Merger and Acquisition Decisions in Family Firms. The Role of Past Performance

ABSTRACT

In widely held firms, managers often make acquisitions to create empires and maximize their utility. What does it change, when the firm is family run and the managers are members of the controlling family? Stemming from *Upper Echelons s* theory, the aim of this paper is to understand whether and how family managers influence M&A decisions and, in turn, family firms' performance, by considering the moderating role of past performance (objective situation). We test our hypotheses on a sample of 111 German family firms through a moderated mediation analysis. The main findings suggest that to an increasing presence of family members in TMT is related a higher propensity towards merger and acquisition activities and, in turn, better performance, especially when past performance are negative. Implications for theory and practice are also discussed.

KEYWORDS

TMT composition; performance; organic growth; acquisitive growth; family firms

INTRODUCTION

Research in widely held firms suggests that managers often make acquisitions to create empires and maximize their utility (Jensen, 1986; Morck, Shleifer, & Vishny, 1990). Furthermore, managers may pursue size-increasing acquisitions as a device to defend themselves from unwanted disciplinary takeovers (Gorton, Kahl, & Rosen, 2009) and because of their overconfidence (Malmendier & Tate, 2008; Roll, 1986). What does it change, when the firm is family run and the managers are members of the controlling family? Family firms are known as risk-adverse and avoiding merger and acquisition (M&A) decisions (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007; Zahra, 2005). However, the studies that reached this conclusion have focused their attention on the effect that family control (ownership) has on M&A decisions (Basu, Dimitrova, & Paeglis, 2009; Bauguess & Stegemoller, 2008; Ben-Amar & André, 2006; Caprio, Croci, & Del Giudice, 2011; Holderness & Sheehan, 1988), neglecting the role that the family members sitting in the top management team (TMT) have in the decision-making process.

Stemming from Upper Echelons s theory (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick, 2007; Hambrick & Mason, 1984), the aim of this paper is to understand whether and how the presence of family members in TMT influences merger and acquisition decisions and, in turn, which consequences these decisions generate on firm performance. Moreover, because TMT's decisions are in part a reflection of the situation that the firm faces (Hambrick & Mason, 1984), this research work also seeks to catch the "actual" reasons that motivate the overall path (TMT – merger and acquisition decisions – performance), by considering, among others, firms' past performance (Amason & Mooney, 1999) as aspect of "objective situation".

We test our hypotheses on a sample of 111 German family firms through a moderated mediation analysis (James & Brett, 1984; Muller, Judd, & Yzerbyt, 205). The main findings suggest that to an increasing presence of family members in TMT is related a higher propensity towards merger and acquisition activities and, in turn, better performance, especially when past performance are negative.

This paper makes several contributions to theory and practice. First, it extends the comprehension of the dynamics related to merger and acquisition decisions in family firms (Caprio et al., 2011), on the one hand by evaluating the role of TMT, on the other hand by studying their consequential effect of firm performance. In so doing, we answer to the calls suggesting that the effect of composition and process of TMT on performance in family firms needs further investigation (Ling & Kellermanns, 2010; Minichilli, Corbetta, & MacMillan, 2010; Patel & Cooper, 2014). Second, it spreads the understanding and the use of Upper Echelons theory, mainly focused on large public companies, applying its arguments to family firms (Minichilli et al., 2010). By referring to this perspective, we go beyond the direct effect of TMT on M&A decisions, by considering its consequences (performance) and antecedents (past performance). By focusing on the motivations that lead family members to make a M&A decision, we help to shed new light on the family members' behavioral dynamics in decision-making processes (Chrisman, Chua, & Sharma, 2003; Ensley & Pearson, 2005; Nordqvist, 2005), drawing on the concept of socioemotional wealth (SEW) (Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010; Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Finally, as our main findings suggest that merger and acquisition decisions allow to family firms reaching better performance, this article offers useful implications for family managers. We suggest that, sometimes, especially when the firm is losing, a more risky decision could represents the way to survive and grow.

The remainder of this article is organized as follows: in the next section a literature review on merger and acquisition decisions in family firms is presented and our starting hypothesis is formulated. Then, drawing on the Upper Echelons theory, mediating role of M&A decisions and the moderating role of past performance on the TMT-performance relationship are argued and hypotheses are subsequently formulated. Data collection, measurement, and analysis are shown in section three. Finally, we describe and discuss the results and conclude with the main contributions.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Merger and Acquisition Decisions in Family Firms

Family firms are known as more risk adverse than other firms (Anderson & Reeb, 2003; Faccio, Marchica, & Mura, 2011), adopting conservative behaviors and leading to fewer investments (Bianco, Golinelli, & Parigi, 2009). Researchers motivate this evidence by the circumstance that in family firms the decisions are often taken in the interest of the controlling family (Morck & Yeung, 2003), which derives greater benefit from the survival of the company than from enhancing shareholder value (Anderson & Reeb, 2003). Furthermore, the desire to pass the firm onto subsequent generations represents a further valiant motivation for the careful management of capital and invest in long-lasting assets (Miller & Le Breton-Miller, 2006). These family firms' attitudes also translate in a lower probability to engage in active takeovers (Bauguess & Stegemoller, 2008; Ben-Amar & André, 2006; Caprio et al., 2011). In fact, despite generally managers look with favor at takeovers proposals, because they offer them good future employment opportunities or large severance payments (Gorton et al., 2009), when family members are in the top management team the probabilities of merger and acquisition decisions decrease. Merger and acquisition might represent a strategic decision for firm's growth, one of the most important goals for family firms (Deloitte & Touche, 1996) which helps sustaining their long-term perspective and survival orientation (Anderson, Mansi, & Reeb, 2003; Eddleston, Kellermanns, & Sarathy, 2008); nonetheless, acquisitive growth (Hitt, Hoskisson, Ireland, & Harrison, 1989) are often considered challenging for family firms. A first reason is the high need of financial resources. Capital constraints imposed by the owner-family (Carney, 2005) and a low orientation towards indebtedness (Górriz & Fumás, 1996) translate indeed in a greater difficulty for a family managers to use financial resources and to develop pro-active and aggressive strategies (Miles & Snow, 1978), by pushing them to avoid active takeovers. Second, family executives are known having a lower orientation towards growth, at least in the short term (Zahra, Hayton, & Salvato, 2004). Priority for them is the continuity of the firm (Miller & Le Breton-Miller, 2006) that they tend to put before growth, by preferring to maintain the status quo (Gersick, Davis, Hampton, & Lansberg, 1997; Salvato, 2004). Firm's survival is an objective more important than profitability (Athanassiou, Crittenden, Kelly, & Marquez, 2002) and pushes family managers to reject high-risk projects that imply high degrees of variability in their results (Gedajlovic, Lubatkin, & Schulze, 2004; Van Auken & Werbel, 2006; Zahra, 2005). This risk-taking inhibits corporate growth (Naldi et al., 2007). Finally, family managers desire a higher external autonomy related to a lower inclination to collaborate with other firms into networks and to develop joint ventures and other acquisitive strategies (Casillas & Moreno, 2010). In the light of these arguments, we propose the following hypothesis:

Hypothesis 1: *There is a negative relationship between an increasing presence of family members in TMT and merger and acquisition decisions.*

Adopting an Upper Echelons s Perspective: The Mediating Role of Merger and Acquisition Decisions and the Moderating Role of Past Performance

The Upper Echelons s theory suggests that the characteristics and the actions of powerful actors in the organization, especially members of TMT, reflect on firms' outcomes (Hambrick & Mason, 1984). Therefore, this perspective provide us the possibility to go beyond the investigation of the effects that the presence of family members in TMT has on the decisions about merger and acquisition activities, by evaluating also the related consequences. Indeed, the Upper Echelons theory, by adopting a sequential vision, allows to examine whether and how the

TMT's strategic decisions (in our case, merger and acquisition decisions) affect firm performance (Certo, Lester, Dalton, & Dalton, 2006; Hambrick, 2007; Hambrick & Mason, 1984; Homberg & Bui, 2013).

In the light of our previous considerations, we believe that the presence of family members in TMT influences merger and acquisition decisions. These decisions, in turn, can increase firm's overall value (Anderson & Reeb, 2003; Feito-Ruiz & Menéndez-Requejo, 2010) and bring the firm in unfavorable market positions, in terms of the attractiveness of their industries and their competitive position (Hopkins, 1987). In this sense, the decisions about takeovers have the power to influence firm performance (Chen, Zou, & Wang, 2009; Covin, Slevin, & Covin, 1990; Daily & Thompson, 1994). Therefore, stemming on Upper Echelons perspective, we suggest that family members in TMT influence firm's performance through merger and acquisition decisions and then formulate the following hypothesis:

Hypothesis 2: *Merger and acquisition mediate or partially mediate the relationship between TMT and family firms' performance.*

In addition, the Upper Echelons Theory sustains that TMT's decisions are in part a reflection of the situation that the firm faces (Hambrick & Mason, 1984). Therefore, discussing just about TMT's decisions and their consequences on firm performance does not allow catching the "actual" reasons that motivate and move the overall path (TMT – merger and acquisition decisions – performance). Among others possible motivations, this work considers as aspect of "objective situation" firms' past performance. The reflection is related to the conception that economic results obtained in the previous years could influence the decision-making process run by family managers. Positive past performance might lead family decision-makers to avoid highly risk activities, such as M&A. Otherwise, worse past performance might lead family managers to follow counter intuitive decision and to bet, in order to save the destiny of the firm and the family. Indeed, family members very often make their decisions on the basis of emotional aspects (Berrone et al., 2010; Gomez-Mejia et al., 2011; Gómez-Mejía et al., 2007). Socioemotional wealth provides some alternative explanations of the behaviors of family managers, by suggesting that their decisions are based on their concepts of gains and losses. In particular, family members show greater preference to avoid loss than to achieve gain in term of SEW (Chua, Chrisman, & De Massis, 2015). Therefore, while they show as risk-adverse, when the firm run in the right way, in order to avoid wealth's loss; when they percept probability of failure, a danger for their firm and family, they are willing to go for broke. Based on these arguments, we formulate the following hypothesis:

Hypothesis 3: *Past performance moderates the mediating effect of M&A on TMT and family firms' performance.*

Figure 1 provides a visual representation of the research model.

Insert Figure 1 about here

RESEARCH METHODOLOGY

In this section, we present the data collection process and sample selection. Afterwards, main variables, measures, and techniques of analysis to test our hypotheses are specified.

Data Collection and Sample

The theoretical framework of this study is tested by means of quantitative methods, using survey data. The data collection process started with the scanning of the Bureau van Dijk *Amadeus* database, with the following search criteria: for a firm to be eligible for our study, it had to be German based, with at least €50 million in annual turnover. Furthermore, the firm has to be owned with at least 50.1% ownership by one family. To collect this ownership information, we used the "hyper ownership viewer" in order to quickly identify firms with concentrated ownership. Moreover, the firms had to be the global ultimate owner (GUO), meaning that they have to be the parent company with no other holding above them. This process yielded a first sample of 781 firms, which were contacted via corporate email addresses and asked to participate in an online survey, with the note that the CEO ought to be the respondent. One follow-up mailing was performed to encourage participation. Congruent with past research (Machold, Huse, Minichilli, & Nordqvist, 2011), the CEO is expected to be the best key informant because of his/her knowledge on different firm level orientations and attitudes. The data collection period in which the online survey was available was the summer of 2011, and the questionnaire contained 124 items. All respondents had to indicate if they were the CEO of the firm, and another item asked if they perceive the firm to be a family firm. In order to back-up the self-perception as a family firm, we checked the website and press releases of the firms that completely answered the questionnaire and looked for a specific mentioning of the firm as being a family firm.

It is important to highlight that the context for this study is Germany, which has a two-tier governance system, strictly separating the management board from the supervisory board.

We reached a usable 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 & Overton, 1977). As for the purpose of this study we also collected secondary data (Amadeus, Bureau Van Dijk) for our performance measures (2010-2012). 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.

Variables and Measures

Dependent Variable

Firm performance. Our performance measure is the rate of *return on equity* (ROE) - net income divided by equity capital - growth, calculated as (ROE 2012 – ROE 2011) / ROE 2011. ROE has been commonly used to assess top executive and family impact on firm performance (Alipour, 2013; Allouche, Amann, Jaussaud, & Kurashina, 2008; Kowalewski, Talavera, & Stetsyuk, 2010; Martínez, Stöhr, & Quiroga, 2007; Mazzola, Sciascia, & Kellermanns, 2013).

Independent Variable

TMT. 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 a external-TMT and the case of a family-TMT.

Mediating Variables

Merger and Acquisition. We capture TMT's propensity towards merger and acquisition activities by using five items in the questionnaire. The five items are measured on a 5-point semantic differential scale (Osgood, 1964) and, after a factor analysis, four of them resulted significant. The Cronbach's alpha coefficients are exceeding the recommended minimum of .70 and thus indicating a very good reliability (Hair, Anderson, Tatham, & Black, 2010). All items, their factor loadings, and the associated alpha are shown in Table 1.

Insert Table 1 about here

Moderating Variable

Past performance. We consider as moderating variable the past performance (Amason & Mooney, 1999) measured by the rate of *return on equity* (ROE) growth calculated as (ROE 2011 – ROE 2010) / ROE 2010.

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 & Gianecchini, 2002). To determine the generational stage of the family firm, we ask respondents to indicate the *generation* that is managing the firm (Bammens, Voordeckers, & Van Gils, 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 *firm age* since older firms are expected to be more conservative in their strategic orientations (Zahra, Hayton, Neubaum, Dibrell, & Craig, 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, Minichilli, & Corbetta, 2013) measured through the number of employees. Finally, 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, Dibrell, & Craig, 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.

Insert Table 2 about here

Analyses

Hypotheses are tested using a moderated mediation analysis (Ben-Amar & André, 2006; James & Brett, 1984). First, we verify the existence of a relationship between TMT and performance mediated by M&A by applying a mediation model (Baron & Kenny, 1986; Selig & Preacher, 2009); then we evaluate the magnitude of the indirect effect (mediation) at a different values of the moderator (Preacher, Rucker, & Hayes, 2007), i.e. we test the conditional indirect effect by considering the past performance as moderating variable.

In order to verify the mediating role of merger and acquisition decisions on the relationship between TMT and performance, we use multiple regression models (Aiken & West, 1991). Specifically, we test three models. In Model 1, the direct effect of TMT on merger and acquisition decisions is examined. We then regress the rate of ROE growth (Model 2) on TMT. In Model 3, we test the mediating role of M&A on ROE. 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 heteroskedasticity and serial correlation of the data is made by determining the robust standard errors using the Huber White Sandwich estimator for clustered data (Rogers, 1993; 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).

In order to assess moderated mediation, we use normal-theory standard errors and bootstrapping procedure. The first method assumes that the distribution of conditional indirect effects are asymptotically independent and normally distributed. However, because the distribution of conditional indirect effects are known to be non-normal, 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, bootstrapping procedure allows improving results' accuracy thrugh 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 moderator variable: low moderator (mean - 1sd), medium moderator (mean), high moderator (mean + 1sd).

RESULTS

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

Insert Table 3 about here

In Models 1, we show the direct effect of TMT on the propensity towards merger and acquisition. The results highlight that there is a positive relationship between TMT and merger and acquisition ($\beta = -.057$, $p < .01$), not supporting hypothesis 1. In fact, family firms show greater propensity towards merger and acquisition activities when the percentage of family tmbers in TMT is higher. In Model 2, the effects of TMT on firm performance are shown. The relationship between TMT and firm performance proves to be positive, i.e. returns on equity are higher when more family members are in TMT. Finally, in Model 3, we test the mediating role of merger and acquisition on the 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. The direct effect of TMT on the rate of ROE growth is shown in Model 1 and is significant and positive ($\beta = .317$, $p < .05$). In Model 3, the rate of ROE growth is regressed on TMT and M&A. The results suggest the mediation role of merger and acquisition, supporting hypothesis 2. In other words, when the merger and acquisition variable is added to the main effects, the direct effect of TMT on the rate of ROE growth reduces its significance ($\beta = .301$, $p < .10$), indicating the partial mediation role of merger and acquisition, 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.

Insert Table 4 about here

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 does 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 presence of family members tend to favor merger and acquisition activities, when past performance are worse, supporting hypothesis 3.

DISCUSSION AND CONCLUSIONS

This paper, drawing on the Upper Echelons theory, has investigated whether and how family managers influence merger and acquisition decisions and, in turn, firm performance, by considering the moderating role of past performance. Our main findings suggest that i) an increasing presence of family members in TMT is related to a higher propensity towards merger and acquisition activities; ii) merger and acquisition partially mediate the relationship between TMT and family firms' performance; iii) past performance moderates the mediating effect of M&A on TMT and family firms' performance.

The first finding is inside out previous literature results. By considering the well-know risk aversion showed by family members (Naldi et al., 2007; Zahra, 2005), we expected to find a negative relationship between the presence of family members in TMT and merger and acquisition decisions. Instead, surprisingly, we verify the existence of a positive relation that also in turn allow to family firms reaching better performance. The consideration of the moderating variable allows us proposing a motivation to this unexpected finding. Indeed, our findings show that the economic results obtained in the previous years influence the decion-making process run by family managers. Specifically, negative past performance leads family managers to follow counter intuitive decision and to go for broke. This decision could be related to the preference that family members have to avoid wealth's loss for the firm and the family (Chua, Chrisman, & De Massis, 2015)(Chua, Chrisman, & De Massis, 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 & Le Breton-Miller, 2006). In this perspective, a merger and acquisition decision could be a way to avoid firm's failure and to strengthen the competitive position of the business and give additional opportunities to heirs.

This paper makes several contributions to theory. First, it extends the understanding and the use of Upper Echelons s theory (Carpenter et al., 2004; Hambrick, 2007; Hambrick & Mason, 1984) applied to family firms. Stemming from this theory, it extends the comprehension of the dynamics that regulate the effect the presence of family members in TMT on merger and acquisition decisions and, in turn, on family firms' performances. In this sense, our study sheds new light on the dynamics related to merger and acquisition decisions in family firms and answers to the call for more research investigating the relationship between TMT and performance in the family firms' context (Ling & Kellermanns, 2010; Minichilli et al., 2010; Patel & Cooper, 2014). Moreover, by focusing on the motivations that lead family members to make M&A decisions this paper offers a full application to the family firms' context of Upper Echelons s theory. Indeed, this perspective sustains that TMT's decisions are in part a reflection of the situation that the firm faces (Hambrick & Mason, 1984), and past performance represent a valiant “objective situation”. Finally, this paper sheds new light on the family members’ behavioral dynamics in decision-making processes (Chrisman et al., 2003; Ensley & Pearson, 2005; Nordqvist, 2005), drawing on the concept of socioemotional wealth (Berrone et al., 2010; Gomez-Mejia et al., 2011; Gómez-Mejía et al., 2007)that helps motivating a finding conflicting with previous studies (the positive effect of family managers on M&A).

Tables and Figures

Table 1: Questionnaire items

Construct	*Measures of construct*	*Factor loading*
Acquisitive growth strategic choices, $\alpha = .85$	TMT is continuously and systematically looking for potential acquisition targets - Potential acquisition targets are rather identified by chance than by systematic exploration of opportunities	.88
	Strategically motivated vertical and horizontal M&A activities are an central part of our growth strategy - M&A activities do not play an important role in our growth strategy	.91
	TMT is willing to engage in riskier M&A projects - TMT is only willing to engage in low risk M&A projects	.73
	TMT tries to specifically build up process knowledge concerning M&A transactions - TMT does not specifically try to develop M&A competencies	.77

Table 2: Correlation Matrix, Means, and Standard Deviations

	Mean	*SD*	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*
1. Rate of ROE growth	.52	3.92								
2. TMT size	3.68	1.95	-.009							
3. Generation	1.92	.87	-.223**	-.055						
4. Firm age	66.72	86.29	-.142	.046	.259**					
5.Firm size	1224.52	2034.94	-.074	.129	.154*	.108				
6. Manufacturing[a]	-	-	-.096	.042	.254**	.222**	.093			
7. Service[a]	-	-	-.082	-.051	-.096	-.076	.163*	-.547**		
8. Merger and Acquisition	0.13	.87	.057*	.107	-.011	-.047	.169*	-.122	.114	
9. TMT	.75	.48	.020*	-.599**	.185*	.075	.003	.029	.066	.039*

[a]Dummy variables

*Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

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

	Rate of ROE growth	*Merger and Acquisition*	*Rate of ROE growth*
	Model 1 β	*Model 2 β*	*Model 3 β*
Control variables			
TMT size	.006	.049	-.008
Generation	-.899*	.009	-.902*
Firm age	-.004	-.001	-.004
Firm size	.001	.001*	.001
Manufacturing	-1.020	-.209	-.961
Service	-1.840	.044	-1.852
Independent/Mediating variable			
TMT	.317**	.057*	.301*
Merger and Acquisition			.284**
R^2	.125	.154	.184
F	11.70***	9.20***	13.00***
N	111	111	111

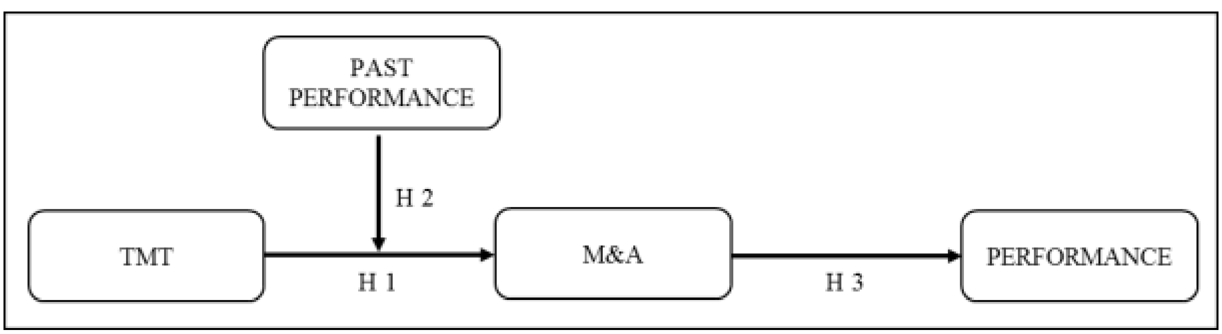
* p<.10
** p<.05
*** p<.01

Table 4: Results of moderated mediation models

	Normal-theory		*Bootstrapping*			
Moderator Level	*Coefficients*	*95% CI*	*Coefficients*	*95% CI*	*95% percentile CI*	*95% bias-corrected CI*
Low	.359***	.270 - .448	.359***	.266 - .452	.246 - .472	.246 - .472
Medium	.190***	.110 - .270	.190***	.100 - .280	.103 - .277	.103 - .277
High	-.322***	-.410 - -.234	-.322***	-.531 - -.113	-.407 - -.237	-.413 - -.231

*** p<.01

Figure 1: Research design



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