When Does *Time* Enhance Family Firm Performance?  
Examining Family Generation in Control and Family Control Dispersion through a Mixed-Gamble Logic

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*Accepted for Publication in Long Range Planning*

**Abstract**

We investigate the differential effect of time in terms of generation in control of the firm’s management on family firm performance to address the call in the literature for a more nuanced treatment of family firms and their performance differences. By drawing on the mixed-gamble logic of the behavioral agency model, our work suggests that the family’s socio-emotional wealth (SEW) varies across generations, resulting in complex performance relationships. We theorize and empirically find that earlier-generation family firms protect current SEW and perform increasingly worse while later-generation firms maximize prospective financial wealth and perform increasingly better. Additionally, we argue that high family control dispersion mitigates the negative effect on performance of earlier generations in control and increases the positive effect of later generations in control. Important theoretical and practical contributions emerge from this study.

**Keywords:** Performance, time, family generation in control, family control dispersion, family firms
INTRODUCTION

Family firms have a different time horizon than non-family firms (Ward, 1997), often exceeding the life span of individual owners (Zellweger, 2007). As the focus of many family firms is the desire to build a dynasty (Landes, 2006; Stanley, Kellermanns, & Zellweger, 2017), researchers have stressed the importance of time in terms of family generational involvement as a key moderator of a variety of outcome variables, such as entrepreneurial orientation, innovation, and firm performance (Beck, Janssens, Debruyne, & Lommelen, 2011; Cruz & Nordqvist, 2012; Le Breton-Miller, Miller, & Steier, 2004; Ling & Kellermanns, 2010; Miller, Le Breton-Miller, & Scholnick, 2008). As family firms are heterogeneous entities (Chua, Chrisman, Steier, & Rau, 2012; De Massis, Frattini, Majocchi, & Piscitello, 2018; Mariotti, Marzano, & Piscitello, 2021; Stanley et al., 2017; Westhead & Howorth, 2007), the family firm specific impact on performance is complex (Gedajlovic, Carney, Chrisman, & Kellermanns, 2012).

The role of family generation in the family firm-performance relationship is not clear; its operationalization in the literature has varied from dummy codes to continuous operationalization (e.g., Casillas, Moreno, & Barbero, 2010; Ling & Kellermanns, 2010). Indeed, the various operationalizations in term of measurement, position in the model (main effect vs. moderator), and the plethora of dependent variables makes understanding the role of generational involvement a complex puzzle that highlights positive, non-significant, and negative effects of this variable on various outcomes and warrants further investigation (Beck et al., 2011; Casillas et al., 2010; Cruz & Nordqvist, 2012; Kellermanns, Eddleston, Sarathy, & Murphy, 2012b; Ling & Kellermanns, 2010; Salvato, 2004; van Essen, Carney, Gedajlovic, & Heugens, 2011).

Utilizing a multi-respondent design, we draw on the mixed-gamble logic of the behavioral agency model (Alessandri, Mammen, & Eddleston, 2018; Chirico et al., 2020a;
Chirico, Gómez-Mejia, Hellerstedt, Withers, & Nordqvist, 2020b; Gomez-Mejia, Chirico, Martin, & Baù, 2022; Gómez-Mejia, Patel, & Zellweger, 2018; Kotlar, Signori, De Massis, & Vismara, 2018; Martin, Gomez-Mejia, & Wiseman, 2013) and utilize socio-emotional wealth (SEW) as a theoretical framework to represent and account for the inherent heterogeneity of family firms, as SEW captures non-financial aspects that cater to the family’s affective needs, such as control and perpetuation of, and identification with, the business (e.g., Berrone, Cruz, & Gómez-Mejía, 2012; Chirico et al., 2020b; Gómez-Mejia, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007; Gómez-Mejia et al., 2018; Jiang, Kellermanns, Munyn, & Lane, 2018; Zellweger, Kellermanns, Chrisman, & Chua, 2012). Specifically, we argue that family firm performance and related risks may imply a trade-off between gains in prospective financial wealth and losses in the family’s current SEW.

We theorize that family firms frame the value of gains and losses in relation to family firm performance differently, depending on the generation in control of the firm’s management, thereby providing a contingency view on SEW. We hypothesize that family firm performance decreases in earlier generations to protect current SEW and increases in later generations to maximize prospective financial gains. Drawing on the concept of ”threshold of performance” (Gimeno, Folta, Cooper, & Woo, 1997), we expect this to result in a non-linear, U-shaped relationship between family generation in control and family firm performance. In addition, we propose that family control dispersion – that is, how power is held by and distributed among family members in the firm’s management (e.g., Eddleston & Kellermanns, 2007; Gersick, Davis, Hampton, & Lansberg, 1997) -- moderates this relationship, as level of control is a key aspect of the mixed-gamble logic of SEW (e.g., Hoskisson, Chirico, Zyung, & Gambeta, 2017; Zellweger & Dehlen, 2012) that captures the ability to act (Chrisman, Chua, Massis, Frattini, & Wright, 2015).
There are many theoretical conceptions of the role of time (e.g., Ancona, Goodman, Lawrance, & Tushman, 2001; Lévesque & Stephan, 2020) and a temporal focus has been highlighted as very important (e.g., Levasseur, Shipp, Fried, Rousseau, & Zimbardo, 2020). In the chosen context of family firm generations, conflicting perspectives emerge; for example, the orientation toward SEW (Mariotti et al., 2021). While some researchers argue that the passage of time (i.e., later generations) leads to more attachment to the business and a stronger endowment effect (e.g., Chirico & Salvato, 2016; Price, Arnould, & Curasi, 2000; Zellweger et al., 2012), others argue that emotional distance from the business increases over time, which leads to different behavioral patterns in the firm (e.g., Gersick et al., 1997; Le Breton-Miller & Miller, 2013). Utilizing the mixed-gamble logic of SEW and arguing a non-linear relationship while taking contingency effects into account allows us to extend insights into the effect of generational involvement on family firm performance.

Furthermore, “despite the richness demonstrated by the SEW approach so far, much remains to be done in understanding the SEW [arguments]–financial performance relationship” (Berrone et al., 2012: 272). In addressing recent calls to clarify how mixed-gamble and SEW considerations affect family firm financial outcomes differently through a time perspective (Salvato, Chirico, Melin, & Seidl, 2019), our study reveals that coupling family generation in control with family control dispersion can mitigate earlier generations’ focus on non-financial outcomes and intensify constructive debate, which lead to increased levels of performance. Last, we add to the growing literature on family firm heterogeneity (Chua et al., 2012; De Massis et al., 2018; Mariotti et al., 2021; Stanley et al., 2017; Westhead & Howorth, 2007) and show that a temporal element should be considered when studying family firms.
THE MIXED-GAMBLE LOGIC AND SOCIO-EMOTIONAL WEALTH

Family firms – firms owned and managed by a family (see Gedajlovic et al., 2012; Sirmon, Arregle, Hitt, & Webb, 2008) – are depicted as emotional-intensive organizations (Gómez-Mejia et al., 2007; Shepherd, 2009) due to emotional bonds between owners and managers, nostalgia, and family tradition (Sharma & Manikutty, 2005). In addition, family firms’ features, such as strong collective identity and family values, long-term strategic orientation, intense emotional commitment to firm survival and unique social context (Arregle, Hitt, Sirmon, & Very, 2007; Sirmon & Hitt, 2003; Zellweger et al., 2012) lead them to value both financial and non-financial outcomes while making strategic decisions (Chrisman & Patel, 2012; Gómez-Mejia et al., 2007).

The behavioral agency model developed by Wiseman and Gómez-Mejía (1998), based on Kahneman and Tversky’s (1979) prospect theory and Cyert and March’s (1963) behavioral theory, proposes that decision makers’ risk preferences are based upon reference points or aspiration levels and that individuals code gains and losses relative to their aspiration levels. However, building on the mixed-gamble logic of the behavioral agency model, (Martin et al., 2013) contend that decision makers are inclined to preserve the firm’s current financial endowment or to maximize prospective future financial wealth. Current wealth refers to accumulated firm-specific wealth that is subject to loss, leading to conservative behaviors, whereas prospective wealth refers to future wealth potential attributed to strategic decisions, leading to more risk-taking actions (Hoskisson et al., 2017).

While Martin et al. (2013) focus on financial wealth, it is important to note that family firm wealth endowment includes both financial assets and SEW (Gómez-Mejía et al., 2007). According to Gómez-Mejía et al. (2007: 106, 108), the most important reference point for family firms is the loss of SEW; that is, the “non-financial aspects of the firm that meet the family’s affective needs, such as identity, the ability to exercise family influence, and the
perpetuation of the family dynasty”; independent of financial considerations, preserving the family’s SEW “represents a key goal in and of itself.” Although many scholars have found that family members’ intense feelings and emotions make the achievement of non-financial goals a primary objective for family firms (Astrachan & Jaskiewicz, 2008; Gómez-Mejía, Cruz, Berrone, & De Castro, 2011; Gómez-Mejía et al., 2007; Gómez-Mejía, Makri, & Larraza-Kintana, 2010; Zellweger & Astrachan, 2008; Zellweger et al., 2012), “the financial and socioemotional utility dimensions are not fully fungible, and a change in one utility dimension often leads to an opposite change in the other utility dimension” (Gómez-Mejía et al., 2018, p. 1370) Therefore, family firm owners need to weigh the potential gains and losses of their decisions based on current SEW and prospective financial wealth.

Berrone et al. (2012) depict SEW as a key differentiator of the family firm as a unique entity with positive and negative features (see also Kellermanns, Eddleston, & Zellweger, 2012a), which helps explain why family firms behave and perform distinctively. We build on Gimeno et al.’s (1997) concept of "threshold of performance" – that is, the aspiration level of financial performance below which dominant organizational constituents feel financially unsatisfied within the organization – to argue that family firms are willing to accept lower performance levels to protect the family’s current SEW (Gedajlovic et al., 2012; Salvato, Chirico, & Sharma, 2010) because “the mixed motives of top [family decision makers]…can affect their perceptions of what constitutes an acceptable return” (Gedajlovic et al., 2012: 1028). Yet, family members are also willing to take actions to maximize prospective financial wealth in specific situations (see e.g., Alessandri et al., 2018; Chirico et al., 2020a; Gómez-Mejía et al., 2018; Kotlar et al., 2018). The general argument of threshold of performance coupled with the mixed-gamble? logic is that SEW determines an important reference point that family members use while taking strategic decisions (see Miller & Le Breton-Miller, 2005; Schulze & Kellermanns, 2015; Wennberg, Wiklund, Hellerstedt, & Nordqvist, 2011;
Zellweger & Sieger, 2012), and that family members’ aspiration levels of performance may vary based on family generation in control and family control dispersion, resulting in different effects on current SEW and prospective financial wealth in family firms.

HYPOTHESES DEVELOPMENT

Family Generation in Control and Performance in Family Firms

Time, in terms of family generation in control, has emerged as a prominent factor in explaining family firm entrepreneurial outcomes (Beck et al., 2011; Casillas et al., 2010; Cruz & Nordqvist, 2012; Kellermanns et al., 2012b; Ling & Kellermanns, 2010; Mazzola, Sciascia, & Kellermanns, 2013; Salvato, 2004). Family generation in control identifies the generation in charge of the firm’s management (see e.g., Bammens, Voordeckers, & Van Gils, 2008; Casillas et al., 2010; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010).

Earlier generations (i.e., the founder’s generation and those closer to the founder’s) and later generations (i.e., those at a distance from the founder’s) respond differently to family firm entrepreneurial behavior and outcomes, mainly because of distinctive knowledge endowments and patterns of emotional relationships characterizing family members across generations (Gersick et al., 1997).

Despite its growing relevance, the role of family generation in control has yielded contradictory results in explaining family firm performance. As a positive effect, researchers have suggested that later generations have a more innovation-oriented culture and often drive entrepreneurial opportunity recognition and exploitation (Casillas et al., 2010; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010; Salvato, 2004). Others, however, have found negative effects on family firm outcomes, suggesting that later generations are more risk averse and conservative due to their desire to preserve family wealth (Beck et al., 2011; Kellermanns et al., 2012b; Mazzola et al., 2013; van Essen et al., 2011). We argue that due to the family’s SEW, family members belonging to earlier generations focus on protecting
current SEW, while those belonging to later generations focus on maximizing prospective financial wealth, resulting in non-linear and contextual effects on performance.

The degree of family identification, emotional attachment, family social capital, and personal investment in the firm are highest in the founding generation and tend to weaken as the firm transitions to subsequent generations (e.g., Gómez-Mejía et al., 2007). This is the nearly inevitable consequence of the relentless process of “generational drift,” the progressive decay of family members’ commitment to the firm (Corbetta & Salvato, 2012). For instance, Gómez-Mejía et al. (2007) found that family firm members’ willingness to join a cooperative – a decision associated with a loss of family control but with lower business risks and increased chances of higher performance – is lowest at the founding generation and increases as the firm transitions to later generations.

This effect can be explained by the possession attachment concept (Richins, 1994), which has also been applied to family firms (e.g., Zellweger & Astrachan, 2008). Earlier generations, who often maintain their concept of self through the business and thus have a high level of possession attachment, coupled with the fear of relinquishing control in the succession process (Ine, Nadine, Tensie, & Wim., 2018), are likely to place more emphasis on the emotional aspect of the business. While later generations may still experience possession attachment, they will be more distant from it and the effects are likely to be more subtle. Indeed, it is important to note that an “heirloom” effect (Price et al., 2000), where longer duration of possession leads to more attachment, has not been found in family firms (Zellweger et al., 2012).

Therefore, because financial considerations tend to move to the forefront with each generational transition (Gersick et al., 1997; Gómez-Mejía et al., 2011; Gómez-Mejía et al., 2007), the focus on protecting current SEW should be stronger in earlier generations and the focus on maximizing prospective financial wealth should be stronger in later generations.
Accordingly, earlier- and later-generation family members will perceive and value financial and non-financial goals differently (Gómez-Mejía et al., 2007; Salvato et al., 2010).

Family members in earlier generations will be more likely to accept and be comfortable with low-target performance due to their higher focus on protecting current SEW (e.g., Salvato et al., 2010), which may be justified through obtaining considerable non-economic advantages from being part of the business (e.g., Corbetta & Salvato, 2012; Gómez-Mejia et al., 2007; Salvato et al., 2010). Although founders often base their firms on innovative and successful ideas, research suggests that generations closer to the founder tend to lose their entrepreneurial spirit and prioritize non-financial goals (Beck et al., 2011; Jayaraman, Khorana, Nelling, & Covin, 2000; Salvato, 2004). For instance, Beck et al. (2011) found that second- and third-generation family firms are “more conservative and more interested in preserving the family’s wealth” inherited from parents and grandparents (Beck et al., 2011: 265), perhaps explaining why performance decreases compared to the founder’s generation. Therefore, we expect that family members in earlier generations will tend to be increasingly risk averse by setting lower performance thresholds and adopting conservative strategies while prioritizing non-financial outcomes to preserve the family’s current SEW.

As the family firm progresses further away from the founder’s generation, however, financial expectations will increase – and thus the family’s threshold of performance – due to the family’s reduced focus on current SEW and increasing focus on prospective financial wealth (Salvato et al., 2010; Stewart & Hitt, 2012). In their analysis of the Falck Group, an Italian family firm in the steel industry through the 1990s, Salvato et al. (2010) found that after experiencing increasing financial losses as a consequence of family members’ emotional attachment, only in the fourth/fifth generation did the company achieve increasing financial returns. Kellermanns et al. (2008) maintain that later-generation family firms need to emphasize enhancing future financial growth to ensure the firm’s existence. Therefore, we
argue that whereas earlier generations in control of the family firm increasingly focus on non-financial goals to protect the family’s current SEW, later generations in control manifest an increasing and stronger focus on prospective financial outcomes (Hoskisson et al., 2017). That is, for earlier generations in control, current SEW serves as a substitute for financial performance, while later generations in control increase financial performance by diminishing the focus on current SEW. In formal terms:

**Hypothesis 1:** A U-shaped relationship exists between family generation in control and performance in family firms.

The Moderating Role of Family Control Dispersion

Many family firms, even those in earlier generations, successfully engage in entrepreneurial activities that enable them to realize high-level financial returns (e.g., Chirico, Ireland, & Sirmon, 2011a; Chirico, Sirmon, Sciascia, & Mazzola, 2011b; Upton, Teal, & Felan, 2001; Zahra, 2005; Zahra, Hayton, & Salvato, 2004), as they are apparently able to counter the tendency to excessively focus on current SEW, thus enhancing their prospective performance outcomes. Family control dispersion is defined as the “power held by [and distributed among] family firm members” in the firm’s management (Eddleston & Kellermanns, 2007: 551; see also Gersick et al., 1997), with the degree of family control dispersion varying greatly among family firms. Some firms have only one or a few controlling family members (high family control concentration), while others are controlled by numerous family members (high family control dispersion) (Eddleston & Kellermanns, 2007; Eddleston, Otondo, & Kellermanns, 2008b; Gersick et al., 1997; Kellermanns et al., 2012b). We argue that family control dispersion is a key moderator in the relationship between family generation in control and performance and is a key aspect of the mixed-gamble logic of SEW (see Hoskisson et al., 2017).

Control is often highly centralized, especially in the founder’s generation (Gersick et al., 1997). However, “a lower level of [family] control concentration is extremely desirable,
since the sharing of control…is expected to improve creative goal achievement” and to improve family firm performance due to the greater participation of multiple family members in the strategy-making process (Eddleston & Kellermanns, 2007: 551; see also Kellermanns et al., 2012b). When control is shared, one person is unlikely to dominate the decision-making process, leading to a participative strategy (Ronstadt, 1984). For instance, Kellermanns et al. (2012b: 87) found that family control dispersion “allows family members to gain a better understanding of where the organization is headed, appreciate the challenges facing the firm, and make decisions that they believe will maximize firm performance.”

Family members with different perspectives are likely to be more creative and innovative (Jehn & Bendersky, 2003; Kellermanns & Eddleston, 2004), which can lead to a performance advantage (De Clercq, Dimov, & Thongpapanl, 2010; Kellermanns et al., 2012b). Therefore, family firms should benefit from higher family control dispersion, which prevents premature consensus, encourages family members to carefully consider the effect of their actions on the firm, mitigates potential risk-averse and path-dependent behaviors, and ensures that superior options are not overlooked (Carr, Boyar, & Gregory, 2008; Eddleston & Kellermanns, 2007; Eddleston et al., 2008b).

At higher levels of control dispersion, the family firm is more likely to emphasize the importance of focusing on prospective financial wealth and increasing performance threshold expectations, while lowering the focus on the family’s current SEW. Benefits will likely be easiest to realize around the third and fourth generations, where the strong influence of the founder has likely waned, while a certain amount of family cohesion and common interest is still maintained. For these generational and control configurations, the benefits from enhanced information-sharing through high control dispersion is likely the most pronounced (see also Kellermanns & Eddleston, 2004). However, as the organization transitions to even later generations, the benefits of higher levels of control dispersion may be offset by more...
divergent interests of the different family branches in control; associated agency problems and lack of cohesion lead to a negatively sloped relationship.

Conversely, when family control is concentrated (i.e., low family control dispersion), one or very few family members will tend to control the direction and future of the firm without input from other family members. Early generations tend to often focus excessively on the preservation of current SEW; for example, on non-economic outcomes such as job security for themselves and their offspring (Gersick et al., 1997; Johannisson & Huse, 2000). If this is paired with high levels of control concentration, then the organizational vision is not being challenged, leading to a limited focus on prospective financial wealth and lower levels of performance (Jayaraman et al., 2000).

As high control concentration leads to a less participative atmosphere (Eddleston & Kellermanns, 2007; Ronstadt, 1984) and less chance for family firms to benefit from diverse perspectives (Chirico et al., 2011b; Eddleston & Kellermanns, 2007; Eddleston et al., 2008b; Miller, Steier, & Le Breton-Miller, 2003), the increased focus on current SEW considerations leads to a lower performance threshold, which diminishes prospective financial wealth outcomes. Here again the turning point of the relationship is likely around the third or fourth generation. At later generations, formalization and professionalization are likely much more advanced (Stewart & Hitt, 2012). Strong decision-making authority and limited agency problems between family branches in control likely enhance performance, leading to an overall U-shaped relationship. Accordingly, we predict that:

**Hypothesis 2:** Family control dispersion moderates the curvilinear relationship between family generation in control and performance, such that high family control dispersion leads to an inverted U-shaped relationship, while low family control dispersion leads to a U-shaped relationship.

**METHODS**

Consistent with other studies focused on generation in control, we utilized survey-based research (e.g., Casillas et al., 2010; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010). To
select firms for our survey instrument, we focused on all companies from the Chamber of Commerce in Canton Ticino (Switzerland), resulting in 967 private firms. Then, following Zahra (2005) and Miller et al. (2008), we determined that 592 of these firms were family-owned (family majority equity of 51%) with multiple family members involved in their operations. From these 592 firms, we received two usable responses each from 199 firms, for a response rate of 33.61%. The survey targeted the the CEO and the next-highest senior position, as collecting data from two respondents is strongly encouraged to overcome methodological bias and to avoid issues associated with single-informant data (e.g., Eddleston, Kellermanns, & Sarathy, 2008a).

Using objective secondary data, we compared interview’ age, size, and industry with those of non-respondents and found no statistically significant differences, nor did we find such differences between early and late respondents. The inter-respondent reliability for performance (Pearson correlation = .81; Interclass correlation coefficient = .89; p < .001; \( r_{wg} = .95 \) was high. Responses for all our single-item constructs were consistent in all but a few cases; for those exceptions, we contacted the firms in question.

To address the issue of common method bias, we ran a regression analysis by alternating the first and the second respondent’s dependent variable data; results remained substantially similar. Next, we performed Harman's one-factor test. Results of the unrotated factor analysis show that no single factor was dominant (Podsakoff & Organ, 1986). We also used the unmeasured latent factor method approach (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), which again confirmed that common method bias likely did not influence our study's results.

The questionnaire was first developed in English. Given that Canton Ticino is an Italian-speaking region, it was translated into Italian, then back into English, by two university academics fluent in both languages. We pilot-tested the questionnaire on six senior
executives and five academics, and their comments were incorporated in the final version of the survey, which was tested again on a sample of 53 family businesses. Revisions were again made; the resulting instrument provided high reliability (Cronbach’s $\alpha$ ranged from .79 to .88). The study’s constructs were measured on a 5-point scale.

**Variables**

*Performance* was assessed through four related financial items ($\alpha= 0.85$) (“How would you rate your company’s performance as compared to your competitors: net profit; sales growth; cash flow; growth of net worth”) (see Wiklund & Shepherd, 2003). Following previous studies, in order to measure *family generation in control*, we asked respondents to indicate which generation of the family controls the firm’s management\(^1\) (see e.g., Casillas et al., 2010; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010). To measure *family control dispersion*, we asked respondents to indicate whether management control of the company was concentrated in the hands of one, two, three, four, or more family members\(^2\); a higher number indicates higher family control dispersion (see e.g., Eddleston & Kellermanns, 2007; Kellermanns et al., 2012b).

We also controlled for multiple variables believed to influence the relationship between our dependent and independent variables. Given their potential effect on firm performance (Ling & Kellermanns, 2010; Zahra & Nielsen, 2002), we controlled for the log of firm *age* (number of years since foundation) and firm *size* (number of full-time employees). Second, we controlled for *generational involvement* (Kellermanns & Eddleston, 2006), – which affects entrepreneurial activities and performance (e.g., Kellermanns & Eddleston, 2006; Kellermanns et al., 2008; Ling & Kellermanns, 2010). Third, we controlled for the number of

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\(^1\) After the survey, we contacted the companies by phone about the family generation in control of the firm’s management. In all cases, the generation in control also controlled the firm’s ownership (Ling and Kellermanns, 2010: 324).

\(^2\) In our sample, this variable ranges from 1 to 4.
members in the top management team\textsuperscript{3} and the top management team's total years of full-time paid work experience within and outside the firm given their key role in the company, the importance of their tenure and working experience, and potential overall effect on financial returns (Ling & Kellermanns, 2010). Fifth, we controlled for whether the family fully owns the business (dummy variable=1 if family ownership is equal to 100%), given the different impact that full versus partial ownership may have on firm performance (Gomez-Mejia et al., 2011). Sixth, we controlled for R&D investments, which are often associated with higher performance (Cohen & Levinthal, 1990), using a two-item scale (“R&D spending is high”; “R&D investments are taken into high consideration in our company”) ($\alpha=0.79$) (Sciascia, Mazzola, Astrachan, & Pieper, 2012). Seventh, we controlled for competition, given that higher competition levels may have a detrimental impact on firm performance outcomes (“Competition is intense”; “Our company had strong competitors”) ($\alpha=0.88$) (Tsai, 2001). Last, because type of industry may affect performance outcomes (Zahra & Bogner, 2000), we controlled for industry.

\textbf{Controlling for Endogeneity}

Firm performance may be endogenous to the family generation in control and to family control dispersion; factors that affect firm performance may also impact the desirability to keep the firm’s management within a specific generation and limited to a certain number of family members who exercise control. To control for potential endogeneity, we run a two-stage residual inclusion (2SRI) model (see Patel, Criaco, & Naldi, 2018; Terza, Basu, & Rathouz, 2008). We selected “rapid changes in technology in the market” (a 5-point Likert scale from strongly disagree to strongly agree; (Zahra & Bogner, 2000; Zahra, Neubaum, & Larraneta, 2007)) as an instrumental variable that can potentially correct for endogeneity in relation to

\textsuperscript{3} This information was missing for two companies. We double checked the missing information and inserted the correct values. However, results did not change by leaving these two values as missing.
family generation in control. Theoretically, whether technology changes rapidly is unlikely to have a direct influence on firm performance given that contingency factors need to be in place to explain firm performance (Boyd, Takaes Haynes, Hitt, Bergh, & Ketchen Jr, 2012; Ling & Kellermanns, 2010); however, it can potentially be related to the family generation in control. For instance, technological changes may be better managed by earlier family generations which may devote more time and effort to the success of the organization and to protect current SEW (Gedajlovic et al., 2012; Kellermanns et al., 2012b).

Given that the factors that may influence firm performance could also influence family control dispersion, we addressed potential related endogeneity through an instrumental variable measuring the frequency of changes in laws and regulations in the market (a 5-point Likert scale from strongly disagree to strongly agree; Zhara et al., 2007; Zahra and Bogner, 2000). Such frequent changes are likely to negatively influence the number of family members in control of the firm’s management, thereby speeding up the decision-making process (Chrisman, Memili, & Misra, 2014; Hoskisson et al., 2017) but unlikely to affect firm performance directly (Boyd et al., 2012; Ling & Kellermanns, 2010). Our theoretical predictions were empirically confirmed in the first-stage regression (Rapid changes in technology \(\rightarrow\) generation in control= -.13; \(p=.049\). Rapid changes in technology \(\rightarrow\) performance= -.01; \(p=.83\). Frequent changes in laws and regulations \(\rightarrow\) control dispersion = -.12; \(p=.050\). Frequent changes in laws and regulations \(\rightarrow\) performance= -.01; \(p=.88\)). The weak identification test confirmed that the instruments were valid (Stock & Yogo, 2005).

In the first stage, we used the instrumental variables to compute the values of the problematic predictor(s): 1) generation in control, 2) generation in control squared, and 3) control dispersion (see Appendix I). In particular, following Haans et al. (2016: 1183), in relation to “dealing with endogeneity for a quadratic relationship,” we instrumented both generation in control and generation in control squared separately in the first stage, using the
instrumental variables “rapid changes in technology” and “rapid changes in technology squared”, respectively. Then we used the three computed values in the second stage as predictors of our dependent variable (Kennedy, 2008; Wooldridge, 2002). Thus, we controlled for the three endogeneity scores (1, 2 and 3, respectively) in all analyses (see Table 2; Chrisman and Patel, 2012).

**Controlling for Self-Selection**

Later-generation family firms may survive longer being the best performers, while earlier-generation firms may exit or fail sooner. We relied on the Heckman’s (1979) two-step process to correct for the sample selection bias deriving from the survival of earlier- and later-generation family firms. The Heckman procedure allows us to calculate the inverse Mills ratio from the results of the first-stage probit model predicting the *survival of firms in earlier and later generations*. This dummy variable indicates whether the firm is in the first, second, or third generation (0) ‘or’ in the fourth, fifth, or sixth generation (1). Entering this ratio into the second-stage final regression model removes biases in the regression coefficients by accounting for sample selection. To identify the inverse Mills ratio is important that a variable is correlated with the first-stage probit model’s outcome (i.e., survival of firms in earlier or later generations), but not with the second-stage model’s outcome (i.e., performance) (Kennedy, 2008; Wooldridge, 2002). Because the variable of firm age demonstrates these relationships (Gedajlovic et al., 2012; Ling & Kellermanns, 2010), it was entered in the first-stage probit model, but not in the second-stage performance model (e.g., Huyghebaert & Van de Gucht, 2004; Morrow, Sirmon, Hitt, & Holcomb, 2007). As an additional check, we constructed the dummy variable of family firm survival in earlier and later generations with other combinations. Controlling for the inverse Mills ratio did not affect our main results.
RESULTS

We used hierarchical regression analysis for hypothesis testing.\(^4\) Inspection of the VIF and tolerance values shows that multi-collinearity was not an issue (all VIF coefficients were lower than 10 – mean VIF of 2.84, and all tolerance values were higher than .10 – mean tolerance of 0.56; Hamilton, 2006; Kennedy, 2008; Wooldridge, 2002). There was no correlation above the recommended level of 0.70 (Hair, Black, Babin, & Anderson, 2010), suggesting the absence of collinearity.

The descriptive statistics and correlations of the study’s variables are shown in Table 1, while hypotheses test results are shown in Table 2, using five models. In Model 1, we entered the control variables. In Model 2, we added the main effect of family generation in control and added the squared term of family generation in control in Model 3. In Model 4, we included the effect of family control dispersion and the interaction term between family generation in control and family control dispersion. In Model 5, we included the interaction between the squared term of family generation in control and family control dispersion.

-----------------------------------------------
Insert Tables 1 and 2 about here
-----------------------------------------------

Hypothesis 1 suggests that the relationship between family generation in control and family firm performance is U-shaped. As shown in Model 3, the linear effect of family generation in control was negative, whereas the squared term was positive. Figure 1 shows that performance decreased from the first generation to the second and third generations and increased from the third generation to the fourth, fifth, and sixth generations. Thus, Hypothesis 1 was supported.\(^5\)

\(^4\) As a robustness test, we used an ordered logit; results were consistent (H1: generation in control= -.53; p<.01; generation in control squared= .21 p<.01. H2: generation in control x control dispersion=.56; p<.05; generation in control squared x control dispersion= -.18; p<.10).

\(^5\) As a robustness check, we also ran our analysis by using firm age as a proxy of “time” rather than generation in control. Results were not significant for both firm age and firm age squared, which corroborates our argument
In Hypothesis 2, we proposed the moderating effect of family control dispersion on the family generation in control/performance curvilinear relationship. As shown in Model 5, the interaction between family generation in control and family control dispersion was positive while the interaction between the squared term of family generation in control and family control dispersion was negative (although marginally significant at p=0.06). We drew upon the recommendations of Cohen, Cohen, and Aiken (2003) to fully interpret the contingency role of family control dispersion and plotted the moderated curvilinear effect in Figure 2. As expected, our moderating variable changed the relationship between our independent variable/independent variable squared and our dependent variable from a U-shaped curve to an inverted U-shaped curve (shape-flip; Haans et al., 2016: 1188).

Robustness Tests for the U-shaped Relationship

To evaluate further the validity of the U-shaped relationship between family generation in control and family firm performance, we drew on Lind and Mehlum’s (2010) tests (see also Wales, Parida, & Patel, 2013) to estimate the direction of the slopes. Testing slopes at these bounds ensures that the U-shaped relationship is representative of the data. If the slope at earlier generations in control is negative and the slope at later generations in control is positive, then preliminary evidence of a U-shaped relationship is present. Evidence suggested the presence of a U-shaped relationship (see below). Second, we relied on the Sasabuchi test to check if the effect of generation in control on family firm performance decreased at earlier generations in control and increased at later generations in control. Significant values indicated the presence of a U-shaped relationship ($Lower bound slope= -0.22; t-value= -2.05$; regarding the central role played by family generation in control (and not simply firm age) on performance in family firms.
Following Lind and Mehlum (2010), we estimated confidence intervals around extreme points (Fieller approach). Confidence intervals within the bounds of the low and high values provide further evidence of the U-shaped relationship in the data (Haans et al, 2016). In our data, the estimated extreme point was 3.13, which is within the bounds of generation in control (95% Fieller interval for extreme point: [1.41; 9.02]).

Finally, we tested for the potential existence of a cubic relationship (generation in control cubic=-.03; p>.10). The absence of significant results demonstrates that a U-shaped relationship fits the data better (Kennedy, 2008; Wooldridge, 2002).

**DISCUSSION**

From neighborhood mom-and-pop stores, to small- and mid-size companies, to large firms such as BMW, Samsung, and Wal-Mart, family firms are prevalent throughout the world and are major contributors to economic development, job creation, and firm growth (e.g., Gedajlovic et al., 2012). Broadening our understanding of the unique features of family firms that lead to higher performance across generations strengthens both theory and practice. While family firms’ unique characteristics may be persuasively argued to either support or inhibit performance (Miller et al., 2003), the ongoing discussion of these characteristics as either assets or liabilities has obfuscated the understanding of whether and in which circumstances family firms are able to sustain and increase their financial results (Gedajlovic et al., 2012; Miller et al., 2008). Studies that focus on family firm research have identified [two opposing perspectives – identify?] of the effect of family generation in control on family firm outcomes (e.g., Beck et al., 2011; Casillas et al., 2010; Cruz & Nordqvist, 2012; Kellermanns et al., 2012b; Ling & Kellermanns, 2010; Mazzola et al., 2013; Salvato, 2004).
Drawing on the mixed-gamble logic of SEW, we endeavor to increase our understanding of the effects of the passage of time in terms of family generation in control on firm performance by developing and testing a model that builds upon and extends prior work. We argue that the family’s focus on protecting current SEW is stronger in earlier-generation family firms and the focus on maximizing prospective financial wealth is stronger in later-generation firms. As a consequence, family members’ focus on financial performance will be lower in earlier generations and higher in later generations (Gimeno et al., 1997; Gómez-Mejía et al., 2007). As some have suggested, this implies that “the meanings and measures of performance can change…over time” in family firms (Colli, 2012: 248). Our empirical results confirm that a U-shaped relationship exists between family generation in control and performance. That is, while earlier-generation family firms (e.g., first, second, and third generation) perform increasingly worse, later-generation firms (e.g., fourth, fifth, and sixth generation) perform increasingly better.

Figure 1 shows the different levels of family firm performance based on family generation in control. As expected, higher performance levels are achieved by family firms in later generations, given their stronger focus on financial outcomes. Although SEW is likely to be high in the founder’s generation, firm performance is strong due to the founder’s innovative and entrepreneurial actions (Jayaraman et al., 2000; Salvato, 2004). As predicted, performance substantially decreased from the first to the second and third generations (reaching the lowest point in the third generation) and substantially increased in the fourth, fifth, and sixth generations. This result corroborates our argument that the more family members perceive themselves at a distance from the founder’s generation, the more their focus will switch from an emotional to a business logic, thus increasing potential benefits for family firm performance.
Figure 2 provides a clear picture of the non-linear interaction between family generation in control and family control dispersion on family firm performance. In support of Hypothesis 2, the graph shows that the family generation in control/performance U-shaped relationship is moderated by family control dispersion. When dispersion was low (i.e., high family control concentration), the U-shaped relationship was amplified; when dispersion was high, later generations in control had a positive effect on performance but only up to the fourth generation, after which performance decreased (shape-flip; Haans et al., 2016). However, only sixth-generation family firms with low family control dispersion performed better than those with high family control dispersion. Thus, in contrast to our prediction, this result shows that excessively high family control dispersion had negative effects on firm performance and that control dispersion may, for instance, amplify relationship conflicts in later-generation family firms (Kellermanns & Eddleston, 2007; Qui & Freel, 2020).

**Contributions**

By utilizing Gimeno et al.’s (1997) concept of threshold of performance, we offer additional support for the mixed-gamble logic of SEW and the argument that earlier-generation family firms perform increasingly worse compared to later-generation firms, given family members’ different focus on current SEW and prospective financial wealth. Indeed, Berrone et al. (2012: 272) invite scholars to examine “under which conditions the emphasis on SEW may be beneficial or detrimental to firm performance” and if “there is any [time] threshold beyond which the frame of reference changes from SEW to financial considerations and whether or not this threshold varies across family firms.” Similarly, Kellermanns, Eddleston, and Zellweger (2012a) suggest that SEW can be associated with negative performance implications.

Our results confirm that the turning point after which the threshold level of performance changes from an emotional logic (focusing on current SEW) to a business logic
(focusing on prospective financial wealth) occurs after the third generation and that, as SEW cannot be uniformly applied, contingency effects need to be explored. Not only do temporal aspects of SEW need to be further investigated, there is also a need to consider both emotional and rational components in the decision-making process and how trade-offs affect family firm behavior and performance. Furthermore, our operationalization of time in terms of generation in control and the related complex non-linear findings complement prior temporal research (e.g., Ancona et al., 2001; Lévesque & Stephan, 2020).

Second, our focus is on family control over firm management (i.e., family firm performance depends on the family generation in control and family control dispersion). The observed U-shaped relationship sheds some light on previous research and theories that offer conflicting evidence regarding the effect of family generation in control on family firm outcomes (e.g., Beck et al., 2011; Casillas et al., 2010; Chirico & Salvato, 2016; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010; Salvato, 2004). There is a likelihood that many studies that explored the effect of family generation in control on firm performance may have been biased because they focused on family firms in earlier generations (e.g., first, second, and third) (see e.g., Beck et al., 2011). By extending our observation period to six generations, we found that the effect of family generation in control on firm performance is negative (up to the third generation) and positive in later generations (beginning with the fourth generation; see Figure 1). Our results, which suggest that firms in the fourth, fifth, and sixth generations may focus more on financial results and, thus, perform best, may also explain counter-intuitive findings in regard to the “heirloom” effects on SEW (e.g., Zellweger et al., 2012) and how family firm dynasties solidify and succeed over long periods of time (e.g., Jaffe & Lane, 2004).

Third, by stressing the heterogeneous nature of family firms (Stanley, Hernández-Linares, López-Fernández, & Kellermanns, 2019; Stanley et al., 2017; Westhead &
Howorth, 2007), we answer increasingly frequent calls to investigate behavioral differences among family firms (e.g., Chrisman & Patel, 2012; Sharma, 2004) through a time perspective (Salvato et al., 2019). Our study may explain why, while most family firm owners expect to transfer control to family members when they retire, only one third of family businesses survive into the second generation, and only 10% to 15% survive into the third generation; of these, few create acceptable levels of financial value (cf. earlier-generation family firms) (Le Breton-Miller et al., 2004). As many financially healthy and long-standing family firms exist because of their stronger focus on financial outcomes (cf. later-generation family firms) (Miller & Le Breton-Miller, 2005), those that survive into the third generation tend to thrive and, subsequently, prosper.

Fourth, our specific focus on family control dispersion advances existing research that has mainly centered on family control concentration (e.g., Eddleston & Kellermanns, 2007; Eddleston et al., 2008a; Kellermanns & Eddleston, 2007). We found that family control dispersion is crucial to enhance firm outcomes. Therefore, we suggest that coupling family control dispersion with family generation in control can mitigate SEW considerations in earlier generations and amplify later-generation family firms’ focus on financial outcomes, thus leading to increased levels of performance. Accordingly, we propose that a contingency perspective is likely to be very fruitful in further developing SEW.

Figure 2 reveals that although family firms with high family control dispersion performed better than those with low family control dispersion until the fifth generation, the family generation in control/performance relationship became negative after the fourth generation when family control dispersion was high, suggesting that some form of centralized decision making may still be needed in generations more distant from the founder. Even in a more professionalized business (Stewart & Hitt, 2012), the family firm environment may still cause the need to mitigate potential relationship conflicts deriving from the increased kinship
distance among family managers in later generations (Corbetta & Salvato, 2012; Gersick et al., 1997). At every stage of development, family firms may need to adopt governance mechanisms that not only take the complexities of family ownership into account but are also flexible enough to accommodate changes in their management over time.

Finally, our study may help us better understand performance outcomes within other organizational contexts characterized by emotional commitments and strong social structures (Jiang et al., 2018).

Limitations, Future Research, and Implications for Practice

First, we used cross-sectional data to explore the effect on performance of family generation in control and family control dispersion, while using limited archival data for some of our control variables. A longitudinal panel data set would have been a stronger test of our hypotheses, although it would have required over 100 years of data to examine the performance of family firms across as many as six generations. Researchers may also complement our study by focusing on single or multiple in-depth case studies to explore the evolution of performance within firms rather than across firms (Kammerlander & Diaz-Moriana, 2022), preferably using family firms with a long business history, which are more easily found in specific sectors; for example, “[t]he wine industry [which] is one of the oldest industries in Europe” (Jaskiewicz, Heinrichs, Rau, & Reay, 2016: 786; see also Baù, 2013; Chirico & Nordqvist, 2010). At the very least, a mixed method approach is highly desirable.

Furthermore, although our final sample of 199 respondents is in line with recent survey-based family firm research (e.g., Delgado-García, VirginiaBlanco-Mazagatos, ElenaRomero-Merino, & CeliaDiaz-Portugal, forthcoming; Madison, Eddleston, Kellermanns, & Powell, 2021), there are potential power concerns, which are mitigated by the significant findings of our hypotheses. When conducting this study, [a priori – a priori?] analysis assumed a moderate effect size, an alpha of .05 and a power of .80 with 20 estimators. The necessary
sample size was determined to be 157 via a power analysis that assessed the $R^2$ deviation from zero (Faul, Erdfelder, Buchner, & Lang, 2009), which our sample size exceeded. Yet, we encourage researchers to pay particular attention to statistical power concerns (e.g., Aguinis, 1995).

Second, although we utilized dual respondents to mitigate respondents’ personal perceptions (Eddleston et al., 2008a) and as subjective performance tends to be highly correlated with objective performance in family firms (Ling & Kellermanns, 2010), a direct measure of performance would have further strengthened our research design. Also, our results were confirmed using only family generation in control, not firm age, as a proxy of time. We believe that this provided better construct validity, as firm age does not fully correspond with family generation and, most importantly, with the succession of generations over time, a key focus in family firm research (e.g., Gersick et al., 1997). The distinction between time since founding and generations opens new avenues of research. For example, when aspects of control are examined, generations should be the focus. Conversely, if mere duration is the variable of interest (e.g., in term of imprinting (Pieper, Smith, Kudlats, & Astrachan, 2015; Simsek, Fox, & Heavey, 2015), the general passage of time may be the more appropriate measure. Firm age, per se, may be a crude time measure that, especially in a family firm context, may impact firm outcomes but only when in connection with other key family variables.

Third, even though we did not directly measure SEW (Berrone et al., 2012) or decision makers’ threshold of performance (Chrisman & Patel, 2012; Gimeno et al., 1997), we argue that they play a crucial role to explain financial performance in family firms and encourage researchers to directly measure these elements (e.g., Berrone et al., 2012; Zellweger et al., 2012). Fourth, our data sample is drawn from Switzerland, one of the world’s most stable economies with one of the highest per capita incomes in the world, a low unemployment rate,
and a balanced budget. As these factors might have partially driven or affected our results, research should be replicated in other countries to ensure that these results are not linked to Swiss economic, institutional, or cultural variables.

Fifth, the contradictory findings of previous studies that focus on the family generation in control/family firm outcomes relationship may also be measurement-related. In particular, when using archival data, family generation in control may be impossible to pinpoint; firm age is a likely approximation. Yet, in survey and qualitative research, generations can be more directly assessed. Although quantitative studies use measures and designs very similar to ours (see e.g., Casillas et al., 2010; Cruz & Nordqvist, 2012; Ling & Kellermanns, 2010), we invite researchers to rely on different measures of performance and different measures of generation in control (e.g., in terms of management, ownership, and/or ownership and management together) while relying on both archival data (e.g., to measure performance) and primary data (e.g., to measure generation in control) in a panel setting. Sixth, nine percent of our sample belong to generations beyond the third, which is consistent with general statistics about the percentage of family firms in generations beyond the third compared to firms belonging to previous generations, supporting the representativeness of our sample. Indeed, only a small percentage of family firms are passed down to the fourth or later generation both in Switzerland (see e.g., Sieger & Zellweger, 2012) (Frey, Halter, Klein, & Zellweger, 2004) and internationally (Gedajlovic et al., 2012; Gersik et al., 1997; The Economist, 2015). We invite scholars to construct a larger sample or build a matching sample between family firms in earlier and later generations to test our contentions more fully.

Finally, our study also has practical implications for managers. Compared to later-generation family firms, earlier-generation firms may perform steadily worse due to their main focus on non-financial goals and path-dependent behaviors, unless more family members who work effectively together share managerial power. Indeed, “[a]lthough ideas
are formed in the minds of individuals, interaction between individuals typically plays a critical role in developing these ideas. That is to say, ‘communities of interaction’ contribute to the amplification and development of new knowledge” and new perspectives to be brought to the organization. Accordingly, encouraging ”participants in the dialogue . . . to express their own ideas freely and candidly” is important (Nonaka, 1994: 15, 25). While some family firms may limit family members’ participation in the firm’s management and decision-making processes (Kellermanns & Eddleston, 2007), other fast-growing, high-performing family firms may encourage family member participation in developing long-term goals and strategies (Upton et al., 2001).

We hope this study refines our understanding of performance through a time perspective as it relates to the family firm in earlier and later generational stages. By extending and encouraging research on financial and non-financial firm outcomes, depending on the specific features of the business organization, our goal is to help companies better understand the roles of family generation in control and family control dispersion as sources of competitive advantage in family firms.
REFERENCES


Table 1
Descriptive Statistics and Correlations

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<th>9</th>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
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<td>0.55</td>
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N = 199; Correlations with values of |.14| or greater are significant at p < .05
Industry dummies included in the regressions
Table 2  
Results of Hierarchical Regression Analysis

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<tr>
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<th>Model 1</th>
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<th>Model 4</th>
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<td>FGC-squared</td>
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<td>0.05</td>
<td>0.05</td>
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<td>FGC * FCD</td>
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<td>0.07</td>
<td>0.14</td>
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<td>FGC-squared * FCD</td>
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<tr>
<td>Endogeneity score 1</td>
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<td>Inverse Mills ratio</td>
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<td>-0.02</td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.03</td>
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<tr>
<td>$R^2$</td>
<td>0.27</td>
<td>0.27</td>
<td>0.29</td>
<td>0.32</td>
<td>0.34</td>
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<tr>
<td>Adjusted R2</td>
<td>0.18</td>
<td>0.18</td>
<td>0.20</td>
<td>0.23</td>
<td>0.24</td>
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<tr>
<td>F statistic</td>
<td>3.14***</td>
<td>2.99***</td>
<td>3.10***</td>
<td>3.31***</td>
<td>3.37***</td>
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</tbody>
</table>

$+ p<0.1 ; * p<0.05 ; ** p<0.01 ; *** p<0.001.$
Figure 1
The U-shaped Relationship between Family Generation in Control and Performance
Figure 2
The Moderating Role of Family Control Dispersion on the U-shaped Relationship between Family Generation in Control and Performance
## Appendix I

### First-stage Regressions for Endogeneity

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family generation in control (FGC)</strong></td>
<td><strong>FGC squared</strong></td>
<td><strong>Family control dispersion</strong></td>
</tr>
<tr>
<td>Firm Age</td>
<td>0.66***</td>
<td>3.22***</td>
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<tr>
<td>Firm Size</td>
<td>-0.07</td>
<td>-0.48</td>
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<tr>
<td>Generational involvement</td>
<td>0.22*</td>
<td>1.27*</td>
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<td># members in TMT</td>
<td>-0.03</td>
<td>-0.10</td>
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<tr>
<td>Experience within</td>
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<td>0.00</td>
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<tr>
<td>Experience outside</td>
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<td>0.00</td>
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<tr>
<td>Fully family owned</td>
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<td>-0.10</td>
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<td>Trade</td>
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<td>Finance</td>
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<td>Services</td>
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<tr>
<td>Others</td>
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<tr>
<td>Firm Age</td>
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<td>1.22</td>
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<tr>
<td>Rapid changes in technology (RCT)</td>
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</tr>
<tr>
<td>RCT squared</td>
<td></td>
<td>-0.07</td>
</tr>
<tr>
<td>Frequent changes in low/regulations</td>
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<td>F statistic</td>
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<td>9.43***</td>
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</table>

+ $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$. 