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Does Increased Generational Involvement Foster Business Growth? The Moderating Roles of Family Involvement in Ownership and Management — Source link

Daniel Pittino, Daniel Pittino, Francesco Chirico, Francesco Chirico ...+2 more authors

Institutions: Jönköping University, University of Udine, Macquarie University, Katholieke Universiteit Leuven

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Daniel Pittino
daniel.pittino@ju.se

Francesco Chirico
francesco.chirico@ju.se

Bart Henssen
bart.henssen@odisee.be

Wouter Broekaert
wouter.broekaert@odisee.be

forthcoming in European Management Review

Abstract

Building upon the upper echelon perspective, we examine the effect of generational involvement in management on various measures of business growth and consider different levels of family participation. Specifically, we argue that generational involvement and the participation of family actors in ownership and management foster cognitive diversity at the TMT level, which may ultimately positively *or* negatively impact family business growth. Our theory, which is tested using a longitudinal sample of unlisted Belgian family firms, contributes primarily to the literature related to the determinants of family firm growth, which, to date, has paid limited attention to the combined effect of different family involvement factors.

Does Increased Generational Involvement Foster Business Growth?
The Moderating Roles of Family Involvement in Ownership and Management

Introduction

Firm growth among family firms is a critical topic given the predominance of these types of organizations worldwide (e.g., Astrachan and Shanker 2003; Claessens, Djankov, and Lang 2000) and their contribution to both regional and global economies (e.g., Basco, 2015). Previous studies suggest that family involvement affects family decision makers' attitude towards growth and related firm growth performance (e.g., Bjuggren, Daunfeldt, & Johansson, 2013; Daily & Dollinger, 1992; Hamelin, 2013; Yordanova, 2011). On the one hand, firm growth appears to contrast with family decision makers' emphasis on non-economic goals (e.g., Chrisman, Chua, Pearson, & Barnett, 2012) and their willingness to maintain control in the hands of the family (e.g., Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, Moyano-Fuentes, 2007). In fact, some pre-requisites of growth, such as the participation of external investors or the reliance on equity funding or debt financing (Chrisman and Patel, 2012; Gomez-Mejia et al., 2014), are likely to diminish the capacity of the family to exert control over the business (Gomez-Mejia et al., 2007). On the other hand, the long-term orientation and specific resources of family firms compared to those of their non-family counterparts have been suggested to positively affect firm growth (e.g., Bau, Chirico, Pittino, Backman, Klaesson, 2018; Sirmon and Hitt, 2003).

Given these contrasting arguments, the effect of family involvement on business growth remains unclear (Basco, 2013; Calabrò et al., 2017; Dyer, 2006; O'Boyle et al., 2012). However, it is known that the composition of the top management team (TMT) and the characteristics of its decision makers play a decisive role in the strategy and goal definition of family businesses (Geyer, 2016; Hambrick & Mason, 1984). Yet, our knowledge regarding the impact of generational involvement, i.e., the joint involvement of multiple generations in the

TMT (Sciascia, Mazzola, & Chirico, 2013), on family firm growth is minimal. This lack of knowledge is not a trivial issue since generational involvement is among the most distinctive ways through which family dynamics influence company goals, decisions and related outcomes (e.g., De Massis., Kotlar, Campopiano, & Cassia, 2015; Sciascia et al., 2013; Upton, Teal and Felan, 2001).

Therefore, building upon the upper echelons perspective (Hambrick & Mason, 1984; Finkelstein, Hambrick, & Cannella, 2009), according to which the composition of a firm's TMT affects the team's strategic decision-making and subsequent organizational outcomes (Carpenter, Geletkanycz and Sanders, 2004), we examine the effect of generational involvement in management on various measures of business growth and consider different levels of family participation. Specifically, we argue that generational involvement and the participation of family actors in ownership and management foster cognitive diversity at the TMT level, which may ultimately positively or negatively impact family business growth. Cognitive diversity, i.e., differences in knowledge, skills, preferences, and perspectives, among TMT members (Huber & Glick, 1995; Mello & Rentsch, 2015; Miller, Burke, & Glick, 1998) in management is key to explaining firm outcomes given such diversity sheds light on the underlying reasons behind decision making choices and outcomes, and demographic variables (e.g., age, tenure, education, and gender) have often been used as mere proxies by upper echelon theorists (Hambrick and Mason, 1984; Glick, Miller & Huber, 1993). The variables we focus on and the related cognitive diversity arguments have important implications for a TMT group functioning such as cooperation, conflict and group performance (Barsade, Ward, Turner, & Sonnenfeld, 2000).

Our study, which is based on a longitudinal sample of Belgian private family firms resulting in 1,350 year-observations during the 2009-2013 period, makes several important contributions. First, our theory primarily allows us to contribute to the literature related to the

determinants of family business growth, which, to date, has paid limited attention to the combined effect of different family involvement factors (e.g., Casillas, Moreno & Barbero, 2010). In fact, most studies examining the effects of family involvement on firm growth address the dimensions of involvement separately and evaluate their additive impact while overlooking their joint effects. Understanding the combined effect of various dimensions of family involvement is key because this information could provide scholars and practitioners a more realistic picture of the heterogeneous patterns existing among family firms (e.g., Chrisman, Chua, De Massis, Minola, & Vismara, 2016), which emerge mainly from configurations of multiple family attributes (e.g., Klein, Astrachan, & Smyrnios, 2005; Nordqvist, Sharma, & Chirico, 2014).

Second, we shed further light on the upper echelons perspective applied to family firms (e.g., Binacci, Peruffo, Oriani, & Minichilli, 2016; Ling & Kellermanns, 2010; Sciascia et al., 2013) with an additional emphasis on the role of non-family actors (e.g., Tabor, Chrisman, Madison, & Vardaman, 2018) by assessing the effects of upper echelon diversity not only within groups but also across groups, i.e., by considering the joint effect of diversity at the TMT and ownership group levels. Third, we advance the upper echelons literature on a broader level by adding to the ongoing debate concerning the relationship between TMT diversity and firm outcomes (e.g., Carpenter, 2002; Hambrick, Humphrey, & Gupta, 2015; Roberson, Holmes, & Perry, 2017). While the demographic diversity of the TMT is an important factor to consider, upper echelons theory has been criticized for its unifocal attention towards demographic variables that are mere indications of the deep-level composition of TMTs, such as the team members' attitudes, personality, and cognitive characteristics (e.g., Kauer et al., 2007; Oppong, 2014; Priem et al., 1999). Our study addresses the pressing need to unravel deeper-level factors affecting firm outcomes, such as generational and family involvement in management and ownership.

Literature and hypotheses

Business growth is considered a key factor for the creation of wealth and employment (e.g., Davidsson and Wiklund, 2006). As highlighted by several review efforts (e.g., Davidsson, Achtenhagen, Naldi, 2010; Delmar, 1997; Gilbert, McDougall and Audretsch, 2006; Shepherd and Wiklund, 2009; Wiklund, 1998), research investigating this topic has produced a very large amount of empirical work and numerous theoretical modeling attempts. However, the conceptual understanding of the concept is still partial, and empirical evidence is sometimes conflicting (Davidsson and Wiklund, 2000; Shepherd and Wiklund, 2009). In fact, business growth is a complex phenomenon to define and measure (Achtenhagen, Naldi, Melin, 2010). In the seminal work "The Theory of the Growth of the Firm", Edith Penrose (1959) observes that "The term 'growth'(…) sometimes denotes merely increase in amount; for example, when one speaks of 'growth' in output, export, and sales. At other times, however, it is used in its primary meaning, implying an increase in size or improvement in quality as a result of a process of development, akin to natural biological processes in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object" (Penrose, 1959: p.1).

Therefore, business growth needs to be analyzed as a multifaceted phenomenon, but there is consensus among scholars and practitioners that business growth represents an essential performance measure of a successful business (Achtenhagen et al., 2010) and is mainly reflected in growth in assets, size growth and revenue growth (e.g., Shepherd & Wiklund, 2009). Among other factors, growth is dependent on a firm's strategy (e.g., Baum et al., 2001; Davidson & Wiklund, 2013; Geyer, 2016) as it can be interpreted as a strategic goal set at the top management level (Greve, 2008). This situation is especially valid in the context of family firms (Bau et al., 2018), which rely heavily on internal financing and, therefore, need to

carefully plan business growth goals and processes as these activities involve investments of resources that may place the business at risk. According to Hamelin (2012), family firms are prone to limiting firms' growth by adopting conservative growth behavior that reduces placing the family wealth at risk (Zellweger & Sieger, 2012). Additionally, family firms tend to limit their growth to protect their socio-emotional wealth (Gomez-Mejia et al., 2007). Non-financial motives specific to family firms, such as the need for belonging, preservation of family wealth, dynastic continuity and family social status (Gomez-Mejia et al., 2007, Zellweger & Astrachan, 2008), discourage investments in growth to preserve family control (Choi et al., 2015). Non-financial motives also provide an incentive to manage capital effectively over longer periods of time (Hamelin, 2012; James, 1999; Le Breton-Miller & Miller, 2006), thus leading to considerations of firm survival over wealth maximization (Steier, 2005).

However, empirical research investigating the effect of family involvement on firm growth differences within family firms shows ambiguous results because several factors play a role. Research shows conservative growth behaviors among most family-owned businesses because of the fear of the loss of family control, which is enhanced by the lower growth potential due to financial capacity constraints (e.g., Bjuggren, Daunfeldt, & Johansson, 2013). However, such an effect is not observed in all growth indicators. For example, Hamelin (2012) studies 22,237 French family-owned SMEs and finds that family ownership has an insignificant effect on the firm's investment rate and a positive influence on the firm's sales growth rate, indicating an ambiguous effect of family ownership on multiple types of growth. In her study, Hamelin (2012) finds that family ownership leads to conservative growth behavior due to the following three main reasons: (1) higher family ownership concentration is related to greater wealth under-diversification, increasing exposure to firm-specific risk and raising the required return on investment (Hamelin, 2012); in turn, this situation limits the incentive to invest and could lead to lower investment growth; (2) family-controlled firms deliberately limit their

growth due to non-financial goal pursuance, which might not lead to a value-maximizing approach; and (3) family firms may undermine business growth to maintain business opacity before tax authorities (Hamelin, 2012).

Although reasons (1) and (2) have a strong impact on family owners' growth behavior, Choi et al. (2015) show that family ownership and the propensity to maintain family control may also lead to higher investments. In their study investigating the role of growth opportunities and business group membership, these authors show that in an environment in which competitors are growing more quickly than the independent family firm (i.e., a firm that is not a part of a family business group), family owners align their R&D investments with the industry requirements to maintain the family owners' long-term control goals. Thus, the industry requirements could reduce the negative effect of family involvement on growth in terms of R&D investments. However, when firms are a part of a family business group, this joint effect of industry growth opportunities and family ownership on R&D investments becomes negative (Choi et al., 2015). According to McConaughy and Phillips (1999), investment in capital equipment and R&D is also related to the firm's generational stage. "They find that next-generation family firms invest less in capital equipment and R&D and exploit fewer new technologies or markets, leading to slower growth compared with founder-controlled firms" (Molly et al., 2011). However, according to other studies, specific family-based resources allow a family firm to generate a competitive advantage over non-family firms such that higher growth can be expected in family firms (e.g., Bau et al., 2018; Sirmon & Hitt, 2003). Thus, family involvement in ownership or management has the potential to increase business growth. Thus, family firms might exhibit considerable heterogeneity in their growth outcomes, and the effects of the varying degrees and forms of family involvement, i.e., the generations involved, family ownership and family management, on business growth require further exploration.

Generational involvement in management and growth

In family firms, growth in quantitative dimensions (i.e., growth in assets, size, and revenues) is likely to be the outcome of a deliberate goal setting process (Eddleston, Kellermanns, Floyd, Crittenden, & Crittenden, 2013; William, Pieper, Kellermanns, Astrachan, 2018) given the critical impact that growth can have on the economic and socioemotional value of the business. An effective process of organizational goal setting requires consensus among actors, especially among those who are members of the organization's dominant coalition (Kotlar, De Massis, Wright, & Frattini, 2018; Colbert, Kristof – Brown, Bradley, & Barrick, 2008); this requirement also applies to business growth as a strategic goal in a family business setting. In fact, growth is unlikely to occur, especially in family firms, without a careful goal definition (Corbetta & Salvato, 2012).

The involvement of multiple family generations in the TMT may influence the conditions for defining and pursuing growth goals because generational involvement is a relevant source of cognitive diversity. Despite their kinship ties, executives in multigenerational teams differ in their knowledge, skills, preferences and perspectives towards the family business according to the family generation to which they belong (Sciascia et al., 2013). Cognitive diversity in TMTs may lead to disadvantages in the decision-making process as heterogeneous TMTs experience more difficulties in reaching consensus on decisions (Amason, 1996; Hmieleski & Ensley, 2007). This situation occurs because diverse perspectives within top management teams often generate emotional conflicts and slow the decision-making process (Amason, Shrader, & Thompson, 2006). In multigenerational TMTs, this situation may emerge due to the different attitudes of the members of different generations regarding the family and business priorities. More specifically, the simultaneous involvement of multiple generations in family firms' management is likely to be related to numerous contrasting views and personal goals at the team level, which foster difficulty in reaching a consensus and the potential for affective

conflict, namely, emotional and individual-oriented disagreement (e.g., Amason & Sapienza, 1997; Mooney, Holahan, & Amason, 2007; Sciascia et al., 2012). Indeed, the direct involvement of multiple generations implies the emergence of diverse mindsets and viewpoints regarding effective actions, timings, feelings of entitlement to the wealth and the control of the firm (Kellermanns & Eddleston, 2004), which could lead to conflicting expectations regarding long-term strategies, including those concerning firm growth (Chrisman & Patel, 2012; Kotlar & De Massis, 2013; Schulze, Lubatkin, & Dino, 2003; Visintin, Pittino, & Minichilli, 2017).

However, it is possible to assume a competing perspective in relation to the effect of generational involvement on firm growth. Upper echelons theory asserts that cognitive diversity in TMTs can also be beneficial and lead to better problem solving and more comprehensive decision making (Bantel & Jackson, 1989; Wiersema & Bantel, 1992) due to its potential to generate multiple alternatives and the contribution of various ideas and perspectives (e.g., Beckman, Burton, & O' Reilly, 2007; Hmieleski & Ensley, 2007; Steffens, Terjesen, & Davidsson, 2012). These features are common in TMTs in which multiple family generations are involved. For instance, previous studies have suggested that the participation of members from multiple generations in management helps bridge the values of the business family over time (Zellweger, Nason, & Nordqvist, 2012) and strengthens the feelings of belonging to the family business (Björnberg & Nicholson, 2012) by promoting awareness of the family's past success (Jaskievicz, Combs, & Rau, 2015) and reinforcing the perception of a strong identity fit between the family and the firm (Zellweger, Nason, Nordqvist, & Brush, 2011). It has also been highlighted that when family members from different generations are involved in management roles, they exhibit mutual trust and collectivistic attitudes (Chirico, Ireland and Sirmon, 2011a; Pittino, Barroso-Martinez, Chirico, & Galvan, 2018). In particular, the heterogeneous knowledge in multigenerational family TMTs has the potential to facilitate the identification of growth opportunities by increasing alertness and the capacity to interpret

signals from the environment (e.g., Cruz & Nordqvist, 2012). Additionally, the presence of different generations in management can encourage the consideration of a wider range of strategic options, including those related to firm growth (Ling & Kellermanns, 2010; Zahra, 2005; Zahra, Neubaum, & Larraneta, 2007; Sciascia et al., 2012). These arguments suggest that the beneficial effects of cognitive diversity in multigenerational TMTs are not necessarily offset by the increased potential for conflict and disagreement. Therefore, we propose the following competing hypotheses:

Hypothesis 1a: Increased generational involvement in management has a negative effect on business growth.

Hypothesis 1b: Increased generational involvement in management has a positive effect on business growth.

Moderating roles of family involvement in ownership and management

The effect of multiple generations active in management is likely to be affected by the surrounding social context. In particular, the relative importance of family and non-family actors in ownership and management may have an impact on the cognitive diversity among the members of different generations regarding attitudes towards growth and, ultimately, the realization of such strategies. Consistent with previous studies adopting an upper echelons perspective in a family business setting (e.g., Brunninge, Nordqvist, & Wiklund, 2007; De Massis, Kotlar, Campopiano, & Cassia, 2015), we argue that the possibility of goal incongruence and conflict among managing family generations is further influenced by (1) the degree of homogeneity among the actors at the ownership level and (2) the level of interpersonal cohesion within the TMT. In turn, these dimensions depend on the presence of non-family shareholders (Schulze, Lubatkin, Dino, 2003, Villaseca, 2002) and non-family TMT members (Ensley and Pearson, 2005; Kellermanns Eddleston, 2007).

The presence of non-family owners indicates a less uniform preference for family-centered goals and socioemotional priorities within the owning family (e.g., Chirico et al., 2019;

Kraus, Mensching, Calabrò, Cheng, & Filser, 2016). Therefore, the cognitive distance among the managing generations may increase as the divergences in the ownership coalitions are potentially mirrored by family members' differing attitudes and preferences at the management level. Thus, we suggest that even if non-family actors are not actively involved in the firm's management team, their status and rights as owners may exert an influence on the family firm's management via interactions with family executives occurring in other settings, including formal (e.g., shareholder assembly or board of directors) or informal (personal relationships, which may be stronger or weaker with different generations) settings. The preferences of non-family actors as owners may be leveraged by family managers at the TMT level to politically argue in favor or against a given decision. In contrast, an entirely familial ownership structure reduces the likelihood that the differences among the family generations result in unhealthy conflicts at the management level, promotes goal congruence between the family and the business and stimulates socialization processes among multigenerational family members (Gomez-Mejia et al., 2007; Schulze, Lubatkin, & Dino, 2003). More specifically, an ownership coalition composed exclusively of family members promotes the full embeddedness of business decisions in a more cohesive family system of norms and values, lowering the disruptive potential of multigenerational affective conflicts (Miller, Le Breton-Miller, & Lester, 2011; Le Breton-Miller, Miller, & Lester, 2011).

Therefore, we suggest that the combined effect of several generations involved in management and high family ownership results in a team that combines divergent knowledge and insights with the expertise of multiple generations in an ownership context characterized by the stability of family-centered goals (Chirico et al., 2011b; Zahra, 2005; Fernández and Nieto, 2005). This situation may provide a multigenerational TMT with the confidence, trust, alignment of interests and expertise (Miller & Le-Breton Miller, 2006) necessary to formulate a strategy for steady growth. Therefore, this situation is likely to (1) reduce the negative effect

postulated in Hypothesis 1a by decreasing the probability that different generations "use" non-family owners' goals and perspectives as an argument in favor or against other family members' ideas or (2) strengthen the positive effect postulated in Hypothesis 1b by further reinforcing the feeling of unity and cohesion in the family coalition. Formally, we propose the following hypothesis:

> *Hypothesis 2: Family involvement in ownership positively moderates the effect of generational involvement in management on business growth such that higher family involvement in ownership reduces the negative effect or increases the positive effect of generational involvement on business growth.*

Similar arguments can be developed with respect to the TMT composition. The participation of non-family managers in a multigenerational TMT tends to magnify the cognitive diversity within the group, creating more difficult conditions for reaching consensus on strategic goals (e.g., Dess, 1987; Kotlar & De Massis, 2013 West & Schwenk, 1996). It is true that non-family managers may help with resolving disputes among family executives; however, given that non-family actors in family TMTs often lack structural power relative to the family members (e.g., Patel & Cooper, 2014), the outcome of their intervention is more likely to result in conflict suppression or sub-optimal mediation rather than an agreement regarding higher-level goals in multigenerational family teams (Jehn & Bendersky, 2003).

Furthermore, despite the existence of generation-based cognitive differences, compared to TMT settings involving non-family executives, TMT relationships occurring among multigenerational family members are more likely to foster a stewardship-based atmosphere with a higher propensity of TMT members working for long-term business goals within a setting of familial social interaction (Kotlar & De Massis, 2013; Miller and Le Breton-Miller, 2005; Miller, Le Breton-Miller and Scholnick, 2008). Coordination in performing managerial tasks is also easier among multigenerational family members because the family is the context of the primary socialization process of an individual (Berger and Luckmann, 1967). For

example, norms used within the family define recurring behaviors and reciprocal expectations by multigenerational family executives (Arregle, Hitt, Simon, Very, 2007; Bettenhausen and Murnighan, 1991).

Thus, we predict that when TMTs are predominantly or entirely composed of family members, it will be easier to reconcile cognitive differences among representatives of different generations in regard to setting and implementing growth-related goals. Similar to our Hypothesis 2, we postulate that a higher family involvement could reduce the negative effect postulated in Hypothesis 1a by decreasing the conflict potential in the team or strengthen the positive effect postulated in Hypothesis 1b by enhancing the feelings of trust and cohesion within the group. Therefore, we propose the following hypothesis:

> *Hypothesis 3: Family involvement in management positively moderates the effect of generational involvement in management on business growth such that a higher family involvement in management reduces the negative effect or increases the positive effect of generational involvement on business growth.*

Methods

Data collection and analysis

Our dataset is based on an initial sample of 561 unlisted family firms in Belgium. These companies received a questionnaire during the first half of 2014 and subsequently provided information regarding various company characteristics, including the family's presence in ownership and management positions. To determine whether a company could be labeled a family firm, we asked the respondents whether they considered the company a family firm and whether there was one family with a decisive influence on management and/or ownership. If the answer to either of those questions was 'yes', we considered the firm a family business. Notably, this initial, broad definition of a "family firm" merely served as a filter to select our initial sample. In our subsequent analyses, we used more fine-grained family firm characteristics, namely, the percentage of total ownership (shares) held by the family and the

family presence in the management team as a percentage of the total number of managers in the company. Finally, we selected family firms that indicated that there had been no changes in the ownership structure (shareholder structure) and no transfers of top management positions since 2008.

Additional, yearly data were obtained from 'Bel-first' by Bureau van Dijk, which is a comprehensive national database containing companies' financial statements. The Belgian context is well-suited for business growth analyses as each year, all nonfinancial companies in Belgium are legally obliged to file their financial statements, which are subsequently made publicly available (Neckebrouck, Schulze & Zellweger, 2018). This context offers a wealth of additional information regarding family firms, which represent more than three quarters of all Belgian companies (Lambrecht & Molly, 2011). Furthermore, combining our survey data with external data alleviates potential issues stemming from common method bias (Huybrechts, Voordeckers, D' Espallier, Lybaert & Van Gils, 2016). From Bel-first, we collected information regarding the firms' size, revenues and growth in assets during the 2009-2013 period. As the Bel-first database only contained revenue information about a limited set of firms, this was reflected in smaller samples for those models. Hence, after merging the data and eliminating missing values, we obtained final subsamples ranging from 110 to 273 firms and 451 to 1,350 year-observations depending on the performance indicator of interest. The outlier analysis indicated no compelling reason to further limit our sample composition. As most companies in our sample have measurements during all time periods, the panel can be considered strongly balanced.

Variables and descriptive statistics

Table 1 provides an overview of the descriptive statistics of the main variables used in our analysis, as well as the correlations between the variables.

- INSERT TABLE 1 HERE -

Dependent variables

We used three dependent variables representing different dimensions of business growth measured in absolute or relative terms (Shepherd & Wiklund, 2009). Each variable was obtained from the Bel-first database and merged with the data obtained from the questionnaire. *Growth_in_Assets* measures the total value of a company's yearly investment in fixed assets divided by its value added. The sample shows an average *growth in assets investment* ratio of 15. *Size growth* measures the relative workforce growth compared to the previous year (i.e., $Sizegrowth = \frac{(Sizeinyeart)-(Sizeinyeart-1)}{(Sizeinyeart-1)}$). The average firm in our sample has 30 employees with an average yearly growth rate of 4 percent. Clearly, our sample contains mostly SMEs, rendering our research particularly relevant for economies dominated by SME activity as is the case in Belgium and most of Europe. Our final growth measure is the companies' relative *revenue growth* compared to the previous year (i.e., $Revenuegrowth = \frac{(Revenueinyeart)-(Revenueinyeart-1)}{(Revenueinyeart-1)}$). The average growth rate is 5 percent. Relative measures of both sales and employment growth are widely used in research investigating company growth (Davidsson, Achtenhagen & Naldi, 2010) and studies exploring the relationship between TMT and growth performance (e.g., Norburn & Birley, 1988).

Independent variables

We used several independent variables that are relevant to our analysis. *Generational involvement (Gens_managers)* measures the total number of family generations that are simultaneously present in the firm's management team. This value ranges from 0 to 2 in our sample with an average value of 1.23. *Family ownership* is the percentage of total ownership (shares) owned by the family in control. *Family management* indicates the family's presence in the management team as a percentage of the total number of managers in the company.

Control variables

To control for the company *size,* we added the number of employees to the regressions with *growth in assets* and *revenue growth* as the dependent variables. The inclusion of size as a key control variable stems from accounting for the law of proportionate effect when studying firm growth. This law states that the probability distribution of growth rates is independent of the firm size and has been repeatedly tested among small firms (e.g., Wagner, 1992).

Based on the companies' NACE code, we created 2 industry dummies to distinguish manufacturing firms (*Manufacturing*, NACE sections A, C, D, E and F) and commercial firms (*Commerce*, NACE section G) from other industry sectors. Our sample consists of 47 percent manufacturing firms and 25 percent commercial firms. The dichotomy between manufacturing and services has been proven to be relevant in explaining different growth rates (e.g., Audretsch, Klomp. Santarelli, & Thurik, 2004). Finally, we included yearly time dummies to account for time-specific impact factors on performance. The last year for which data entered the sample (2013) serves as our reference point.

Results

Table 2 presents the pooled OLS regression results of the three models, each of which included a different performance indicator as the dependent variable (*Growth_in_asset, Size_growth* and

Revenue_growth, respectively). Because our performance indicators, *family ownership* and *family management* have a skewed distribution and may also include zero (or negative) values, we applied a log-modulus transformation[1] before entering these data into our regression analyses. The postestimation analysis of the variance inflation factors (VIFs) in the models reveals no VIFs above 2. Hence, there is no indication of multi-collinearity issues as these values remain well below the often-cited cutoff value of 10 (Thompson, Kim, Aloe & Becker, 2017; Kutner, Li, Nachtsheim & Neter, 2005; Chatterjee & Bertram, 1991). Furthermore, although the Durbin-Watson test value and Breusch-Pagan-Godfrey test (Johnston & DiNardo, 1997) indicate that there are no problems concerning autocorrelation and heteroscedasticity, we performed our analysis using clustered, robust Huber-White estimates of variance (Rabe-Hesketh & Skrondal, 2005; Rogers, 1994).

Models 1, 4 and 7 in our tables include only the control variables. Models 2, 5 and 8 show the direct effects of *Gens_managers* on our three dependent variables. Models 3, 6 and 9 introduce the interaction effects of *Gens_managers x Family_ownership* and *Gens_managers x Family_management*. Regarding the absolute performance indicators, the analysis shows that the number of different family generations in management (*Gens_managers*) has a significant effect ($p < 0.05$) on *Growth_in_assets* (Table 2, model 2); however, this effect is positive. This finding does not support our hypothesis 1a, which posited that a higher generational involvement in management has a negative effect on family business growth, and instead supports our hypothesis 1b, which postulated a positive effect of generational involvement on firm growth. Additionally, the interaction terms between *Gens_managers* and both *Family_ownership* and *Family_management* are positive and significant ($p < 0.01$ and $p < 0.05$,

[1] The transformation adds 1 to the logarithm of the absolute value of the variable and then multiplies the result by the original sign of the variable as follows: LM(x) = sign(x) * log(|x| + 1) (John and Draper, 1980).

respectively) in the model with *Growth_in_assets* as the dependent variable (Table 2, model 3). This result supports Hypotheses 2 and 3 regarding growth in fixed assets.

We can also observe a positive and significant effect ($p < 0.05$) of the interaction of *Gens_managers x Family_ownership* in the model that includes *Size_growth* as the dependent variable (Table 2, model 6), further supporting hypothesis 2. However, the direct effect of *Gens_managers* on *Size_growth* is not significant (Table 2, model 5). Finally, we did not observe significant relationships in the model including *Revenue_growth* as the dependent variable (Table 2).

- INSERT TABLE 2 HERE -

To properly evaluate the moderating effects postulated in hypotheses 2 and 3 and assess the effect sizes, we plotted the interactions in Figure 1 and 2 while considering *Growth_in_assets* as the dependent variable. As shown in Figure 1, in situations in which the percentage of family ownership is relatively low, the effect of generational involvement on growth as measured by the annual increase in fixed assets is negative. According to our positive moderation argument, this relationship is not only weaker but is also strongly reversed in the situation in which ownership is mostly or entirely in the hands of the family. In this setting, we observe a positive relationship between generational involvement and growth.

The analysis shown in Figure 2 further clarifies the role of family involvement in management as a moderator of the effect of multiple generations in the TMT on business growth. In teams with a low percentage of family executives, the presence of multiple generations in management results in a negative effect on growth. This effect is reversed in teams with a higher percentage of family managers.

- INSERT FIGURES 1 and 2 HERE -

Additional robustness tests

First, in our dataset, only the dependent variables and control variables vary across time periods; thus, we employed a pooled OLS regression. However, as a robustness check, we also performed a panel analysis regression. More specifically, we performed random effects regressions as suggested by the results of the Breusch and Pagan Lagrangian multiplier test. The results obtained by these random effects analyses are substantially equivalent to those obtained by our pooled OLS analysis in terms of the signs, magnitude and significance of the effects. We report the detailed results in Table 3.

- INSERT TABLE 3 HERE -

Second, as there are various approaches to defining family firms, we performed additional robustness tests based on alternative samples. The first set of analyses was performed using a subsample of companies that explicitly considered themselves family firms (self-definition). This definition resulted in sample sizes that were only slightly smaller and yielded very similar results to those obtained by the *Growth_in_assets* and *Revenue_growth* models. Regarding the model using *Size_growth* as the dependent variable, the smaller sample yielded less significant results, and only the interaction between *Gens_managers* and *Family_ownership* retained a (marginally) significant positive sign. The second set of alternative analyses was performed using the subsample of companies in which family members were present in both management and ownership. These subsamples ranged from 98 to 237 companies. Again, our results were similar to those obtained from our original sample, except for the interaction between *Gens_managers* and *Family_management*, which became insignificant in the *Growth_in_assets* model.

Third, regarding potential non-response bias, unfortunately, we do not possess information about non-respondents. However, independent t-tests reveal no significant differences in the mean values of the dependent variables between early and late responders in our final sample (Table 4).

- INSERT TABLE 4 HERE -

Finally, it is important to acknowledge the potential for endogeneity in our model. In particular, the risk of reverse causality could exist such that the family's (generational) presence in management could foster business growth but also the other way around. Although it is generally difficult to completely rule out a causal relationship between the family firm's growth performance and the number of family generations in management (*Gens_managers*), we believe that this possibility is unlikely. Instead, the involvement of several generations in management is likely the result of factors that do not originate from firm outcomes but rather originate from strategic, biological or cultural factors (e.g., Nicholson, 2008). However, to address the potential problem of endogeneity, we performed additional two-stage least squares (2SLS) regressions with an instrumental variable. More specifically, we selected the existence of a family charter as an instrument for *Family_management* based on the reasoning that family firms with a considerable family presence in management could have a stronger incentive to invest time and effort in drafting a clear and comprehensive family charter. Hence, the existence of a family charter is strongly correlated with *Family_management* but can be assumed to be uncorrelated with the error term. However, the subsequent tests between our pooled OLS results and the alternative 2SLS results indicated no endogeneity issues.

Discussion

Our results offer important insights. First, we propose that the effect of the involvement of multiple generations in the TMT on firm growth can be properly understood only by adopting a perspective that considers further contextual dimensions that characterize such involvement. The adoption of such a lens enables a more compelling understanding of complex phenomena and helps capture a variety of social behaviors (Hitt et al., 2007). In our analysis, increased generational involvement fosters business growth, and this result seems to provide arguments

in favor of the idea rooted in the upper echelons theory that the presence of multiple generations increases cognitive diversity and opens the family TMT to unexplored growth opportunities (Sciascia et al., 2013; Cruz & Nordqvist, 2012) without hampering the capacity to reach consensus regarding strategic goals related to these opportunities. This finding is consistent with the results reported by Zahra (2005) and Fernández & Nieto (2005), who discover that when new generations of family members become actively involved in a company, wealth increases, and strategic renewal becomes more important. The underlying argument is that with each succession, new family members introduce fresh knowledge and insight to the firm, which positively affects the incentive to innovate and grow (Molly et al., 2011).

Second, our theory and related results suggest that this positive effect is contingent on the presence of non-family actors either in the ownership or management group. We found that a higher family involvement in ownership and management increases the positive effect of generational involvement on growth. Therefore, the combination of generational involvement and the presence of *non-family owners or managers* is detrimental to the growth of the family business. This finding, which is rather surprising and counterintuitive, offers interesting theoretical contributions. Previous studies and common sense suggest that opening up the ownership and management structure in family firms is a pre-requisite for subsequent growth (e.g., Corbetta & Salvato, 2012; Scholes, Wright, Westhead, Burrows & Bruining, 2007). However, our theory suggests that when generational involvement is high, cognitive diversity can be disadvantageous for decision-making, thus requiring consensus among family actors regarding crucial strategic goals. More specifically, our results highlight that in teams with a low percentage of family managers and when family owners hold few shares, the presence of multiple generations in management results in a negative effect on business growth. This effect is reversed in teams with a higher percentage of family managers and family owners owning large shares of the business (see Figures 1 and 2).

This finding is consistent with studies investigating goal setting processes in family firms, which argue that when goal diversity among family actors occurs, familial social interactions are more effective than professional interactions in fostering commitment to family-centered goals and long-term strategies (Kotlar & De Massis, 2013). Thus, our work provides a more nuanced view of the contribution of non-family managers in family firms (Binacci at al., 2016; Tabor et al., 2018). For example, the contribution of non-family actors could be positive for the implementation of strategies but more questionable for strategic goal-setting processes, which might involve a complex interplay between family and business-related goals (e.g., Visintin et al., 2017). Conditions favoring interpersonal cohesion within the TMT and a certain level of homogeneity in the ownership group seem to be important attributes for a multigenerational family business, balancing opportunities for rapid growth with family-firm-specific non-financial motives (Gomez-Mejia et al., 2007, Zellweger & Astrachan, 2008). These attributes also apply to the ownership structure (Arregle et al., 2012). Our results indirectly suggest that the type of goal (e.g., family centered versus business centered) associated with performance is a potentially relevant contextual dimension for the analysis of the diversity – performance link. In summary, our theory and related results shed additional light on the impact of generational differences on the growth behavior of family firms, which have exhibited mixed results to date (e.g., Blanco-Mazagatos, de Quevedo-Puente, & Castrillo, 2007; McConaughy & Phillips, 1999; Schulze, Lubatkin, & Dino, 2003, Molly et al., 2011).

Third, our findings are of potential interest for studies adopting an upper echelons perspective, particularly for those focusing on the relationship between TMT diversity and performance, which is the subject to an ongoing debate and numerous recent efforts towards more fine-grained theoretical and empirical specification (e.g., Hambrick, Humphrey, & Gupta, 2015; Roberson, Holmes, & Perry, 2017). As observed by Hmieleski and Ensley (2007), “the value of top management team heterogeneity appears to be partly context dependent”. TMT

heterogeneity might be positively or negatively related to firm outcomes depending on the level of TMT consensus, and, thus, the quality of communication is more important than information seeking and decision comprehensiveness. Therefore, our study contributes to the further development of upper echelons theory by adding insight into the underlying mechanisms and processes by which top management teams reach their strategic decisions that shape firm outcomes (Carpenter et al., 2004; Geyer, 2016).

Moreover, our results highlight that the effect of TMT heterogeneity on family business growth depends on the growth measure considered. We measured growth as *growth in assets*, *size growth* and *revenue growth,* leading to different outcomes. In particular, while the interaction terms between generational involvement and *growth in assets* and *size growth* were significant, the interaction term between generational involvement and *revenue growth* did not yield the expected results. An explanation could be that while hiring new employees or investing in fixed assets can be planned and are subject to the decision of the TMT, significant growth in terms of revenues is much more difficult to achieve by means of TMT decisions. Thus, revenue growth is more likely to be occasional and unplanned, whereas asset growth following investment and growth in the number of employees require a more explicit goal-setting process and consensus at the TMT level (e.g., Berry, 1998; Eddleston, Kellermanns, Floyd, Crittenden, & Crittenden, 2013; William, Pieper, Kellermanns, Astrachan, 2018). This finding supports the need for a strong alignment between TMT decisions and employees' agreement with those decisions to reach the planned revenue growth outcomes.

Interestingly, an overlooked factor may be the role of middle managers' and employees' perception of TMT effectiveness, which are conveyed by means of organizational stories (Kammerlander et al., 2015). These organizational stories assist in the sensemaking of decisions made at top management level (Ford & Ford, 1995). The stories that prevail on TMT leadership and their sensemaking effect could have a significant impact on TMT effectiveness as leaders,

thus generating a (positive or negative) impact on potential growth outcomes by means of strategy deployment and implementation. For example, Balogun and Johnson (2005) show that middle managers play a pivotal role in strategy formation and that their sensemaking strongly affects resulting organizational changes. These authors find that "what is key, is not that these processes [of sensemaking] exist, but how during change they mediate between individuals' interpretations and the designed change interventions to create an emergent implementation process in which intentional and unintentional change are inextricably interlinked" (Balogun & Johnson, 2005 - brackets added). This finding supports research that concludes that "organizational change is a context-dependent, unpredictable, non-linear process, in which intended strategies often lead to unintended outcomes. Empirical research (Gouldner 1954; Harris and Ogbonna, 2002; Johnson 1987; Mintzberg 1978; Ogbonna and Harris 1998; Pettigrew 1985; Pettigrew and Whipp, 1991) shows that strategy development and change should be viewed as an emergent process" not as a practice that flows naturally from policy (Balogun & Johnson, 2005).

Additionally, it is worthy to question whether including one, two or more generations in management is entirely at the discretion of the family and, therefore, the result of an intended strategy or an emerging strategy as an outcome of path-dependency, emotional constraints, or other less tangible family-related factors (e.g., altruism; Schulze et al., 2003). For example, the manageability of the TMT composition is often limited by emotional constraints, such as perceptions of procedural and distributive justice among family members (Skarliki & Folger, 1997; Lubatkin & Schulze, 2007; Schulze et al., 2003), or cross-generational path-dependency based on the current ownership and management structures this is reinforced by strong norms aiming to maintain stability (Arregle et al., 2007; Dodd et al., 2014). This question opens up a discussion regarding the extent to which a desirable TMT multi-generational composition can be achieved given structural and emotional constraints, which could explain why some family

firms do not exploit their full potential of cognitive diversity, which could set the family TMT on the path to unexplored growth opportunities. Based on the discussion above, we may conclude that the upper echelons theory needs expansion in terms of family firm-specific structural and emotional constraints and their impact on growth decisions.

Finally, our work also offers important implications for practice. As previously mentioned, most studies advocate the importance of involving non-family members in a family organization to facilitate innovation and growth. Although this strategy is valuable and has been successful for many family firms, our work suggests that family owners and managers need to carefully examine the present family business structure, such as how many generations are simultaneously managing the business, to assess whether involving non-family owners and managers in a multigenerational family business can be advantageous.

Limitations and future research directions

As with any work, our study is not free of limitations, which suggest avenues for future research. First, notably, our analysis is based on data from Belgium. Future research should consider testing our results in a cross-national comparison to account for different socio-economic contexts. Second, we used established proxy variables at the demographic level to depict complex behavioral constructs. As scholars have noted, these proxies imperfectly capture the full complexity of what they are supposed to measure (e.g., Hambrick, Werder and Zajac, 2008). Therefore, future studies should consider more fine-grained information regarding the behavioral and emotional processes of individual family and non-family actors and team dynamics. For example, it could be interesting to explore whether the presence of a family CEO may counterbalance the disadvantages of having non-family owners and managers in multigenerational family firms.

Third, multiple dimensions of family and non-family diversity within and across the two groups may be explored in future studies. Interesting insights may emerge from such analyses. For example, future research could examine the level of ownership fragmentation or concentration within the family member group (Lambrecht & Lievens, 2008) and its effect on decision making regarding growth strategies. Furthermore, ownership dispersion (or concentration) could act as a moderator in the relationship between multigenerational involvement in management and family business growth such that ownership dispersion (or concentration) could increase (or decrease) the positive impact of cognitive diversity among generations on family business growth. Relatedly, regarding the non-family group, an interesting avenue for future research could be the extent to which non-family members may be considered by the family 'quasi-family' based on broad conceptions of kinship and ethnic ties (Chirico et al., 2011a; Karra, Tracey, Phillips, 2006). Future research could explore the extent to which 'quasi-family' ties and altruism may lead to reciprocal behaviors fostering family business growth when several generations are involved in managing a firm (Karra, Tracey, Phillips, 2006).

Furthermore, notably. the temporal variance in our dataset is limited as only the dependent variables and control variables vary across time periods within the same company. Future research could benefit from an analysis of more fine-grained information regarding subsequent changes in the family firms' generational involvement and family presence in both management and ownership. Furthermore, the limited temporal variance in our data and the potentially bidirectional links between firm performance on the one hand and family presence in management on the other hand suggest caution in making strong causal claims (Vandekerkhof, Steijvers, Hendriks & Voordeckers, 2015). Similarly, recognizing that our focus on quantitative measures offers only a partial picture of the complex character of the

business growth phenomena, future studies could employ indicators accounting for qualitative growth and professionalization in the family business context.

Finally, our analysis is based on a sample of privately owned firms, i.e., a sample for which insights are highly desirable because it too often remains a black box. Nevertheless, future research could examine listed family firms to determine whether similar processes apply. For example, since growth indices have a strong effect on stock and firm valuation, it could be the case that listed family firms have a higher need for TMT cognitive diversity to achieve their full growth potential, thereby overruling emotional and structural path dependencies. Therefore, from a growth perspective, these family firms could more greatly benefit from the positive effect of generational involvement on growth by involving more family members and several generations in ownership and management.

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Tables

Table 1: Descriptive statistics

	Average	Minimum	Maximum	Standard deviation	1	2	3	4	5	6	7	8	9	10
1 Growth_in_assets	15.44	0.00	424.37	28.89	1									
2 Size	30.37	2.00	223.00	30.73	-0.0021	1								
3 Size_growth	0.04	-0.53	4.07	0.24	0.0981*	-0.0039	1							
4 Revenue	14 500 000	74 152	73 600 000	13 300 000	0.1611*	0.5485*	-0.0105	1						
5 Revenue_growth	0.05	-0.68	9.96	0.52	0.0554	-0.0328	0.2492*	-0.008	1					
6 Family_ownership	0.96	0.00	1.00	0.16	-0.0345	0.0474	-0.0286	0.062	0.0021	1				
7 Family_ management	0.78	0.00	1.00	0.35	0.0664*	-0.0448	0.0152	-0.0381	0.0189	0.1390*	1			
8 Gens_managers	1.23	0.00	2.00	0.45	0.1092*	0.0272	0.0302	0.0774	0.0114	0.0917*	0.1533*	1		
9 Manufacturing	0.47	0	1	0.50	0.0517	0.1059*	-0.0954*	0.1186*	-0.0494	0.0075	0.1177*	-0.0825*	1	
10 Commerce	0.25	0	1	0.43	-0.0187	-0.0816*	0.0438	0.2497*	-0.0124	0.1068*	0.0317	0.0853*	-0.5401*	1

* indicates statistical significance at the 5% level

Table 2: Regression analysis results

Dependent Variable	Growth in assets			Size growth			Revenue growth		
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
Family_ownership		-0.561	-4.674**		-0.047	-0.289†		-0.018	0.118
		(0.600)	(1.621)		(0.058)	(0.149)		(0.054)	(1.022)
Family_management		0.135	-0.292		0.011	0.025		0.019	-0.051
		(0.122)	(0.251)		(0.013)	(0.029)		(0.017)	(0.132)
Gens_managers		0.119*	-1.314**		0.003	-0.059†		0.003	0.002
		(0.048)	(0.346)		(0.005)	(0.033)		(0.007)	(0.237)
Gens_managersxFamily_management			0.442*			-0.012			0.075
			(0.210)			(0.025)			(0.131)
Gens_managersxFamily_ownership			4.007**			0.233*			-0.130
			(1.301)			(0.112)			(1.022)
Size	0.016	-0.002	-0.013				-0.005	-0.007	-0.008
	(0.077)	(0.076)	(0.076)				(0.020)	(0.022)	(0.022)
Manufacturing	0.046	0.057	0.051	-0.014*	-0.013*	-0.013*	-0.017	-0.019	-0.020

	(0.055)	(0.055)	(0.055)	(0.006)	(0.006)	(0.006)	(0.015)	(0.016)	(0.017)
Commerce	-0.020	0.008	0.003	-0.004	-0.002	-0.002	-0.015	-0.019	-0.020
	(0.060)	(0.061)	(0.061)	(0.007)	(0.007)	(0.007)	(0.019)	(0.021)	(0.021)
Year 2009	0.148**	0.141**	0.139**	0.008†	0.007	0.007	-0.018	-0.017	-0.017
	(0.032)	(0.032)	(0.033)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.011)
Year 2010	0.127**	0.124**	0.122**	0.017**	0.017**	0.017**	0.022*	0.023*	0.023*
	(0.030)	(0.031)	(0.031)	(0.006)	(0.006)	(0.006)	(0.010)	(0.011)	(0.011)
Year 2011	0.102**	0.110**	0.108**	0.021**	0.019**	0.019**	0.048**	0.048**	0.048**
	(0.031)	(0.031)	(0.031)	(0.005)	(0.005)	(0.005)	(0.013)	(0.013)	(0.013)
Year 2012	0.075**	0.068*	0.068*	0.015**	0.015**	0.015**	0.011	0.011	0.011
	(0.028)	(0.030)	(0.030)	(0.004)	(0.004)	(0.004)	(0.011)	(0.011)	(0.011)
Constant	0.809**	0.765**	2.237**	0.009†	0.012	0.076†	0.020	0.017	0.017
	(0.115)	(0.214)	(0.454)	(0.005)	(0.018)	(0.040)	(0.042)	(0.033)	(0.243)
N	1,450	1,350	1,350	1,439	1,339	1,339	482	451	451
R-squared	0.0150	0.0310	0.0420	0.0220	0.0240	0.0250	0.0670	0.0670	0.0680
Δ *R-squared*		+0.016	+0.011		+0.002	+0.001		+0	+0.001

F	4.47	3.99	4.81	5.10	3.17	2.82	5.70	3.54	3.27
Prob > F	0.0001	0.0000	0.0000	0.0001	0.0012	0.0017	0.0000	0.0004	0.0005
Root MSE	0.4850	0.4750	0.4730	0.0645	0.0644	0.0644	0.0861	0.0878	0.0879

(Robust standard errors); ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$.

Table 3: Random effects regression analysis results

Dependent Variable	Growth in assets			Size growth			Revenue growth		
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
Family_ownership		-0.555	-3.987*		-0.045	-0.302*		0.015	0.761
		(0.594)	(1.836)		(0.057)	(0.150)		(0.078)	(1.580)
Family_management		0.135	-0.329		0.011	0.025		0.025	-0.146
		(0.122)	(0.263)		(0.013)	(0.030)		(0.023)	(0.196)
Gens_managers		0.118*	-1.131**		0.003	-0.063†		0.001	0.123
		(0.048)	(0.419)		(0.005)	(0.033)		(0.010)	(0.362)
Gens_managersxFamily_management			0.477*			-0.013			0.177
			(0.222)			(0.026)			(0.199)
Gens_managersxFamily_ownership			3.326*			0.247*			-0.733
			(1.558)			(0.113)			(1.575)
Size	-0.002	-0.010	-0.017				-0.021	-0.025	-0.026
	(0.078)	(0.077)	(0.077)				(0.031)	(0.034)	(0.035)
Manufacturing	0.047	0.058	0.050	-0.014*	-0.014*	-0.013*	-0.020	-0.024	-0.026

	(0.055)	(0.056)	(0.055)	(0.006)	(0.006)	(0.006)	(0.022)	(0.025)	(0.025)
Commerce	-0.023	0.005	-0.002	-0.004	-0.002	-0.002	-0.022	-0.028	-0.030
	(0.060)	(0.061)	(0.061)	(0.007)	(0.007)	(0.007)	(0.028)	(0.032)	(0.032)
Year 2009	0.149**	0.141**	0.140**	0.008†	0.007	0.007	-0.019†	-0.020†	-0.020†
	(0.032)	(0.032)	(0.032)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.011)
Year 2010	0.127**	0.124**	0.124**	0.017**	0.018**	0.017**	0.021*	0.021†	0.021†
	(0.030)	(0.031)	(0.031)	(0.006)	(0.006)	(0.006)	(0.010)	(0.011)	(0.011)
Year 2011	0.104**	0.111**	0.110**	0.021**	0.019**	0.019**	0.043**	0.041**	0.041**
	(0.030)	(0.031)	(0.031)	(0.005)	(0.005)	(0.005)	(0.010)	(0.010)	(0.010)
Year 2012	0.075**	0.067*	0.067*	0.015**	0.015**	0.015**	0.006	0.006	0.006
	(0.028)	(0.030)	(0.030)	(0.004)	(0.004)	(0.004)	(0.009)	(0.010)	(0.010)
Constant	0.834**	0.776**	2.062**	0.009†	0.012	0.080†	0.052	0.044	-0.082
	(0.116)	(0.215)	(0.511)	(0.005)	(0.018)	(0.041)	(0.068)	(0.053)	(0.369)
N	1,450	1,350	1,350	1,439	1,339	1,339	482	451	451
Nr of companies (clusters)	293	273	273	293	273	273	119	110	110
Overall R-squared	0.0147	0.0311	0.0417	0.0218	0.0238	0.0248	0.0632	0.0615	0.0624

Δ *Overall R-squared*		+0.0163	+0.0106		+0.002	+0.001		-0.0017	+0.009
Wald chi²	32.02	40.72	54.08	30.72	28.57	31.43	33.06	29.77	32.70
Prob > chi²	4.03e-05	1.26e-05	2.65e-07	2.86e-05	0.000765	0.000942	2.58e-05	0.000934	0.00108

(Robust standard errors); ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$.

Table 4: Early versus late responders

Growth in assets				
Group	N	Mean	Std. Err.	Std. Dev.
0	95	10.265	1.414	13.784
1	178	11.555	1.066	14.224
Combined	273	11.106	0.851	14.060
Difference		-1.290	1.788	
Ho: Difference = 0, Ha: Difference ≠ 0				
t =	-0.722			
Degrees of freedom =	271			
Pr(T > t) =	0.471			

Size growth				
Group	N	Mean	Std. Err.	Std. Dev.
0	95	0.013	0.014	0.135
1	178	0.002	0.011	0.147
Combined	273	0.006	0.009	0.142
Difference		0.011	0.018	
Ho: Difference = 0, Ha: Difference ≠ 0				
t =	0.610			
Degrees of freedom =	271			
Pr(T > t) =	0.543			

Revenue growth				
Group	N	Mean	Std. Err.	Std. Dev.
0	44	-0.003	0.023	0.152
1	54	0.003	0.019	0.141
Combined	98	0.000	0.015	0.145
Difference		-0.006	0.030	
Ho: Difference = 0, Ha: Difference ≠ 0				
t =	-0.186			
Degrees of freedom =	96			
Pr(T > t) =	0.853			

Figures

Figure 1: Effect of generational involvement in management on growth in assets among different levels of family ownership

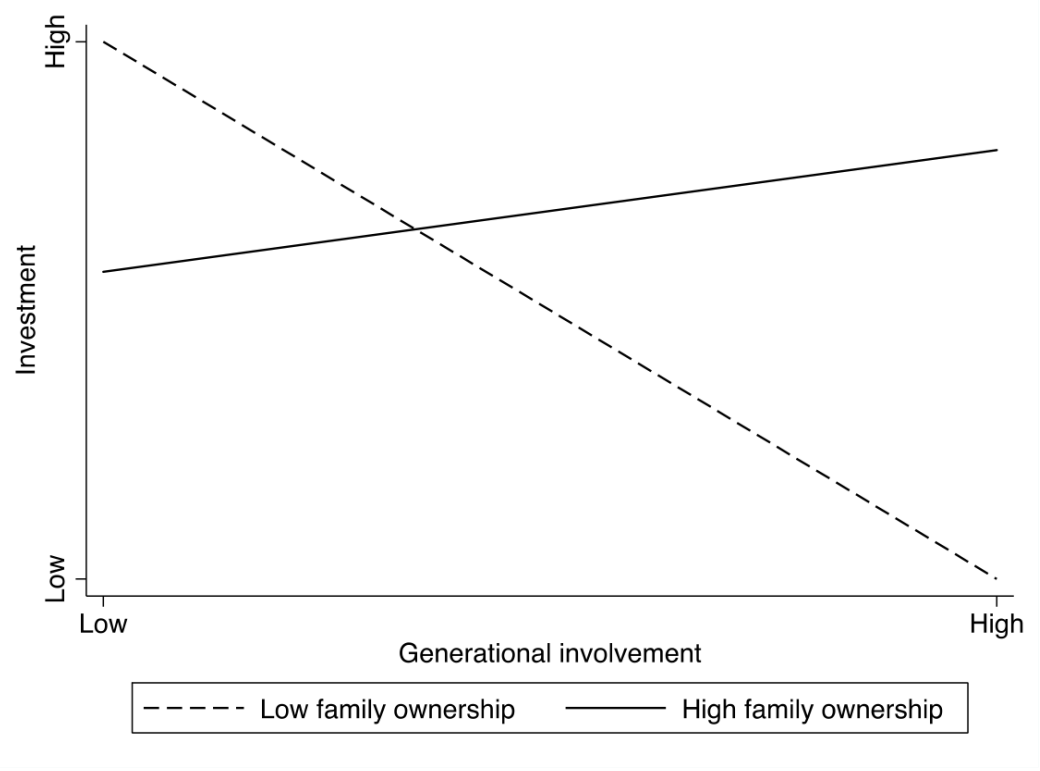

Figure 2: Effect of generational involvement in management on growth in assets among different levels of family involvement in TMT