice short-term gains for long-run and risky payoffs are more likely to be observed (James, 1999). Thus, scholars adopting a stewardship perspective predict a superior commitment of family firms to proactive search and pursuance of new business opportunities (Corbetta & Salvato, 2004; Nordqvist et al., 2008).

Conversely, scholars adopting the agency lens assume that family goals diverge from business goals,

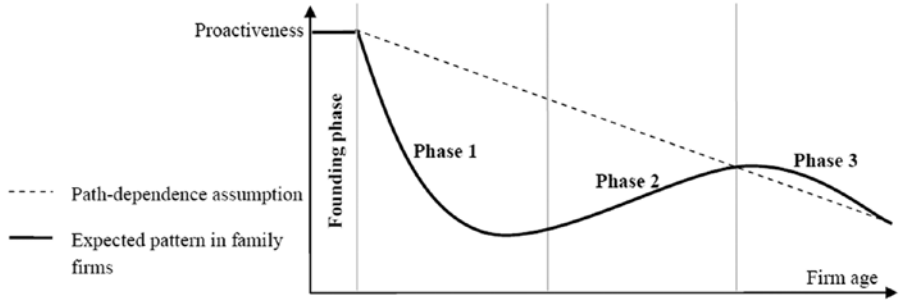
and that calculative agreements among family members are prevalent. According to this view, the universal altruistic tendencies among family members are limited to narrower family groups, while economic contracting prevails over relational contracting. Thus, family owners and managers are seen as driven by self-interest, and motivated to seek wealth and personal benefits for themselves and their narrow family group, even if this means missing promising entrepreneurial opportunities. In other words, this perspective suggests that agency behaviors prevail in the family firm (Corbetta & Salvato, 2004), such that family owners and managers are more prone to protect their personal wealth rather than to ensure a future to the firm, and likely use their voting control to appropriate company assets to fulfill their personal needs. Their goal to obtain resources in the form of perquisites, inflated compensation, and safe managerial positions leads to risk aversion, entrenchment, and asymmetrical altruism (Schulze, Lubatkin, & Dino, 2003). If family owners are risk averse and tend to use substantial resources for parochial purposes, they will not be inclined to invest adequately in the exploration and anticipation of new opportunities for the firm. As a consequence, agency proponents see family firms as conservative (Morck & Yeung, 2003), and willing to adopt defender strategies that emphasize efficiency over proactive opportunity recognition and exploitation (Short et al., 2009).

It emerges from this literature that the level of proactiveness in a family firm will be strictly related to the prevalence of stewardship or agency behaviors among family members, which, in turn, depends on the nature of family dynamics. Corbetta and Salvato (2004), for example, noted that family firms may be more or less prone to embrace proactive entrepreneurial behaviors depending on the nature of family goals, trust, altruism, and interpersonal contracts among family members. As the nature of family dynamics naturally evolves over time (Gersick, Davis, Hampton, & Lansberg, 1997; Kotlar & De Massis, 2013), it is also likely that some heterogeneity in family firms' proactive behavior will be observed across time. In this regard, many scholars have assumed that family firms are very proactive in their early stages (Discua Cruz, Howorth, & Hamilton, 2013), and that proactiveness then consistently decreases as the family firm ages owing to routinization and path dependencies (Short et al., 2009). Other scholars challenged this view, providing preliminary empirical evidence that very high levels of proactiveness can be found also in older family firms (e.g., Cruz & Nordqvist, 2012). This is in accordance with the idea that the dynamics inherent in the evolution of the family may produce important variations in a family firm's entrepreneurial behavior that go beyond, and add to those of the business (Corbetta & Salvato, 2004). Zellweger and Sieger (2012), for example, have noted that proactiveness in family firms may follow idiosyncratic trends over time, alternating phases of relatively low levels of proactive behaviors with periods of vibrant proactive moves. What is missing in this debate, however, is a conceptual lens through which to explain why family involvement may lead to such contradictory behaviors. Drawing on prior literature, we focus in the next section on the role of family dynamics in determining the prevalence of agency or stewardship behaviors in family firms across time, thereby building hypotheses that link firm age to proactiveness in family firms.

Firm Age and Proactiveness in Family Firms

The arguments reported in the previous section identify the potentially positive and negative effects of family involvement on firm proactiveness by outlining the contrasting views of stewardship and agency theories regarding the prevalence of self-serving or self-actualizing behaviors among family members in family firms (Corbetta & Salvato, 2004). As noted, the prevalence of stewardship or agency behaviors among family owners and managers depends on the nature of family dynamics, and holds meaningful consequences for the level of proactiveness embraced by a family firm. As a family firm ages, our attention turns now to examining how variations in family dynamics along the family firm life cycle engender alternate phases of increasing and decreasing levels of proactiveness. Our proposed model is presented in Figure 1. It provides an integrative synoptic view of the predicted pattern of proactiveness as a function of firm age in the unique context of family firms.

As predicted by a rich body of literature on strategic and organizational change, the dotted line in Figure 1 represents the trend in proactiveness as an organization ages. Traditionally, young organizations are considered to be structurally unstable and to have high rates of learning. Early in life, decision makers have indeed little experience about the company and the environment and must experiment and actively seek out information to learn about and connect with their environment, identify



	Founding phase	Phase 1	Phase 2	Phase 3
Family dynamics				
Goal alignment:	Goal overlap	Emergence of intra-family goal diversity	Goal realignment	Family goals satisfied without affecting business goals
• **Individual family members – Family**	High Based on entrepreneurial ambition	Low Due to heterogeneous claims	High Based on reputation and harmony	High or low Not salient
• **Individual family members – Business**	High Based on growth	Low Search of status and perks constrains growth	High Based on economic and non-economic returns	High Based only on maintaining economic returns
• **Family – Business**	High Based on common destiny	Low Due to limited congruence	High Based on family dynasty	High or low Family goals little represented in the business
Trust	Affective	Calculative	Affective	Non-influential
Altruism	High	Selective	High	Non-influential
Interpersonal Contracts	Relational	Economic	Relational	Non-influential
Expected outcomes				
Prevailing behavior	Stewardship	Switch from stewardship to agency	Switch from agency to stewardship	Family dynamics mainly concern ownership issues, path-dependence in the long run
Proactiveness	High	Declining	Growing	Declining

Figure 1. Family dynamics and the temporal evolution of proactiveness in family firms.

a strategic focus, establish internal roles, and develop control mechanisms (e.g., Simon & Houghton, 2003). For these reasons, younger firms are expected to be proactive and well predisposed toward change (Baker & Cullen, 1993). Conversely, when firms age they typically strengthen their internal and external relationships and their behaviors become increasingly guided by institutionalized norms and habits (Tushman & Romanelli, 1985). In particular, firms develop well-embedded, robust routines derived from prior operating experiences (Nelson & Winter, 1982) and preexisting rules are increasingly used to understand their environment (Daft & Weick, 1984). Thus, *ceteris paribus*, older firms should be more inert than younger firms, suggesting a consistent decline in proactiveness as firms age (Hannan & Freeman, 1984).

Owing to family dynamics, that add to the natural evolution of businesses, this general pattern may be more complex in family firms. Specifically, the interplay between evolutions in family dynamics and the business is expected to result in the smooth boldface curve of Figure 1, indicating a fluctuating pattern of family firms' proactiveness over time. This curve identifies four distinct phases in the relationship between family firm age and proactiveness, which recall previous life cycle models of the family firm (Gersick et al., 1997). Initially, during the foundation phase, family and business largely overlap, as the family firm is likely to involve the founder and all those family members who share the entrepreneurial ambition of the family. Family involvement thus centers on strong bonding structural, cognitive, and relational social capital that can be leveraged among selected family members who share a strong commitment to stewardship over the family's assets (Discua Cruz et al., 2013; Gersick et al., 1997). As such, the family founder and the narrow group of her or his family members share a common destiny with their firm, and the goals of individual family members, as well as those of the family as a whole, are perfectly aligned with business goals. It follows that family members are most likely to promote the economic well-being and development of the firm rather than being concerned about particularistic interests, for example, the pursuit of perquisites and other private benefits that may subtract resources and energies necessary for proactive entrepreneurial engagement. Owing to goal alignment, relationships among family members involved in the firm are likely to rely on affective trust that facilitates informal agreement and faith in the intentions of one another, favoring the emergence of altruism among family members, and producing positive emotions and sentiments that reinforce relational contracts within the family. It follows that, in the founding stage of the family firm life cycle, family stewards will gain utility from succeeding in the business, and a "self-actualizing" model of men is most likely to be observed among family members (Corbetta & Salvato, 2004). As a result, stewardship behavior will prevail in the foundation phase of the family firm's life, and this is expected to turn into high levels of proactiveness.

With aging, both the business and the family evolve (Gersick et al., 1997). As the business grows, family members are more and more able to obtain both personal and economic returns from being involved in it. Also, success in the foundation phase produces positive emotions among family members, including pride, belonging, and prestige, that concur in reinforcing social bonds within the family (e.g., Arregle, Hitt, Sirmon, & Very, 2007). Thus, the achievement of business goals helps the functional integrity of the family and the satisfaction of family members with their life. However, these flows are not easily sustainable as the family firm further ages, because the business grows arithmetically, while the demands of the procreating families grow geometrically (Miller, Le Breton-Miller, & Scholnick, 2008). As the number of nuclear families that rely on the business as a primary source of income rises, the family gets increasingly fragmented. With reference to the taxonomy proposed by Gersick et al. (1997), the family firm enters the sibling partnership stage. Under these conditions, individual family members' goals get more and more diverse and diverge from those of the family as a whole. Indeed, goal alignment among family members is rare, and it can at best be transitory (Kotlar & De Massis, 2013). Each family member must first satisfy the needs of her or his own nuclear family, and more formal agreements among family members are thus needed. Trust among family members becomes more calculative, family members get divided into factions, and the utility function of each family member only partially corresponds to that of the business and other family members. As such, also the goals of the family and those of the business tend to diverge, leading to selective forms of familial altruism limited to narrow subgroups of family members. Thus, as the family firm ages, the dynamics within the family system delineate a gradual transformation of family members from stewards to agents who pursue parochial interests (Corbetta & Salvato, 2004). In this circumstance the proactive improvement of the business through the search and exploitation of new opportunities will give way to inward-oriented policies that favor conservation of the existing position and the exploitation of existing businesses by the means of defender strategies and emphasis on efficiency (Morck & Yeung, 2003; Short et al., 2009). The result is *Phase 1*, in which increasing firm age is associated with a decrease in firm proactiveness.

As the beneficial influence of the family is gradually replaced by parochial attitudes and utilitarian behaviors that inhibit the firm's proactiveness during *Phase 1*, the family keeps growing, continuously rising more heterogeneous claims. At the same time, the declining level of proactiveness that is predicted in *Phase 1* is expected to limit the growth of the family firm. As the family

continues to be involved in a business that is more and more stagnant, it is reasonable to expect that family goals escalate to the point where the family firm is no longer sufficient to satisfy the economic needs of all family members. At that point, the financial returns from the firm will only represent a marginal contribution to most family members' income, while the family firms' reputation and family harmony likely become more important sources of benefits for families. As such, the utility functions of individual family members are likely to realign around that of the family as a whole and to the goals of the business. Owing to this realignment of goals, a proactive business agenda is likely to be relaunched in order to improve the firm's ability to generate both economic and noneconomic wealth to satisfy the family needs. In other words, and consistent with the description of the cousin consortium stage of the family firm life cycle described by Gersick et al. (1997), at a point of the family firm's aging process it is reasonable to expect that the goals of the family tend to reconverge with those of the business. In support of this view, evidential and anecdotal evidence suggests that family firms can navigate the declining stage of their life and solve the goal dualities toward the revival of the entrepreneurial activity (Huybrechts, Voordeckers, & Lybaert, 2012; Nordqvist et al., 2008). Remarkable cases such as Alessi and Beretta indicate that family firms that survive to the initial turmoil in their entrepreneurial activity can give rise to a family dynasty, such that continued business growth becomes an imperative to sustain a needed level of economic and noneconomic returns for the family (e.g., Zellweger & Sieger, 2012). In this situation, family goals and the economic goals of the firm tend to come together and reinforce one another, accompanied by the reemergence of affective trust, altruism, and relational contracting among family members within the family. It follows that stewardship behaviors will resurface within the family firms, which can be expected to ultimately raise again the firm's proactiveness, marking *Phase 2*.

Finally, in the long run, as the firm ages more and more, the role of controlling families tends to become less salient to the business. The longer the family has owned the business, the more likely the organization will rely on external managers, with the family gradually becoming a passive owner (Gedajlovic, Lubatkin, & Schulze, 2004). The case of Fiat is indicative of this pattern, with the Agnelli family being at the helm of the firm for about a century before handing over the leadership to professional managers and just focusing on the ownership position (Davis, Bertoldi, & Quaglia, 2012). As such, individual family members' goals tend to be little represented in the business, regardless of whether they are aligned or in conflict, and the family favors business goals as a mean of maintaining its economic returns. As the intersection between family and business systems becomes weaker, corporate routines and structures become internally consistent and take increasing weight in decision making over time, like in nonfamily firms. Precedent gradually dictates the future, and firms become more and more inert (Hannan & Freeman, 1984). This results in slowly declining proactiveness with age, as represented in *Phase 3*, such that it asymptotically tends to the declining line of the traditionally assumed age effect, regardless of the effects of family dynamics. Accordingly, we hypothesize a horizontal S-shaped relationship between firm age and proactiveness in family firms. Formally,

> **Hypothesis 1:** There is a cubic relationship (horizontal S pattern) between firm age and proactiveness in family firms, with the slope first negative, then positive, and then again negative over the phases of organizational aging.

Although we expect that family dynamics will produce an alternating pattern in the family members' propensity to engage their firms in proactive entrepreneurial initiatives, an important caveat to that baseline hypothesis relates to the allocation of managerial power among family members. Managerial control dispersion among family members is defined as the power held by and distributed among family members who occupy managerial posts in the family firm and are able to directly influence decision-making (Eddleston & Kellermanns, 2007; Gersick et al., 1997). According to several authors, the dispersion of managerial control among family members exerts some meaningful influences on the effects of family relationships in family firms (e.g., Corbetta & Salvato, 2004). Thus, this factor represents an important contingency on the family members' ability to influence business decisions, indicating how decision making is "consensus sensitive" to multiple family members (e.g., Kelly, Athanassiou, & Crittenden, 2000).

More specifically, as a firm ages the impact of family dynamics on proactiveness is expected to be more pronounced when multiple family members exert some managerial power. That is, in this situation many family

managers actively participate to decision making, thus influencing the firm's strategic directions (Eddleston & Kellermanns, 2007). Firm decisions are thereby more likely to be sensitive to the individual family members' claims, goal diversity is likely to get more pronounced, and the competition over firm resources among nuclear families is likely to get more difficult to manage (Kotlar & De Massis, 2013). As such, the impact of family dynamics on the entrepreneurial behavior of a family firm is expected to be stronger, and the pattern in family firms' proactiveness outlined above is likely to be more accentuated (i.e., steeper). On the contrary, when one family member dominates the decision-making process, decisions get less participative (Eddleston & Kellermanns, 2007) and the family leader is less likely to be influenced by claims advanced by members of the extended family. Indeed, family firms with low managerial control dispersion tend to be governed by owner-managers who control their firm's structure, resources, and strategy without the input of other family members (Westhead & Howorth, 2006). Also, the family leader has the power to mediate among competing factions that may emerge within the extended family system, thus lowering the impact of family dynamics on the family firms' entrepreneurial behavior over time.

In sum, dispersion of the firm's managerial control among family members is predicted to be associated with a more participative decision process in family firms, such that the fluctuating effects of family dynamics on proactiveness in family firms will be stronger when managerial control is dispersed among multiple family members than when it is concentrated in the hands of a single family member. Formally,

> **Hypothesis 2:** The cubic relationship between family firm age and proactiveness in family firms will be steeper when the managerial control is dispersed among multiple family members than when it is concentrated in the hands of one family member.

Method

Data for this study were collected with a survey of 199 Swiss family firms. To select firms for the survey, we identified all the companies registered with the Chamber of Commerce in Canton Ticino, Switzerland. This provided a sampling frame of 967 firms. Then, following Miller et al. (2008), we determined whether the firms were family owned (the majority of equity owned by a family) and had multiple family members involved in their operations. A total of 592 firms were family firms and recognized themselves as such. We sent the survey to these firms, and we received 199 usable responses, a response rate of 33.61%. The study's sample is composed of family firms with an age ranging from 1 to 177 years (64.32% of firms are 1 to 50 years old, 24.62% of firms are 51 to 100 years old, and 11.06% of firms are 101 to 177 years old). Additionally, all firms have less than 250 employees (small and medium-sized enterprises) except for five of them that are large enterprises. We compared the respondents' size, age, and industry with those of nonrespondents (whose data were provided by SwissFirms), and found no statistically significant differences. Moreover, no statistically significant differences were found between early and late respondents.

The survey targeted the firms' two highest executives (the CEO and the next-highest senior position). We addressed interrespondent reliability by correlating the responses per firm. The result indicates significant interrespondent reliability (interclass correlation coefficient = .78; $p < .001$). Next, we addressed the issue of common methods bias in several ways. First, we used the first respondent's data regarding proactiveness for our analysis. Also, we ran the regression analysis by using the second respondent's data on proactiveness and results did not differ substantially from our reported analyses. Second, we used an objective secondary data for our in dependent variable (age).

The questionnaire was first developed in English, then translated into Italian through a translation and back-translation procedure by two university academics. Then, the questionnaire was pilot-tested on six senior executives belonging to three family firms (two from each firm), and on five academics. Their comments on the content of the survey instrument, item wording, terminology, and clarity were incorporated into a revised instrument. Next, the refined instrument was piloted again on a larger sample of 53 family firms (which are not part of our final sample), and final revisions were made.

Variables

We relied on the widely used scale developed by Miller (1983) to measure *proactiveness* ("our company has shown a strong commitment to research and development, technological leadership, and innovation"; "our company has followed strategies that allow it to exploit

opportunities in its external environment"; 5-point scale; α = .71). This choice increases the comparability of our findings, given that the majority of empirical research has used this approach (Covin & Lumpkin, 2011). To measure *age* we considered the number of years the firm had been in existence. To measure *family control dispersion* we used a dummy variable indicating if the management was concentrated in the hands of one or multiple family members (Eddleston & Kellermanns, 2007).

We also controlled for size, generational involvement, generational ownership dispersion, knowledge diversity, percentage of nonfamily members on the TMT (top management team), R&D investments, environmental dynamism, industry, and performance, which are expected to affect a firm's proactiveness.[1] First, because access to external resources is easier for larger firms, and this access can affect proactiveness, we controlled for *size* by measuring the number of full-time employees. This value was logged to address issues with its raw distribution. Second, given that *generational involvement*—the number of family generations simultaneously involved in the management of the firm—has been proved to affect entrepreneurial activities (e.g., Eddleston & Kellermanns, 2007), we controlled for this variable in our study. Third, we also controlled for *generational ownership dispersion*—the level of ownership that resides within one, two, or more generations (Eddleston & Kellermanns, 2007). Indeed, the literature suggests it may affect the family firm's proactiveness (e.g., Gersick et al., 1997). Fourth, given its potential impact on creativity and proactiveness, we controlled for *knowledge diversity* by adapting a five-item scale from Tiwana and Mclean (2005): "members of this team vary widely in their areas of expertise," "members of this team have a variety of different backgrounds and experiences," "members of this team have skills and abilities that complement each other's," "members of this team have studied in different educational institutions," "members of this team have been educated in different specializations" (5-point scale; α = .85). Fifth, we controlled for *percentage of nonfamily members on the TMT*, given that it is recognized that nonfamily professional managers may bring more objectivity to the decision-making process (Schulze et al., 2003; Su & Dou, 2013) and thereby encourage proactive strategies. Sixth, we also controlled for *R&D investment*, which may affect entrepreneurship and proactive behaviors (Cohen & Levinthal, 1990): "R&D spending is high," and "R&D investments are taken into high consideration in our company" (5-point scale; α = .79). Seventh, because firms that operate in dynamic environments are likely to be technology-intensive and thus need to systematically explore new proactive opportunities, we controlled for *dynamism*. This factor was measured with a three-item index taken from Jansen, Van Den Bosch, and Volberda (2005): "environmental changes in our local market are intense," "customers regularly ask for complete new products and services," and "in our market, changes are taking place continuously" (5-point scale; α = .80). Eighth, because industries may differentially encourage companies to develop new and proactive strategies, we controlled for *industry type*. The agriculture industry was used as the comparison industry, with dummy variables differentiating the following industries: electronics, trade, construction, manufacturing, transportation/communication, finance, services, and others. Finally, a firm's performance is expected to influence proactiveness, so we also controlled for *performance* through four related financial items regarding net profit, sales growth, cash flow, and growth of net worth (5-point scale; α = .85). Respondents were asked to compare the level of performance of their firm relative to their main competitors in the past three years (Naldi et al., 2007).

Results

Regression analysis was used for hypothesis testing. The descriptive statistics and correlations of the study's variables are presented in Table 1. Inspection of the variance inflation factors showed that multicollinearity was not a concern. To check for normality, we used the skewness/kurtosis tests (sktest command). Proactiveness appeared significantly nonnormal in skewness, kurtosis, and both statistics considered jointly. Based on the results of STATA's "ladder" command, a square transformation was needed for proactiveness to closely resemble a normal distribution, $\chi^2(2) = 1.51$; $p(\chi^2) = .46$ (e.g., Hamilton, 2006).[2] Also, to test for heteroskedasticity, we screened the data with the help of the Breusch−Pagan/Cook−Weisberg test and the White test (Cameron and Trivedi's decomposition of the IM [information matrix] test). The former tests whether the estimated variance of the residuals from a regression are dependent on the values of the independent variables; the latter establishes whether the residual variance of a variable in a regression model is constant. Both the Breusch−Pagan/Cook−Weisberg test, $\chi^2(1) = 1.06$; $p(\chi^2) = .30$, and the White test, $\chi^2 = 169.15$; $p = .33$,

Table 1. Descriptive Statistics and Correlations.

	M	*SD*	1	2	3	4	5	6	7	8	9
Proactiveness	3.72	0.73	1.00								
Age	46.27	39.38	−0.12	1.00							
Family control dispersion	0.60	0.49	−0.05	0.15	1.00						
Size	92.33	738.39	0.01	0.08	−0.06	1.00					
Generational involvement	1.54	0.55	−0.05	0.22	0.20	−0.04	1.00				
Generational ownership dispersion	1.50	0.79	−0.11	0.18	0.17	0.12	0.22	1.00			
Knowledge diversity	3.88	0.61	0.35	−0.08	0.18	−0.04	0.02	−0.04	1.00		
Percentage nonfamily members on the TMT	0.24	0.30	0.07	0.04	−0.07	0.12	−0.06	0.10	0.05	1.00	
R&D investments	3.69	0.82	0.27	−0.10	0.09	−0.03	−0.02	−0.08	0.82	0.11	1.00
Environmental dynamism	3.27	0.72	0.25	−0.06	−0.07	−0.17	−0.07	−0.10	0.14	−0.11	0.12
Electronics/informatics	0.04	0.20	0.03	−0.10	0.17	−0.02	−0.15	−0.03	−0.13	−0.05	−0.11
Trade	0.25	0.43	−0.16	0.18	−0.13	−0.05	0.06	−0.04	−0.04	0.02	−0.01
Construction	0.14	0.35	0.00	0.12	0.09	−0.04	0.08	0.24	0.04	−0.11	−0.02
Manufacturing	0.20	0.40	0.03	0.15	0.06	−0.03	0.00	−0.06	0.06	0.12	0.08
Transportation/communication	0.03	0.17	0.13	0.03	0.02	−0.01	0.10	0.00	0.04	−0.06	0.03
Finance	0.02	0.12	0.05	−0.06	−0.07	−0.01	−0.05	−0.03	−0.04	−0.03	−0.05
Services	0.21	0.41	0.03	−0.23	−0.13	0.16	−0.06	−0.08	−0.01	0.05	0.00
Others	0.09	0.29	0.12	−0.13	0.04	−0.03	−0.12	0.02	0.06	−0.01	0.03
Performance	3.92	0.56	0.33	−0.04	0.17	−0.07	0.05	−0.06	0.41	−0.11	0.30

	10	11	12	13	14	15	16	17	18	19	
Environmental dynamism	1.00										
Electronics/informatics	0.10	1.00									
Trade	0.08	−0.12	1.00								
Construction	0.00	−0.08	−0.23	1.00							
Manufacturing	−0.11	−0.10	−0.28	−0.20	1.00						
Transportation/communication	0.02	−0.04	−0.10	−0.07	−0.09	1.00					
Finance	−0.03	−0.03	−0.07	−0.05	−0.06	−0.02	1.00				
Services	0.01	−0.11	−0.30	−0.21	−0.26	−0.09	−0.06	1.00			
Others	0.00	−0.06	−0.18	−0.13	−0.16	−0.06	−0.04	−0.16	1.00		
Performance	0.08	−0.24	−0.03	0.05	−0.09	0.06	0.20	0.06	0.10	1.00	

Note. In this table, we report the values of firm proactiveness and size without the transformations performed in the statistical analyses and Figure 2 to resemble normal distributions. $N = 199$. Correlations with values of $|.14|$ or greater are significant at $p < .05$. TMT = top management team.

indicated that heteroskedasticity was not a concern (e.g., Hamilton, 2006). The results of our hypothesis testing are presented in Tables 2 and 3.

We entered the control variables in Model 1, age in Model 2, age squared in Model 3, age cubic in Model 4, and the interaction terms in Models 5, 6, and 7 (Table 1). Hypothesis 1 suggests that the relationship between firm age and proactiveness is cubic (horizontal S-curve). Importantly, neither age in Model 2 nor age squared in Model 3 was significant. On the contrary, in Model 4 age cubic, together with age and age squared, are significant and in the expected direction, thus fully supporting Hypothesis 1. In further support of this hypothesis, Figure 2 illustrates a horizontal S-curve between firm age and proactiveness. Hypothesis 2 suggests that a high level of dispersion of the firm's managerial control among family members is associated with a more participative decision process, such that the fluctuating effects of family dynamics on proactiveness in the family firm will be stronger. Model 7 confirms that family control dispersion moderates the nonlinear relationship between firm age and proactiveness. To further interpret this result we split the sample based on the family control dispersion dummy variable (see Table 3; Models 8 and 9). This allowed us to separately test the cubic relationship in each subgroup: (a) one group when the control of the firm's management is dispersed among multiple family members (Model 8) and (b) the other when the control of the firm's management is concentrated in the hands of one family member (Model 9). We ran separate regression analyses with each subsample: The S-curve relationship persists in Model 8 and becomes steeper as predicted (see Figure 3). However, the cubic relationship is not confirmed in Model 9. Thus, Hypothesis 2 is only partially confirmed. As a robustness check, we also tested the possibility of a linear or

Table 2. Results of Hierarchical Regression Analysis.

Proactiveness	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Size	0.019	0.051	0.046	0.040	0.049	0.065	0.081
Generational involvement	0.030	0.061	0.060	0.094	0.081	0.074	0.080
Generational ownership dispersion	−0.084	−0.058	−0.058	−0.058	−0.052	−0.057	−0.058
Knowledge diversity	0.274*	0.312**	0.316**	0.334**	0.366**	0.373**	0.325**
Percentage nonfamily members on the top management team (TMT)	0.124†	0.116†	0.117†	0.123†	0.110†	0.110†	0.105
R&D investments	−0.058	−0.082	−0.087	−0.105	−0.134	−0.122	−0.097
Environmental dynamism	0.210**	0.198**	0.195**	0.197**	0.185**	0.188**	0.188**
Electronics/informatics	0.166†	0.196*	0.195*	0.210*	0.208*	0.202*	0.205*
Trade	0.050	0.023	0.020	0.017	−0.003	−0.013	−0.036
Construction	0.120	0.110	0.104	0.093	0.084	0.071	0.063
Manufacturing	0.143	0.141	0.133	0.151	0.132	0.104	0.082
Transportation and communication	0.163†	0.151†	0.147	0.145	0.148†	0.146	0.142
Finance	0.049	0.025	0.023	0.037	0.028	0.035	0.022
Services	0.132	0.088	0.086	0.092	0.076	0.078	0.059
Others	0.172	0.156	0.153	0.168	0.156	0.153	0.142
Performance	0.254***	0.288***	0.291***	0.282***	0.274***	0.249**	0.276***
Family control dispersion (FCD)		−0.168*	−0.170*	−0.186**	−0.288**	−0.435**	−0.176
Age		−0.061	0.031	−0.837†	−0.785†	−1.277*	−0.363
Age squared			−0.094	2.092*	1.659	2.435*	0.132
Age cubic				−1.406*	−1.117†	−1.393*	0.023
Age × FCD					0.180	0.799*	−1.062
Age squared × FCD						−0.558†	3.414†
Age cubic × FCD							−2.326*
R^2	.29	.32	.32	.34	.35	.35	.37
Adjusted R^2	.23	.25	.24	.26	.27	.27	.28
F statistic	4.59***	4.56***	4.31***	4.41***	4.25***	4.25***	4.37***

†$p < .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

squared relationship between firm age and proactiveness in each subgroup. As expected, no significant results were found.

Last, we used Heckman's (1979) two-step procedure to test for potential sample selection bias induced by the survival of younger or older family firms. For instance, older firms might survive longer because they are the best performers, while younger firms may fail or exit sooner. The Heckman procedure allows us to calculate a control variable, commonly referred to as the inverse Mills ratio, from the results of a first-stage probit model predicting the survival of younger and older firms. We constructed a dummy variable based on the median split of firm age. Entering this ratio into the second-stage final regression model removes any bias in the regression coefficients by accounting for sample selection. Proper identification of the inverse Mills ratio, however, requires that a variable is correlated with the first-stage probit model's outcome (i.e., survival of younger or older firms), but not with the second-stage model's outcome (i.e., proactiveness; e.g., Hamilton, 2006). Because the "top management team's total years of full time paid work experience in the firm" variable demonstrates these relationships, it was entered in the first-stage probit model, but not in the second-stage performance model (e.g., Huyghebaert & Van de Gucht, 2004). We found that the inverse Mills ratio is not significant ($r = -0.02$; $p = .77$) and that results from other variables are unaffected (see, Huyghebaert & Van de Gucht, 2004).

As an additional check, we constructed the dummy variable of younger and older family firms' survival with other combinations: first, a dummy variable indicating whether the firm has an age ranging from 1 to 50 (dummy variable = 0) or from 51 to 177 (dummy variable = 1); second, a dummy variable indicating whether the firm has an age ranging from 1 to 75 (dummy variable = 0) or from 76 to 177 (dummy variable = 1); third, a dummy variable indicating whether the firm has an age ranging from 1 to 100 (dummy variable = 0) or from 101 to 177 (dummy variable = 1); fourth, a dummy variable indicating whether the firm has an age ranging from 1 to 125 (dummy variable = 0) or from 126 to 177

Table 3. Results of Hierarchical Regression Analysis With the Two Subsamples of Family Control Dispersion (FCD).

Proactiveness	Model 8 (FCD = Multiple family members)	Model 9 (FCD = One family member)
Size	0.034	0.031
Generational involvement	0.044	0.100
Generational ownership dispersion	−0.105	0.012
Knowledge diversity	0.397**	0.184
Percentage nonfamily members on the top management team (TMT)	−0.009	0.301*
R&D investments	−0.134	0.029
Environmental dynamism	0.149†	0.266*
Electronics/informatics	0.270*	—
Trade	0.035	−0.062
Construction	0.101	0.058
Manufacturing	0.075	0.154
Transportation and communication	0.198†	0.098
Finance	0.015	0.080
Services	0.028	0.100
Others	0.184	0.143
Performance	0.264**	0.292*
Age	−1.154†	−0.630
Age squared	3.545*	1.014
Age cubic	−2.462*	−0.568
R^2	.38	.44
Adjusted R^2	.27	.26
F statistic	3.26***	2.49**

†$p < .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

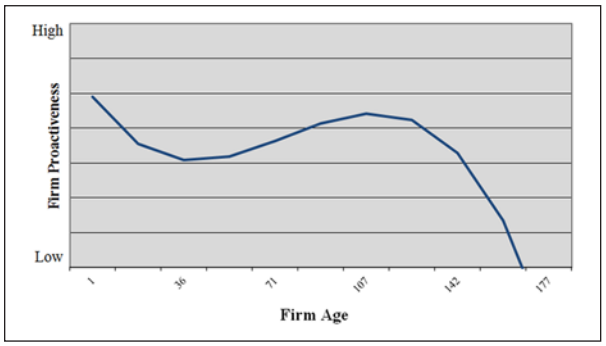


Figure 2. Horizontal S-curve between firm age and proactiveness in family firms.

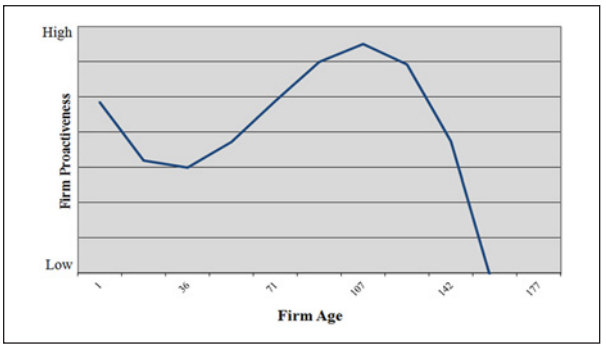


Figure 3. Horizontal S-curve between firm age and proactiveness in family firms when the firm's managerial control is dispersed among multiple family members.

(dummy variable = 1); and finally, a dummy variable indicating whether the firm has an age ranging from 1 to 150 (dummy variable = 0) or from 151 to 177 (dummy variable = 1). In all these cases, still, the inverse Mills ratio was not significant and results from other variables of interest did not substantially change.

Discussion

We examined the relationship between firm age and proactiveness in the context of family firms and found that firm age has a cubic relationship with proactiveness.

Also, we found that family control dispersion moderates this nonlinear relationship, such that it is steeper when managerial control is dispersed among multiple family members. We argue that this horizontal S-shaped relationship may help reconcile conflicting views on the proactiveness of family firms. Our results (a) suggest that family involvement is not individually exhaustive to understand family firm's proactiveness; (b) support recent recommendations of family firm scholars to consider that family influence on the firm's entrepreneurial orientation is not constant over time, and point to family dynamics as key drivers for explaining the causal relationship between family involvement and the entrepreneurial behavior of family firms (Corbetta & Salvato, 2004); and (c) most important, offer prospective ideas on how family dynamics evolve over time and how this evolution adds complexity to the trend in proactiveness as a family firm ages, which thus appears as an area ripe for future research. Specifically, we develop a framework that emphasizes the role of family dynamics, and variations thereof, in determining the evolution of proactiveness in family firms.

The study makes a number of contributions to existing knowledge about entrepreneurship in family firms. First, by explicitly exploring how the entrepreneurial behavior of family firms changes over time our results indicate that the "family" introduces additional complexity in a phenomenon—the temporal evolution of a firm's proactiveness—that has been previously assumed to be linear. In this regard, we add to the observation that downplaying the family variable in business and management research reduces the predictive accuracy and power of theoretical predictions (e.g., Litz, 1997). Second, the proposed framework contextualizes the opposing views on proactiveness in family firms. More specifically, this model emphasizes the role of the temporal evolution of the family system in terms of family goals, trust, altruism, and interpersonal contracts in determining the attitude of family owners and managers to embrace proactive entrepreneurial behaviors. Third, we advance knowledge about determinants of family firms' heterogeneity in that our results outline family dynamics (and their variation as the firm ages) as sources of heterogeneity among family firms, and identify family control dispersion as an important contextual factor to understand proactiveness in family firms, contrasting the traditional view that firm age has consistent impacts on firm proactiveness. Thus, the findings of this study respond to recent calls for a more contextualized approach to understand the family firm's entrepreneurial behavior (e.g., Chrisman et al., 2012).

These considerations have important implications for advancing the theoretical understanding of the family enterprise, and they outline promising directions for future research. In particular, researchers have only recently started to focus their attention on intrafamily goal diversity within family firms (Kotlar & De Massis, 2013). One of the most important implications of our study is that goal diversity resulting from the interplay of family goals with the economic goals of the family seems to be evolving over time. Scholars have recognized that these two classes of goals do not necessarily diverge (Zellweger & Nason, 2008) and are hence increasingly interested in identifying the conditions under which family goals cope or collide with the economic goals of the firm (Chrisman et al., 2012). Taking into account the temporal dimension can be thus very promising for understanding such dynamics. Accordingly, we encourage scholars to further explore how goals, values, and the unique cultural and sociological aspects of family firms evolve over time, a topic that has received very scant attention from both conceptual and empirical points of view.

Our findings suggest that, on average, the temporal evolution of family dynamics causes a fluctuating trend in family firms' proactiveness over time. As such, our results help reconcile conflicting views as to the entrepreneurial proactiveness in family firms (e.g., Naldi et al., 2007; Nordqvist et al., 2008; Short et al., 2009), and provide further insights regarding the irregular trend in proactiveness that family firms follow over time (Zellweger & Sieger, 2012). We have also shown that this irregular trend is more pronounced when managerial control is shared among multiple family members, suggesting that the willingness of family owners and managers to embrace entrepreneurial attitudes is contingent on their ability to influence decision making and policy in their firms (De Massis, Kotlar, Chua, & Chrisman, in press). Researchers who wish to continue with our line of inquiry could further assess the nature of this complex relationship by exploring how other configurations in family ownership, composition of the top management team, firm resources, and the characteristics of the external environment moderate the factors underlying the S-shape curve (Figure 1) and influence its slopes and inflection points.

Like all studies, our work has some limitations, which provide further opportunities for future research. First,

our study is focused on family firms that keep being family firms as the firm ages. It would be useful to extend our argumentations to the realm of family firms that exit or cease to be family firms at a certain point in time (De Tienne & Chirico, 2013). However, the closure or sale of a family firm is likely to be a very sensitive subject among members of family businesses who are typically protective of their privacy. An approach to solve the access problem would be to collect data from or through family business consultants. Besides providing useful contacts, consultants might possess important insights of their own that could be tapped for research purposes.

Second, our sample is drawn from one country (Switzerland). We encourage scholars to add evidence about proactiveness in family firms in other countries to ensure that the relationships found are not linked to Swiss institutional or cultural variables. For instance, proactiveness may be specifically bounded to cultural contingencies. Important differences across natural cultures, for example, social collectivism versus individualism and uncertainty avoidance, may inform institutional perspectives on how the effect of family dynamics on firm proactiveness in different phases of the firm age may vary in family firms from different regions worldwide.

Third, we used firm age as a proxy for change in family dynamics over time. Thus, we can infer but cannot conclusively demonstrate the causal relationships between family dynamics, the prevalence of self-serving or self-actualizing behaviors among family owners and managers, and firm proactiveness. Future research is thus needed to further assess the mechanisms and processes through which family involvement affects proactiveness in family firms. In this regard, a more direct measurement of goals and dynamics inherent to the family system is warranted in future research, in that it would also enable researchers to explicitly explore the interplay of family and business goals over time, thereby outlining possible goal trade-offs and/or goal activation logics that drive variations in the entrepreneurial behaviors and outcomes of family firms across time. For instance, qualitative studies could open up the black box of family dynamics and investigate how unfolding events such as birth, divorces, and deaths within the family (Hoy & Sharma, 2010) may affect the firm entrepreneurial spirit and orientation.

Finally, this study draws on cross-sectional data to examine the evolution of proactiveness in family firms as these organizations age, a topic that would ideally require longitudinal data and analysis techniques. Our results hold for firms that are owned and managed by a family at different points in time, but our arguments do not apply to those firms that close or cease to be family firms. For this reason, our results should be interpreted with caution, and future research is needed that takes alternative approaches, for example, borrowed from business history (e.g., Colli, 2012), to offer more reliable and precise portraits of the evolution of entrepreneurial behaviors in family firms over time.

The main practical implication of our study is that it suggests that certain phases of a family firm's aging process are characterized by bigger challenges for proactiveness, owing to particularly struggling family dynamics. These phases are the one after the founding phase, typically referred to as the sibling partnership stage, and the latest phase of a family firm's aging process. However, our findings also suggest that the negative influences characterizing these particular phases of the organizational aging process can be managed and attenuated. This may be achieved, for example, by limiting the pool of family members who have decisional power in the firm, preferably identifying a single family leader who has the managerial discretion and legitimacy to create arrangements within the family. In so doing, the potential influence of the family group over the business will be reduced, and the deleterious effects of intrafamily goal diversity will be neutralized or at least minimized, thus safeguarding the family firm's ability to engage in entrepreneurial initiatives.

Conclusion

In this study, we outlined a unique pattern of proactiveness that family firms follow over time, a pattern that is much more complex than that assumed in the traditional literature. As such, our findings emphasize the importance of considering the role of controlling families and the dynamics that characterize the family system in corporate entrepreneurship, identify the critical challenges for family firms to prosper and nurture their entrepreneurial posture as the organization ages, and provide some important insights for family firm managers, consultants, and policy makers interested in fostering entrepreneurship in family firms. These results point to the importance of incorporating the temporal dimension in family business research, as well as contextualizing it to the nature of family influences on the business, in order to develop a more complete and accurate understanding of family firms' behaviors and outcomes.

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Notes

1. Additionally, given our interest in the passage of time in terms of firm age—and not merely in terms of the generation in control, which is also a factor that may affect firm proactiveness—as robustness check we run our analysis by also controlling for generation in control. This variable was not statistically significant and its inclusion did not change the other results. As an additional check, we again ran the analysis excluding firm age, while keeping generation in control. Again, generation in control was not statistically significant. We also included the squared and cubic terms of generation in control and still results were nonsignificant. This corroborates our argument regarding the central role played by the passage of time in terms of age on proactiveness in family firms. However, given that our findings showed that generation in control did not have a significant linear or nonlinear impact on family firm proactiveness, and because of its high correlation with firm age (0.841; $p < .001$), it was not included as a control variable in the statistical analyses we report.
2. The results presented are those with the transformed proactiveness variable because they are methodologically superior. However, we ran the same models with the nontransformed proactiveness variable and found that these results did not differ substantially from those presented. This eases concerns about interpretation. Moreover, this comparison acts as a robustness check of our conclusions.

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