

Family managers' propensity towards mergers and acquisitions: the role of performance feedback

Family managers' propensity towards M&As

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Abstract

Purpose – Drawing on upper echelons theory (UET) and arguments from behavioral theory of the firm, this paper aims to contribute to the debate on family involvement-performance relationship, by considering the mediating role of the propensity towards merger and acquisition (M&A) and the moderating role of performance feedback.

Design/methodology/approach – The hypotheses are tested by applying a moderated mediation analysis on a sample of 111 German family firms. First, a mediation model is run to verify the mediation role of the propensity towards M&A; then, to evaluate the magnitude of the mediation at different values of the moderator (performance feedback), conditional indirect effects are tested using normal-theory standard errors and bootstrapping procedure.

Findings – The main findings suggest that a higher percentage of family members sitting in TMT is related to better performance and that this effect is mediated by the propensity towards M&A. Furthermore, findings also show that a higher percentage of family managers is positively related to the propensity towards M&A and, in turn, exerts a positive effect of firm performance, especially when performance feedback is negative.

Practical implications – The paper suggests to family firms' managers that when performance feedback is negative, a riskier behavior, such as M&A, could represent a way to improve firm performance.

Originality/value – The paper provides a full application of UET to the context of family firms, offers the point of view of TMT, instead of that of ownership, to study the propensity towards M&A in family firms and goes beyond the rational view to explain family managers' risk-taking behaviors.

Keywords TMT composition, Merger and acquisition, Performance, Performance feedback, Family firms

Paper type Research paper

1. Introduction

A central issue in research on family business is the effect of the family involvement in the firm on the performance of the business (Hansen and Block, 2020). Although the wide interest in seeking to understand whether, how, when and why family members affect firm

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performance, the research findings are to date controversial and inconclusive, thus inviting to search for moderating and/or mediating variables able to shed new light on the debated effect of family on performance (e.g. O'Boyle *et al.*, 2012; Carney *et al.*, 2015).

With a view to contribute to the debate, this study draws on the upper echelons theory (UET) (Hambrick and Mason, 1984) that suggests looking at top management team (TMT) when studying performance implications. The TMT has a central role in defining a firm's strategic decisions regarding for example the introduction of new products, the entrance in a new market, the acquisition of a new company and in affecting performance. Therefore, studying the involvement of family members in TMT could be worthy to reach a better comprehension about the performance of family firms. Accordingly, this study first questions, *how does the percentage of family members in TMT affect firm performance?* Previous studies (e.g. Sciascia and Mazzola, 2008; Kowalewski *et al.*, 2010; Kim and Gao, 2013; Gallucci *et al.*, 2015; Lwango *et al.*, 2017) have already focused on this governing body and tried to provide an answer to this research question. However, they missed a full application of the UET model that in part could explain the puzzling evidence.

Hambrick and Mason's (1984) theory suggests considering the intermediate role of strategic choices taken by managers to explain and understand how TMT affects performance. Many are the strategic choices that could be taken in account, such as investments in marketing, in innovation, in digital transformation. In this study, we decide to look at the propensity of family managers towards merger and acquisition (M&A) activities and ask: *Whether and how does the propensity of family managers towards M&A activities mediate the effect of the percentage of family members in TMT on firm performance?* As known, family members are traditionally risk-averse (Lohe and Calabrò, 2017) and tend to avoid mergers and acquisitions (Naldi *et al.*, 2007; Zahra, 2005) because of the need of financial resources. However, this strategic choice seems to reward those families that invest in external growth (Gómez-Mejía *et al.*, 2018) and it can be considered as an explanatory (mediating) construct of the family involvement–firm performance relationship as it can explain the aversion/propensity towards risk that family members sitting in the TMT could have.

Furthermore, the UET model also suggests considering internal and external conditions, configuring an objective situation that the firm faces, able to motivate TMT's strategic choices and the consequent effects on performance (Hambrick, 2007). Accordingly, this study also aims to provide an answer to the question: *Is the mediated relationship family managers–propensity towards M&A activities – performance contingent on any objective conditions?* To capture the objective situation, we look at performance feedback (that is the performance recorded by the firm in the five years before the year we surveyed the propensity towards M&A). Over the years, scholars (e.g. Heron and Lie, 2002; Lang *et al.*, 1989; Servaes, 1991) have paid particular attention to the role of performance feedback on M&A decisions (Haleblian *et al.*, 2009). According to behavioral theory of the firm (e.g. Cyert and March, 1963; March and Shapira, 1987), performance feedback may actually influence managers' risk bearing and might in turn affect the propensity towards M&A. Hence, by including performance feedback in our model we can gain a more complete understanding of the decisional behaviors of family members sitting in the TMT.

To answer the research questions and test the hypotheses, the study applies a moderated mediation analysis (Muller *et al.*, 2005) on a sample of 111 German family firms, mainly medium and large-sized, with a median age of 63 years. Family firms in our sample are characterized by having at least 50.1% of the shares owned by one family. We first apply a mediation model to verify the mediation role of the propensity towards M&A on the relationship between TMT and performance (Baron and Kenny, 1986); then, we evaluate the magnitude of the indirect effect (mediation) at different values of the moderator (Preacher *et al.*, 2007), i.e. we test the conditional indirect effect by considering performance feedback as

moderating variable, using normal-theory standard errors and bootstrapping procedure (500 replications). Our results suggest that a higher percentage of family members in the TMT is related to higher performance. This relationship is partially explained by the propensity towards M&A, especially when performance feedback is negative.

This paper makes several contributions to theory and practice. First, it furthers understanding of the dynamics that regulate the involvement of family members in TMT and its effect on performance. Thus, we essentially answer the calls for more research investigating the effect of TMT's composition on performance in family firms (Minichilli *et al.*, 2010; Ling and Kellermanns, 2010; Patel and Cooper, 2014). Second, the paper contributes to spread the understanding and the use of UET, mainly focused on large public companies, to the family firms context (Minichilli *et al.*, 2010), by providing a full application of it. Indeed, the work considers the propensity towards M&A as mediator of the TMT-performance relationship and performance feedback as moderator to catch the effect of the objective situation. Third, the choice of the mediator allows us to extend the comprehension about M&A in family firms. While many studies have focused their attention on the effect that family ownership has on M&A (Ben-Amar and André, 2006; Basu *et al.*, 2009; Caprio *et al.*, 2011), we deepen the role of family members sitting in the TMT, by providing a different point of view to study the propensity of family firms towards M&A. Finally, as our main findings suggest that a higher propensity towards M&A allows family firms to reach better performance. This article offers useful implications for family managers. Indeed, we suggest that under certain circumstances, e.g. when performance feedback is negative, a riskier behavior, such as M&A, could represent a way to improve firm performance.

2. Theoretical framework and hypothesis development

2.1 Family involvement-performance relationship: an upper echelons perspective

The family involvement-performance relationship has been the object of interest by many scholars for a long time (see Hansen and Block, 2020 for an overview). Although family business scholars agree that performance depends on the involvement of family members in ownership and management (Le Breton-Miller and Miller, 2018), on how the firm is governed and on the nature of family relationships (Dyer, 2018), so far, the findings have been inconclusive. Some years ago, meta-analyses (e.g. O'Boyle *et al.*, 2012; Wagner *et al.*, 2015) have suggested looking at mediating and moderating variables able to shed new light on the issue. Since then, some steps forward have been taken, but the debate is still open.

With a view to provide a contribution to the debate, we draw on UET. This theory suggests that firm performance is the result of the strategic choices made by TMT's members, which in turn can be viewed as reflections of both the characteristics of TMT's members and the objective situation they face (Hambrick and Mason, 1984; Hambrick, 2007). Accordingly, we focus our attention on the TMTs of family firms, where the involvement of the owning family offers a unique context to examine the owning family's impact on strategic choices and, subsequently, on firm performance (Ling and Kellermanns, 2010).

Over the years, several studies (e.g. Sciascia and Mazzola, 2008; Kowalewski *et al.*, 2010; Kim and Gao, 2013; Gallucci *et al.*, 2015; Lwango *et al.*, 2017) have already investigated the direct effect of family managers on firm performance, also drawing on UET (e.g. Minichilli *et al.*, 2010; Patel and Cooper, 2014). However, studies providing a full application of the model theorized by Hambrick and Mason (1984) to family firms still lack. This could motivate the controversial and inconclusive results.

Differently, this research tempts to provide a full application of the UET's model, by considering both a mediator and a moderator for the direct relationship between the involvement of family members in TMT and performance. In details, as mediator, we look at the propensity towards M&A. M&A have been largely debated in the literature (Meglio and

Risberg, 2010); however, just with reference to family firms, the focus has been limited to family owners (Ben-Amar and André, 2006; Basu *et al.*, 2009; Caprio *et al.*, 2011), thus neglecting the role of family managers, while a different proportion of family and non-family members in TMT influences management activities, styles and characteristics (Sonfield and Lussier, 2009). As moderator, to capture the effect of the objective situation, we look at the performance feedback.

Figure 1 provides a visual representation of the research model.

As shown in Figure 1, we first study the direct relationship between the percentage of family members in the TMT and the performance.

Family members, although they might differ in age, gender, educational background and other demographic attributes, generally share the same values and visions (Chua *et al.*, 2003). This implies they have higher levels of trust and affinity for one another and higher level of cohesion (Ensley and Pearson, 2005). Furthermore, family-TMT members experience long-term interpersonal relationships and, accustomed to freely expressing their opinions within the family, can work in an atmosphere that facilitates the information sharing and encourages high-quality strategic decisions. These aspects, in turn, foster firm performance. Firm performance is influenced by decision quality, the implementation of which requires consensus. Reaching consensus is, by nature, easier among family members because consensus is facilitated by similar backgrounds (Knight *et al.*, 1999). Family-TMT members also tend to share responsibilities and have an accommodating attitude toward other family members (mutuality) for the “good” of the team. They have closer relations with one another and are loyal to the firm’s leadership due to the altruistic nature of the family (Eddleston and Kellermanns, 2007). This form of altruism is considered a family firm-specific resource that positively affects firm performance (Eddleston *et al.*, 2008), when family executives favor decisions that enhance the profitability of the firm (Minichilli *et al.*, 2010). Stemming from those arguments, we formulate the following hypothesis:

H1. There is a positive relationship between the percentage of family members in the TMT and firm performance.

2.2 The propensity towards mergers and acquisitions in family firms’ TMTs: an intermediate step

Discussing TMT compositions solely in the context of the direct effect on firm performance offers a narrow interpretation of the TMT-performance relationship in family firms. Indeed, this approach does not help to determine the “actual” mechanisms through which different

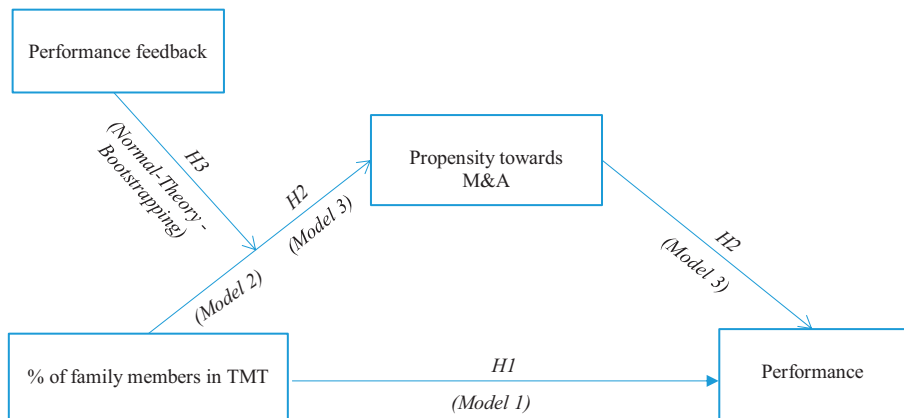


Figure 1. Research design

types of TMT composition contribute to family firms' performance. According to UET, TMT characteristics determine organizational outcomes through the strategic choices that TMT's members make (Hambrick and Mason, 1984).

We consider the propensity towards M&A a good proxy for a strategic choice as it implies that specific decisions on the growth of the business have to be taken by the top-level management of an organization. This strategic choice can take a special flavor within the family firm context more than other strategic choices as family firms are usually considered to be risk-averse thus this type of strategic choices has been often discounted and not taken as relevant in this context. Nevertheless, there is an increasing attention towards this type of growth strategy also within family firms as recent call for more research on the topic can attest (Gómez-Mejía *et al.*, 2018). Furthermore, as M&A activities are highly risky and challenging for family firms because of the need for financial resources, considering them as an explanatory (mediating) construct of the family involvement–firm performance relationship could shed more light on the aversion/propensity towards risk family members sitting in the TMT.

Compared to non-family executives, family managers are more risk-averse (Anderson and Reeb, 2003; Faccio *et al.*, 2011) and adopt more conservative behaviors leading to lower levels of investments (Bianco *et al.*, 2009). This is happening as family managers derive greater benefit from firm's survival (Athanassiou *et al.*, 2002) than from enhancing its value (Anderson and Reeb, 2003). This leads family managers to reject high-risk projects that imply high degrees of variability in their results (Zahra, 2005; Van Auker and Werbel, 2006), inhibiting in turn corporate growth (Naldi *et al.*, 2007). In addition, the desire to pass the firm to the subsequent generation (Treviño-Rodríguez and Bontis, 2010) represents a strong motivation to carefully manage their capital (Miller and Le Breton-Miller, 2006) and additionally, as Puri and Robinson (2013) stated, the family heirs are significantly no risk tolerant. Furthermore, M&A require substantial financial resources that family managers do not have cause of capital constraints imposed by the owner-family (Carney, 2005) and a low orientation towards indebtedness (Górriz and Fumás, 1996). This lack of resources translates in a greater difficulty for family managers in developing pro-active and aggressive strategies (Miles and Snow, 1978) pushing them to avoid active takeovers and other acquisitive strategies (Ben-Amar and André, 2006; Caprio *et al.*, 2011). Therefore, despite managers should look with favor at takeovers proposals, because they offer them good future employment opportunities or large severance payments (Gorton *et al.*, 2009), we expect that when the percentage of family members in the TMT increases the propensity towards M&A decisions decreases.

Despite M&A activities require the use of consistent financial resources, if properly realized in absence of informational asymmetries during the pre-M&A period (Banal-Estañol and Seldeslachts, 2011), they can increase the firm's overall value and bring the firm in a favorable market position (Anderson and Reeb, 2003; Feito-Ruiz and Menéndez-Requejo, 2010). M&A can also represent a way to enter in foreign countries (Nocke and Yeaple, 2007), to benefit from investment in R&D made by other firms (Hitt *et al.*, 1991), to enhance plant productivity and spur workers to be more efficient (Siegel and Simons, 2010). Therefore, we expect to find a positive and direct effect of the propensity towards M&A on family firm performance. Based on the previous arguments we formulate:

H2. The relationship between the percentage of family members in TMT and firm performance is mediated by the propensity towards M&A.

2.3 The moderating role of performance feedback

The UET argues that TMT's strategic choices are in part a reflection of the objective situation that the firm faces (Hambrick and Mason, 1984), thus we consider performance feedback as

moderating variable to catch the objective situation. This is in line with previous literature. Indeed, scholars (e.g. Lang *et al.*, 1989; Servaes, 1991; Heron and Lie, 2002) have paid particular attention to the role of performance feedback on M&A decisions, suggesting that often firms are motivated to engage in takeovers activities when they record negative performance feedback (Haleblian *et al.*, 2009). This evidence is in line with the assumptions of the behavioral theory of the firm (e.g. Cyert and March, 1963; March and Shapira, 1987) suggesting that negative performance feedback may make managers more risk-taking. The influence of performance feedback on behavior in decision-making process is what clearly distinguishes behavioral models from rational expectation views of decision (Tversky and Kahneman, 1986). Behavioral models predict that decision-makers exhibit risk-averse preferences when selecting among positively framed prospects and exhibit risk-seeking preferences when selecting among negatively framed prospects (Kahneman and Tversky, 2013). Loss-averse decision-makers are more sensitive to losing wealth than to increasing wealth (Tversky and Kahneman, 1986, 1991). Hence, loss aversion explains a preference for riskier strategic choices as M&A to avoid an anticipated loss when performance feedback is negative (Thaler and Johnson, 1990).

By considering the specific case of family managers, we argue that economic results obtained in the previous years can affect their behaviors in decision-making process, because performance feedback could lead family managers in a loss or gain mode, influencing in turn their decisions towards more or less risky strategic choices. Family members show greater preference to avoid loss than to achieve gain, as argued above. Therefore, positive performance feedback might lead family decision-makers to avoid highly risk strategic choices, such as M&A. Otherwise, worse performance feedback might lead family managers to follow counterintuitive decision and to bet, in order to save the destiny of the firm and the family. Therefore, while family members are risk-averse when the firm goes the right way, to avoid losses of wealth; when they perceive everything is going wrong probability of failure, a danger for their firm and family, they are willing to go for broke. Indeed, when performance feedback is negative family principals will have less freedom to focus on the destiny of the family and the firm, instead consider strategies with an uncertain upside (Calabrò *et al.*, 2018) such as M&A activities.

Based on these arguments, we formulate the following hypothesis:

- H3.* Negative performance feedback moderates the mediating effect of M&A between the percentage of family members in TMT and firm performance.

3. Methods

3.1 Sample and data collection

The hypotheses are tested on a sample of 111 German family firms. The firms eligible for our study were identified entering the following search criteria on the Bureau van Dijk *Amadeus* database, in the 2011: (1) German firms (Germany has a two-tier governance system, strictly separating the management board from the supervisory board); (2) with no other holding above them (global ultimate owner–GUO); (3) with an annual turnover at least equals to €50 million; (4) with at least 50.1% of the shares owned by one family. This last query helped us in doing a first screening of family firms. However, we also put a question in the questionnaire in order to catch the self-perception; and checked firms' Website and press releases looking for a specific mentioning of the firm as being a family firm. We obtained a first sample of 781 firms, to which CEOs we asked to participate in an online survey during the summer 2011. The questionnaire contained 124 items. After a follow-up mailing, we reached a final sample of 144 firms (leading to a response rate of 18.4%). An analysis of variance (ANOVA) between firms that responded before and after the follow-up mailing yield no significant differences on the

variables of interest, controlling for a potential non-response bias (Armstrong and Overton, 1977). For those 144 firms we also searched for collecting secondary data (performance measures 2006–2013) on Amadeus, Bureau Van Dijk database. Based on the available secondary data the final sample is 111 firms.

The responding firms are of varying sizes, with a majority of medium and large-sized firms (6.6% with 100 or less employees, 39.4% between 101 and 500 employees, 54% with more than 500 employees). The median age of the firms is 63 years.

3.2 Variables

3.2.1 Dependent variable. Firm performance: Our performance measure is the *return on equity* (ROE) – net income divided by equity capital – in 2013. ROE has been commonly used to assess top executive and family impact on firm performance (e.g. Kowalewski *et al.*, 2010; Mazzola *et al.*, 2013).

3.2.2 Independent variable. Family-TMT (percentage): All firms in our sample have a TMT. To determine the composition, we asked in the questionnaire how strong the owner-family was represented in the TMT. By measuring the percentage of family members who sit on TMT, we build a continuous variable from zero to one of family presence on TMT. The two extremes identify, respectively, the case of an external-TMT and the case of a family-TMT.

3.2.3 Mediating variable. M&A: We capture TMT's propensity towards M&A by using five items collected through the questionnaire during the survey. The five items are measured on a 5-point semantic differential scale (Osgood, 1964). After a factor analysis, four of them resulted significant (Table 1). The fifth not significant item was measured between these two extremes: "company's TMT executes M&A projects for the most part independently–company's TMT heavily relies on the support of external consulting firms to execute M&A projects". While the other four items measured the engagement and the effort of the company's TMT towards M&A, the excluded item focused a slightly different aspect: the level of independence in executing opportunities. Including it in the factor "TMT propensity towards M&A", we obtained a Cronbach's alpha equals to 0.53 and thus not sufficient to indicate a good reliability. Instead, by considering just the remaining four items, the Cronbach's alpha coefficient exceeds the recommended minimum of 0.70 ($\alpha = 0.85$) and thus indicates a very good reliability (Hair *et al.*, 2010). All items, their factor loadings and the associated alpha are shown in Table 1.

3.2.4 Moderating variable. Performance feedback: We consider as moderating variable the performance feedback (Amason and Mooney, 1999) measured by the average of *return on*

Construct	Measures of construct	Factor loading
Propensity towards M&A, $\alpha = 0.85$	TMT is continuously and systematically looking for potential acquisition targets – potential acquisition targets are rather identified by chance than by systematic exploration of opportunities	0.88
	Strategically motivated vertical and horizontal M&A activities are a central part of our growth strategy – M&A activities do not play an important role in our growth strategy	0.91
	TMT is willing to engage in riskier M&A projects – TMT is only willing to engage in low risk M&A projects	0.73
	TMT tries to specifically build up process knowledge concerning M&A transactions – TMT does not specifically try to develop M&A competencies	0.77

Table 1.
Questionnaire items

assets (ROA) recorded in the five years before the questionnaire administration (2006–2010). We opt for the ROA to measure performance feedback in order to choose a ratio different from the ROE (the dependent variable of our model, measuring *performance*). We also verified the existence of a correlation between the two ratios and found a slight one. Thus, although such correlation is between a dependent variable and independent variable, we decided to use a mean centered procedure (Aiken and West, 1991) to avoid possible collinearity problems.

3.2.5 Control variables. We include the following control variables in all regressions: *TMT size*, *generation*, *firm age*, *firm size* and *industry*. *TMT size* is measured by the number of team members (Gubitta and Gianecchini, 2002). To determine the generational stage of the family firm, we ask respondents to indicate the *generation* that is managing the firm (Bammens et al., 2008) in the questionnaire. Forty-five firms are managed by the first and founding generation, 30 by the second generation and 36 by the third. We consider this as a discrete variable. All analyses are also controlled for the logarithm transformation of *firm age* since older firms are expected to be more conservative in their strategic orientations (Zahra et al., 2008). Firm age is measured using the number of years since foundation. We control for *firm size*, which may determine the enhancement or erosion of firm performance (Miller et al., 2013) measured through the logarithm transformation of the number of employees. We also control for the *industry*, because the effect of TMT on performance should be assessed in relation to the intensity of competition within industries (Randøy et al., 2009). Two dummy variables are used to measure industry: manufacturing and service. Firms competing in other industries serve as the comparative category.

The descriptive statistics and correlations of the variables are shown in Table 2.

3.3 Analyses

Hypotheses are tested by applying a moderated mediation analysis (Muller et al., 2005). More in details, first, we verify the existence of a relationship between family-TMT and performance mediated by M&A by applying the causal steps procedure to carry out the mediation analysis (Baron and Kenny, 1986); then, we evaluate the magnitude of the indirect effect (mediation) at different values of the moderator (Preacher et al., 2007), i.e. we test the conditional indirect effect by considering the performance feedback as moderating variable.

In order to verify the mediating role of the propensity towards M&A on the relationship between family-TMT and performance, we use multiple regression models (Aiken and West, 1991). Specifically, we test three models (MacKinnon, 2008). In Model 1, the direct effect of family-TMT on performance is examined, in order to test the hypothesis 1. We then regress M&A (Model 2) on family-TMT, as a propaedeutic phase to evaluate the existence of a mediation effect in the Model 3. Finally, in Model 3, we test the mediating role of M&A on ROE according to hypothesis 2 (Figure 1 depicts the estimated relationships). The estimation of the models is preceded by verification of the assumptions underlying the multiple regression models, taking all appropriate measures to ensure the accuracy and consistency of the results. The control of heteroscedasticity and serial correlation of the data is made by determining the robust standard errors using the Huber White Sandwich estimator for clustered data (Wooldridge, 2002). With respect to multicollinearity, we estimate variance inflation factors (VIF test) and the condition index for each regression model. VIF values range from 1.06 to 1.65, and the highest value of the condition index equaled 4.09. Hence, we conclude that there is no major problem with multicollinearity (Hair et al., 2010). Nevertheless, we also recur to a mean centered procedure (Aiken and West, 1991).

In order to assess moderated mediation, we use normal-theory standard errors and bootstrapping procedure (500 replications). The first method assumes that the distribution of conditional indirect effects is asymptotically independent and normally distributed. However, because the distribution of conditional indirect effects is known to be non-normal,

	Mean	SD	1	2	3	4	5	6	7	8	9
1. ROE	0.05	47.23									
2. TMT size	3.68	1.95	-0.011								
3. Generation	1.92	0.87	-0.235**	-0.054							
4. Firm age	43.22	86.29	-0.144	0.048	0.262**						
5. Firm size	1224.52	2034.94	-0.063	0.229	0.148*	0.109					
6. Manufacturing ^a	-	-	-0.087	0.054	0.245**	0.272**	0.088				
7. Service ^a	-	-	-0.056	-0.061	-0.064	-0.073	0.164*	-0.549**			
8. M&A	0.13	0.87	0.062*	0.099	-0.015	-0.056	0.125*	-0.124	0.115		
9. Family-TMT	0.75	0.48	0.032*	-0.045*	0.183*	0.081	0.009	0.033	0.062	0.037*	
10. Performance feedback	0.09	21.34	0.038*	0.012*	0.043	0.019*	0.027*	0.24	0.033	0.012	0.015*

Note(s): ^aDummy variables

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Family
managers'
propensity
towards M&As

Table 2.
Correlation matrix,
means and standard
deviations

most usually skewed and kurtotic, we also apply bootstrapping to obtain standard errors and confidence intervals (CIs). Using bootstrapping, no assumptions about the shape of the sampling distribution of the statistic are necessary. Moreover, the bootstrapping procedure allows improving results' accuracy through the application of a bias-correction to a percentile CI. Biased-corrected and percentile confidence intervals are non-symmetric and better reflect the sampling distribution of the conditional indirect effects. Specifically, we compute the conditional indirect effects for three different values of the moderating variable: low moderator (mean – 1sd), medium moderator (mean), high moderator (mean + 1sd). To run our models, we use an additional macro creating the command MODMED in SPSS (Preacher *et al.*, 2007).

To assure the robustness of our results, we replicate the same analysis while considering *ROA* as the main dependent variable and the average of *ROE* recorded in the five years before the questionnaire administration as moderating variable; and measuring family-*TMT* as a dummy variable with value 1 if at least one family member sits in the TMT, and 0 if no family member is in TMT (family-*TMT* (*presence*)).

4. Results

The results of the regressions applied to test the mediating effect are shown in Table 3.

In Models 1, we show the direct effect of family-*TMT* on firm performance. The relationship between family-*TMT* and *ROE* proves to be positive and significant ($\beta = 0.448$, $p < 0.05$), i.e. returns on equity are higher when more family members are in TMT, thus supporting hypothesis 1. In Model 2, the effects of family-*TMT* on the propensity towards M&A are shown ($\beta = 0.317$, $p < 0.05$). The results highlight that there is a positive relationship. Put it differently, family firms show greater propensity towards M&A when the percentage of family members in TMT is higher. Finally, in Model 3, we test the mediating role of M&A on the family-*TMT*-performance relationship. Concerning mediation, Baron and Kenny (1986) argue that if the original contribution of an independent variable is reduced or displaced by another independent variable, then the second independent variable would have a mediating effect on the dependent variable. In Model 3, *ROE* is regressed on family-*TMT* and M&A. The results suggest the mediation role of M&A, supporting hypothesis 2. In other words, when the M&A variable is added to the main effects, the direct effect of family-*TMT*

	ROE Model 1 β	M&A Model 2 β	ROE Model 3 β
<i>Control variables</i>			
TMT size	0.047	0.006	-0.009
Generation	0.009	-0.899*	-0.899*
Firm age	-0.002	-0.004	-0.007
Firm size	0.001*	0.001	0.001
Manufacturing	-0.207	-0.093	-0.963
Service	0.043	-0.078	-0.076
<i>Independent/mediating variable</i>			
Family- <i>TMT</i> (percentage)	0.448**	0.317**	0.356*
M&A			0.293**
R^2	0.153	0.125	0.185
F	9.30***	11.70***	13.50***
N	111	111	111
Note(s): * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$			

Table 3. Results of regression models (standard errors are robust to heteroskedasticity and serial correlation)

on ROE reduces its significance ($\beta = 0.356, p < 0.10$), indicating the partial mediation role of M&A, according to [Baron and Kenny \(1986\)](#).

[Table 4](#) shows the results related to the application of moderated mediation model according to both normal-theory based approach and bootstrapping procedure.

In the first column, we report the coefficients' values obtained applying the normal-theory standard errors for low, medium and high levels of the moderator. The related CIs at 95% are listed in the column 2. To follow, we report the coefficients, the percentile confidence intervals and the bias-corrected confidence intervals at 95% obtained through bootstrapping procedure using 500 replications. The null hypothesis of no conditional indirect effect can be rejected because the CIs do not contain 0. Both procedures highlight that the conditional indirect effects decrease slowly as the value of the moderator variable increases. This means that a TMT with a higher percentage of family members shows a higher propensity towards M&A, when performance feedback is worse, supporting [hypothesis 3](#).

Furthermore, by conducting a robustness check, we found that the moderating mediation effect remains. The results obtained when considering ROA as main dependent variable and the average of ROE recorded from 2006 to 2010 as moderating variable are consistent with those presented in the main model and suggest the existence of a positive relationship between family-TMT and ROA partially mediated by M&A. Moreover, by applying the normal-theory standard and bootstrapping procedures (500 replications), we found again that the conditional indirect effects decrease slowly as the value of the moderator variable increases. Put it differently, also changing the ratios selected to measure performance, we highlight that a TMT with a higher percentage of family members shows a higher propensity towards M&A, with positive effect on performance, when performance feedback is worse.

Finally, the results obtained when considering the presence of family members in TMT (*family-TMT (presence)*) as main independent variable (dummy variable) have suggested that this variable does not significantly affect M&A nor performance (ROE), demonstrating that we cannot limit the analysis to the "presence" (or not) of family members in TMT, but it is better considering the "percentage" of family members sitting in TMT.

5. Discussion

Drawing on the UET, this paper contributes to the debate on the family involvement-performance relationship, by considering the mediating role of the propensity towards M&A activities and the moderating role of performance feedback. Our main findings suggest that (1) an increasing percentage of family members in TMT is related to higher performance; (2) an increasing percentage of family members in TMT is also related to a higher propensity towards M&A that partially mediate the relationship between family-TMT and firm performance; (3) performance feedback moderates the mediating effect of M&A on family-TMT-performance relationship.

The first finding is in line with the literature suggesting that a higher percentage of family managers in a TMT fosters firm performance ([Kowalewski et al., 2010](#); [Gallucci et al., 2015](#)). This is because the decisions are faster, and their quality is better, thanks to the habit of family members of interacting each other, also outside the business, to a greater affinity and to shared values. Furthermore, family managers tend to share responsibilities, have an accommodating attitude toward other family members and practice the altruism ([Eddleston and Kellermanns, 2007](#)). These aspects allow them to reach consensus more easily and to enhance the profitability of the firm ([Minichilli et al., 2010](#)).

The second finding is unexpected and highlights that focusing on TMT allows to reach different results than by considering family ownership as in previous studies investigating the issue of M&A in family firms. By considering the well-known risk aversion showed by family members in decisional behaviors ([Zahra, 2005](#); [Naldi et al., 2007](#)), we expected to find a

Table 4.
Results of moderated
mediation models
(ROA as moderating)

Moderator level	Normal-theory		Bootstrapping	
	Coefficients	95% CI	Coefficients	95% bias-corrected CI
Low	0.343***	0.262 – 0.4468	0.343***	0.246 – 0.4764
Medium	0.172***	0.107 – 0.263	0.172***	0.101 – 0.275
High	-0.315***	-0.408 – -0.232	-0.315***	-0.403 – -0.233

Note(s): *** $p < 0.01$

negative relationship between the percentage of family members in TMT and the propensity towards M&A. Instead, surprisingly, we verify the existence of a positive relationship. This evidence allows us to add a piece of knowledge to the previous studies investigating the issue of M&A in family firms but only focused on the role of family owners. We suggest that when sitting in TMT family members change their point of view in looking towards the family and the firm. They are directly involved in the decision-making process and feel the responsibility of guaranteeing family's wealth and firm's survival, rather than family shareholders' value. Although family managers perceive M&A as highly risky, at the same time, they are able to see the opportunities for the family firm concealed behind the takeovers activities in terms of new knowledge, technological acquisitions, innovation and new market (Ahuja and Katila, 2001). They understand that opting for the choice to invest in M&A can in turn improve firm performance.

Moreover, by looking to the third finding, we can suggest that the link between family-TMT, M&A and firm performance is strengthened by the investigation of the moderating role of performance feedback. Put it differently, performance feedback exerts an influence on family managers' decisions. Specifically, negative performance feedback leads family managers to follow an apparently counterintuitive decision and thus go for change and risky strategic choices. This behavior is motivated by the preference that family members have to avoid wealth's loss for the firm and the family (Chua *et al.*, 2015). The main objective for family managers is to guarantee, in a long-term perspective, the firm continuity and the intergenerational transfer of managerial and ownership control (Miller and Le Breton-Miller, 2006). In this perspective, M&A could be a way to improve firm performance and, thus, to avoid firm's failure and to strengthen the competitive position of the business and give additional opportunities to heirs.

In the light of these findings, this paper makes several contributions to theory and practice. First, it answers the calls for more studies investigating the effect of TMT's composition on performance in family firms (Minichilli *et al.*, 2010; Ling and Kellermanns, 2010; Patel and Cooper, 2014). In so doing, it spreads the understanding and the use of UET, mainly focused on large public companies, to family firms' context (Minichilli *et al.*, 2010), by providing a full application of it. Indeed, the work considers the propensity towards M&A as mediator of the TMT-performance relationship and also performance feedback as moderator to capture the effect of the objective situation.

The choice of the mediator allows to extend the comprehension about M&A in family firms. While many studies have focused their attention on the effect that family ownership has on M&A (Ben-Amar and André, 2006; Basu *et al.*, 2009; Caprio *et al.*, 2011), we deepen the role of family members sitting in the TMT, by providing a different point of view to study the propensity of family firms towards M&A. While family shareholders could fear a significant loss of firm's value, and consequently of their stocks, over the years post-M&A decision, family managers look at M&A as an opportunity to acquire new technology, innovation and know-how and, in turn, to improve firm performance.

Furthermore, the consideration of the moderating role of performance feedback helps to shed new light on the family members' behavioral dynamics in decision-making processes (Ensley and Pearson, 2005; Nordqvist, 2005). Through the lens of behavioral theory of the firm (e.g. Cyert and March, 1963; March and Shapira, 1987) we investigate the behavior of family managers going beyond the rational view. By considering their loss aversion, we are able to provide an explanation for their counterintuitive, risk-taking behaviors.

Finally, as our main findings suggest that a higher propensity towards M&A allows family firms to reach better performance. This article offers useful implications for family managers. Indeed, we suggest that under certain circumstances, e.g. when performance feedback is negative, a riskier decision could represent the way to improve firm performance and turn around the destiny of the firm.

6. Concluding remarks

The main aim of this paper was to contribute to the debate on family involvement – performance relationship. Drawing our conceptual model on UET, and thus considering the mediating role of the propensity towards M&A and the moderating role of performance feedback, we found that a higher percentage of family members sitting in TMT is related to better performance and that this effect is mediated by the propensity towards M&A. Furthermore, we found that a higher percentage of family managers is positively related to the propensity towards M&A and, in turn, exerts a positive effect of firm performance, especially when performance feedback is negative.

Although the interesting results, the paper also suffers from some limitations that offer insights for future research directions. First, when considering the family involvement simply as the percentage of family managers in TMT, we neglect the demographic (e.g. age, tenure and education) and psychological (e.g. attitudes, aspirations, expertise and mindset) differences existing among family members and implicitly we assume an equal distribution of power. Further studies could thus deepen the internal diversity and behavioral dynamics among family managers and between family CEO and other family members sitting in the TMT. Second, while we have focused on M&A, other mediating variables (strategic choices), such as internationalization or marketing activities, might be considered to explain TMTs' decisional dynamics and their consequences on firm performance. Third, to catch the objective situation we have considered performance feedback. Future research could consider other external (e.g. crisis, industry and country) and internal (e.g. firm dimension, firm age, firm size and generation to control) variables able to moderate the overall path.

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