

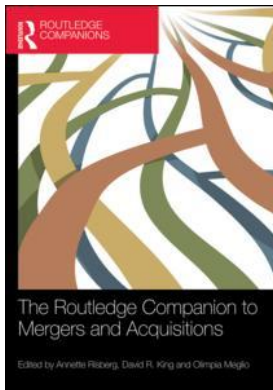
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Acquire or get acquired

Defensive acquisitions in medium-sized family firms

Pankaj C. Patel and David R. King

Introduction

Beyond economic and non-economic motives for acquisitions (Gorton *et al.* 2009; Halebian *et al.* 2009), family firm research consistently shows that family firms engage in lower levels of diversification (Anderson and Reeb 2003b; Basu *et al.* 2009; Caprio *et al.* 2011; Gomez-Mejía *et al.* 2010; Miller *et al.* 2010; Sraer and Thesmar 2007). While acquisitions are complex events, according to Miller *et al.* (2010: 208), family firms' unique social priorities and risk preferences lead to fewer acquisitions, such that "at 20 percent of family ownership, the average number of acquisitions is 1.55 with a value of \$788MM; at 60 percent of family ownership these numbers decline to 1.03 and \$28MM, respectively." Research demonstrates limited consensus on the impact of family ownership on firms (O'Boyle *et al.* 2012). However, recent work on 777 large continental European firms confirms that family control is negatively related with acquisition propensity (Caprio *et al.* 2011). In the quest for preserving socioemotional wealth, family firms exhibit lower acquisition activity than non-family firms (Bauguess and Stegemoller 2008; Sraer and Thesmar 2007). Socioemotional wealth refers to "non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gomez-Mejía *et al.* 2007: 106).

As family firms possess additional social, affective, and emotional endowments, their utility functions for acquisition decisions are different from those of non-family firm managers who are typically driven by economic motives (Daily *et al.* 2003). Compared to non-family firms, family firms engage in economic, social, and emotional calculus of maintaining socioemotional wealth, sometimes at the expense of financial gains (Gomez-Mejía *et al.* 2007). As acquisitions dilute control and often require non-family human and financial capital to create post-acquisition synergies, risk-averse family firms prefer fewer acquisitions than non-family firms (Gomez-Mejía *et al.* 2011). However, research has only scratched the surface in explaining observed differences between family and non-family firm acquisition activity.

Acquisition literature on family firms has largely focused on the differences in "demand" between family and non-family acquirers for target firms in the market for corporate control (Gomez-Mejía *et al.* 2007, 2010, 2011). From a "supply side" for acquisitions, we examine whether the prospect of being acquired motivates family firm acquisition activity. As potential

acquisition targets, family firms are motivated to take steps that mitigate this threat to socioemotional wealth (Gomez-Mejía *et al.* 2007). As a result, we contend that family firms are more likely to engage in defensive acquisitions with the non-financial motive of preserving socioemotional wealth. This is consistent with the “eat or be eaten” hypothesis that maintains that managers of mid-sized firms may undertake defensive acquisitions to lower threat of future takeover (cf. Gorton *et al.* 2009). Under the behavioral agency model (Wiseman and Gomez-Mejía 1998), socioemotional wealth is proportional to firm size—as firm size increases, so does the affective endowment from owning the firm. Therefore, varying levels of socioemotional wealth for family firms of different sizes would lead to different levels of perceived threat of acquisition. Owners of larger family firms would perceive greater loss of endowment than owners of smaller family firms. Therefore, sensitivity to loss of endowment would be greater for larger family firms.

Research consistently finds that firm size is inversely related to the likelihood of acquisition (Heeley *et al.* 2006; Moeller *et al.* 2004; Offenberg 2009; Palepu 1986). Larger targets are more difficult to integrate and require greater financial resources to cover the cost of acquisition, which in turn decreases the acquisition likelihood of larger firms. In combining this insight to family firm acquisition behavior, we expect the following: 1) larger family firms perceive a lower threat to socioemotional wealth from a lower probability of being acquired, and 2) smaller family firms have a higher likelihood of being acquired, but the socioemotional wealth endowment may determine whether being acquired is viewed as a threat. Family firms of low socioemotional wealth could be more open to acquisitions as perceived socioemotional wealth losses are offset by average acquisition premiums that range between 30 and 50 percent of a target’s purchase price (Laamanen 2007). However, greater information asymmetries in acquiring smaller firms suggest that there is a greater risk of overpayment, which reduces the attractiveness of smaller firms as acquisition targets (Kusewitt 1985; Officer *et al.* 2009).

Meanwhile, family firm size is proportional to socioemotional wealth endowment (Gomez-Mejía *et al.* 2011), so small and large-sized family firms likely perceive fewer takeover risks that threaten the loss of socioemotional wealth. This holds true as large firms perceive a lower acquisition risk and small firms have a smaller socioemotional wealth endowment, or loss, compared to gains from an acquisition premium. Meanwhile, mid-size family firms are more likely to focus on loss of socioemotional wealth and engage in defensive acquisitions to maintain it. To test a greater likelihood of acquisition by medium-sized family firms than non-family firms, we draw on a sample of 1,837 acquisitions from 738 firms representing 8,372 firm-year observations in 1993–2007.

Theoretical development and hypotheses

Family firms offer a unique opportunity for comparison in that they exhibit important differences from managerial decisions in other firms (Gomez-Mejía *et al.* 2011). With respect to acquisition motives, a stronger tendency for defensive acquisitions by family firms can be explained by the behavioral agency model that combines agency theory with prospect theory to develop an improved model of corporate governance (Gomez-Mejía *et al.* 2010; Miller and Chen 2004; Wiseman and Gomez-Mejía 1998). Combining elements of agency theory on corporate governance with prospect theory explanations of framing, the behavioral agency model compares outcomes against a reference point. When outcomes are below expected reference point, loss aversion is activated, and when performance is above aspirations, then risk aversion is activated (Wiseman and Gomez-Mejía 1998). In family firms, the primary reference point is the loss of socioemotional wealth, and family firms will accept options with lower financial performance to mitigate loss of socioemotional wealth (Gomez-Mejía *et al.* 2007). Consistent with prospect

theory, the focus in family firms is on the final state of maintaining socioemotional wealth and not changes in financial wealth (Gomez-Mejía *et al.* 2007; cf. Kahneman and Tversky 1979). We further develop this logic in building hypothesized relationships for family firm acquisitions for family firm size and acquisition relatedness.

Family firm size and acquisition activity

The perceived risk of getting acquired, or reference point for loss of socioemotional wealth, likely depends on firm size, and we define firm size as firm assets relative to assets of firms in the industry. In their “eat or be eaten” hypothesis, Gorton and others (2009) state that medium-sized firms are more likely to be the targets of acquisition. If there are private benefits to maintaining control of a firm, medium-sized firms may engage in defensive acquisitions. Both larger and smaller family firms perceive lower threat of being acquired and, therefore, do not perceive their relative asset size as a threat to socioemotional wealth. Maintaining socioemotional wealth represents a private benefit that is unique to family firms. However, acquisition activity is likely impacted by family firm size as it approximates socioemotional wealth at risk in family firms (Gomez-Mejía *et al.* 2011), and we discuss the perspective of small, large, and medium-sized family firms.

With respect to smaller family firms, the perceived threat of takeovers is lower because they are less attractive targets, have less socioemotional wealth at risk (Gomez-Mejía *et al.* 2011), and lack resources for defensive acquisitions. Acquirers are less likely to acquire smaller firms (King *et al.* 2008), and one reason offered is an increased risk of overpayment from information asymmetries (Humphery-Jenner and Powell 2011; Kusewitt 1985). Increased information asymmetry in acquiring smaller targets also increases valuation difficulties and an acquirer’s overpayment risk (Bargeron *et al.* 2008). Further, smaller firms also lack needed managerial and financial resources to create synergies in the post-acquisition phase (King *et al.* 2003). The combined implication is that small family firms are less concerned about takeovers.

For different reasons, large family firms are also less likely to be acquired. Research has already established a demand side explanation that acquisitions dilute family ownership (Gomez-Mejía *et al.* 2010, 2011). However, there are additional reasons why large family firms will be less likely to be pursued as acquisition targets: greater integration challenges, availability of managerial resources from family executives, limited synergy from non-productive assets that are embedded in family legacy, and possibly prolonged takeover battles and reviews (Haspeslagh and Jemison 1991; Palepu 1986; Lubatkin 1983; Seth 1990; Shrivastava 1986). Research consistently finds that large firms have a lower likelihood of being acquired (Ambrose and Megginson 1992; Billett 1996; Cremers *et al.* 2009; Heeley *et al.* 2006; Heron and Lie 2010; Moeller *et al.* 2004; Powell and Yawson 2007; Song and Walkling 1993). Additionally, firms that acquire targets with higher family socioemotional wealth have lower value creation (Basu *et al.* 2009), further suggesting that large family firms are less desirable targets.

Meanwhile, based on the “eat or be eaten” hypothesis (Gorton *et al.* 2009), mid-sized firms are strategically attractive acquisition targets in that they balance synergies and transaction costs. Additionally, mid-size family firms have more socioemotional wealth at stake. This suggests that, compared to non-family firms, medium-sized family firms with socioemotional wealth at stake are more likely to engage in defensive acquisitions to make them less attractive targets. As a result, defensive acquisitions provide a means to preserve socioemotional wealth for mid-size family firms. The non-financial benefits of defensive acquisitions for mid-size firms would then offset financial repercussions, as defensive motives lead to decline in shareholder wealth (Kaplan *et al.* 2000; Seth *et al.* 2002). Medium-sized family firms through acquisitions increase their relative

industry size, providing managerial benefits and maintaining socioemotional wealth. Therefore, we predict the following:

Hypothesis 1 (H1): The likelihood that family firms make acquisitions has an inverted-U relationship with size. In other words, medium-sized (relative to the size of other firms in the industry) family firms are more likely to acquire than non-family firms.

Family firms and related acquisitions

Gomez-Mejía *et al.* (2010: 224) state that family firms are pulled in two opposite directions of deciding to “opt for less diversification in order to preserve socioemotional wealth or choose greater diversification . . . in order to dilute or spread concentrated business risk but at the expense of family socioemotional wealth.” While gains from unrelated acquisitions have less potential to improve financial performance (Lee and Madhavan 2010; Singh and Montgomery 1987) and can dilute socioemotional wealth by including managerial talent outside the family (Gomez-Mejía *et al.* 2010), unrelated diversification is often pursued by family firms to smooth cash flow, lower portfolio risk, and increase firm survival (Anderson and Reeb 2003b; Faccio *et al.* 2001; Salter and Weinhold 1978; Shleifer and Vishny 1997). While portfolio theory would suggest that family firms are more likely to acquire unrelated firms to lower firm risk, on average family firms are less diversified (Gomez-Mejía *et al.* 2010) and medium-sized family firms are more likely to acquire related targets for at least two reasons.

First, for a mid-size family firm, acquiring unrelated firms provides a lower defensive benefit to a possible takeover. The primary reason is that diversified assets are less likely to be integrated within the complex social structure of a family firm (Eddleston *et al.* 2008; Habbershon and Williams 1999; Pearson *et al.* 2008; Sirmon and Hitt 2003). This means that the asset base of an unrelated target is more likely to remain distinct, making it easier for a prospective acquirer to divest unrelated assets. For example, Porter (1987) suggests that over 70 percent of unrelated acquisitions are later divested. This suggests that a mid-sized family firm, by acquiring an unrelated target does not mitigate threat of takeover, because undesired assets can later simply be spun off by an acquirer and socioemotional wealth can still be destroyed. Meanwhile, by acquiring a related target, a family firm increases the benefits of defensive acquisitions as future acquirers might find the combined firm less attractive due to increased integration complexity and lower chances to divest non-performing assets. The implication is that an acquirer may require greater restructuring of a family firm with larger related operations to unlock a resulting acquisition’s potential (e.g. Barkema and Schjiven 2008b).

Second, continuing earlier arguments, medium-sized family firms frame threat of being acquired as a loss of socioemotional wealth and therefore are more likely to increase social complexity by integrating related targets. In the post-acquisition integration process, family firms exhibit stewardship to reconfigure a target’s resources within a complex social structure under family governance (Arregle *et al.* 2007; Carney 2005; Miller and Le Breton-Miller 2006). Such integration increases the combination of new resources with prior resources, or provides a greater benefit of size by integrating a related target into the socioemotional wealth of a family firm. Integration of a related target also preserves socioemotional wealth by continuing to leverage socioemotional resources and allows stakeholders to maintain a coherent organizational identity (Stavrou *et al.* 2007; Zellweger and Nason 2008). This complicates integration costs for a prospective acquirer which must consider the costs of integrating socially complex stakeholder resources (Capron and Guillén 2009; Hitt *et al.* 2001). The combined implication

is that medium-sized family firms are more likely to acquire related targets to provide a greater defensive benefit. Therefore, we propose:

Hypothesis 2 (H2): The likelihood that family firms make related acquisitions has an inverted-U relationship with size. In other words, medium-sized (relative to size of other firms in the industry) family firms are more likely to acquire related targets than non-family firms.

Methodology

Dependent variables

We identified acquisition events from *Thomson Financial's* Securities Data Company (SDC Platinum) database. Next, we matched acquirers in the manufacturing sector who acquired targets in the manufacturing sector with firms in CRSP, COMPUSTAT, ExecuComp, Hoover's Company records, yearly proxy statements, and Investor Responsibility Research Center. To derive additional information on stock market reaction and firm characteristics, we used the following additional filters: a) at least five-years of continuous financial information is available; b) at least 100 days of stock market trading data is available; c) information on top management team is available. Based on these criteria, between 1993 and 2007, 1,837 acquisitions by 738 US acquirers were identified.

We applied multiple definitions of family firms to distinguish them from non-family firms, using blockholder information (Anderson and Reeb 2003a, 2003b; Gomez-Mejía *et al.* 2011; López de Silanes *et al.* 1999). We classify firm as a family firm if family blockholders own 10 percent or more equity and at least one family member is involved in the top management team (defined as executives in Tier 1 of the firm). Family members in the top management team are identified from the pool of executives listed in ExecuComp, annual reports (particularly Item 404 or Regulation S-K that identifies transactions with related persons, promoters, and certain control persons) and Ancestry.com. Of the 1,837 acquisition events by 738 firms between 1993 and 2007, 617 acquisitions were by 341 family firms representing 4,037 family-firm-years.

Likelihood of acquisition

The dependent variable is the likelihood of acquisition. If a firm acquires one or more targets in a given year, "1" is coded and, if it did not make an acquisition, "0" is coded. Acquisition information was obtained from the SDC Platinum database.

Relatedness of acquisitions

Relatedness is operationalized as follows: if the four digits of target and acquirer are the same, we code relatedness as "1"; if only the first three digits are the same, we code relatedness as "0.75"; if only the first two digits match, we code relatedness as "0.5"; if only the first digit is common, we code relatedness as "0.25"; otherwise, we code relatedness as "0" (Hoskisson *et al.* 1993). Therefore, higher values indicate increased relatedness. If a firm acquired more than one firm in a period of observation, we code it as 1 for the first outcome measure. For the second outcome measure, we take the target with lowest relatedness. Additionally, only 2.9 percent of firm-year observations included a firm that acquired more than one target.

Independent variables

Firm size

Based on prior work by Palepu (1986), Powell and Yawson (2007), Ambrose and Meggison (1992), and Dietrich and Sorenson (1984), firm size was measured by firm assets. We used natural log of book value of total assets adjusted for median book value of total assets at the four-digit SIC code level as a proxy for firm size.

Family ownership

We distinguished family firms from non-family firms based on ownership and family involvement in governance and management (e.g. Allen and Sharon 1982; Anderson and Reeb 2003a; Gomez-Mejía *et al.* 2010; Villalonga and Amit 2006). Specifically, family firms are those firms where founders or other family members related by blood or by marriage have significant shareholdings and are executives or directors. Specifically, continuing from earlier discussion, we use four definitions of a family firm: 1) percentage family ownership (≥ 10 percent + at least 1 top management team member); 2) percentage founding CEO ownership (≥ 10 percent + at least 1 top management team member); 3) percentage later generation ownership (≥ 10 percent + at least 1 top management team member); or 4) family involvement (percentage of family top management team members). Firms were treated as a family firm for meeting one or more of the individual definitions.

Control variables

We applied multiple controls to limit the influence of other variables on examined relationships. First, we included relative size, as the relative distribution of firm size in an industry could affect acquisition dynamics (Gorton *et al.* 2009), using Palepu's (1986) application of the Theil Index to measure entropy in distribution of assets. We also control for anti-takeover provisions using the Gompers-Ishii-Metrick (GIM) index developed by Gompers *et al.* (2003) from 24 anti-takeover provisions reported in the Investor Responsibility Research Center database. We also control for organizational slack, where absorbed slack is the ratio of selling, general, and administrative expenses to sales; unabsorbed slack is the ratio of current assets to current liabilities; potential slack is the debt to equity ratio (Bourgeois 1981). To account for bankruptcy risk, we controlled for Altman's Z, where higher values indicate increasing distance from bankruptcy (Altman 1968). Resource investments by firms can influence acquisition likelihood (Heeley *et al.* 2006; Iyer and Miller 2008), so we controlled for R&D intensity ($\ln[\text{R\&D}]/\ln[\text{-Sales}]$), advertising intensity ($\ln[\text{Advertising expenses}]/\ln[\text{Sales}]$), and capital intensity ($\ln[\text{Capital expenditures}]/\ln[\text{Sales}]$). We also controlled for total number of prior acquisitions and value of prior acquisitions (in 2,000 US dollars) in the previous five years of the respective acquisition (Barkema and Schijven 2008a). Finally, we incorporated multiple financial controls, including Tobin's Q, or the ratio of market to book value of assets; free cash flows (Jensen 1986); unsystematic risk using the standard deviation of errors in the regression of market returns (daily market returns in S&P 1500 firms), and firm stock market returns over 252 trading days in a year (Bansal and Clelland 2004).

Analysis

To test our hypotheses we used random effects logit to predict the likelihood of acquisition. The relatedness of acquisition is a latent variable where the degree of commonality between a target and acquirer cannot be observed beyond the matching of four-digit SIC codes. In other words, the data exhibits truncation on right and left side for acquisition relatedness, suggesting a two-limit random effects model. Furthermore, as there is a self-selection effect among firms choosing to acquire, for relatedness of the outcome we include inverse-Mill's ratio using Heckman's two-stage self-selection model. In step 1, using the control variables we predict whether firm acquires a target (=1, or = 0 otherwise). The resulting inverse-Mill's ratio from the probit regression is used as a control in the main analysis predicting relatedness of acquisition.

Table 4.1 lists the mean, standard deviation, and correlations. The highest VIF value is 6.784, or below the recommended cut-off of 10 (O'Brien 2007). The mean value for likelihood of acquisition suggests that firms have a 25 percent chance on average of making an acquisition in a given year. Additionally, the mean value of relatedness averages between a match at the 1 or 2 digit level, suggesting a low level of relatedness between an acquirer and target on average. We also included measures of acquisition performance to examine whether family firm acquisitions destroyed value. Consistent with prior research, acquirer returns in our sample, while positive, are essentially zero on average across multiple measures of performance (King *et al.* 2004).

The results are presented in Table 4.2. Hypothesis 1 proposed that mid-sized family firms are more likely to undertake acquisitions. Results of our random effects logit models support a positive relationship between family firm size and acquisition likelihood across different definitions of family firms (percentage family ownership: $\beta = 0.021$, $p < 0.05$; percentage founding CEO ownership: $\beta = 0.022$, $p < 0.05$; percentage later generation ownership: $\beta = 0.023$, $p < 0.05$; and family involvement: $\beta = 0.025$, $p < 0.05$). Still, the underlying nature of the anticipated relationship between acquisition likelihood and family firm size was an inverted-U relationship with likelihood of acquisition increasing with firm size up to a certain level, and then declining as firms get larger. Hypothesis 2 proposed that mid-sized family firms are more likely to undertake related acquisitions. Results of our random effects two-limit Tobit models support a positive relationship between family firm size and related acquisitions (percentage family ownership: $\beta = 0.042$, $p < 0.05$; percentage founding CEO ownership: $\beta = 0.045$, $p < 0.05$; percentage later generation ownership: $\beta = 0.044$, $p < 0.05$; and family involvement: $\beta = 0.043$, $p < 0.05$). Still, the underlying relationship suggested an inverted-U relationship where mid-sized firms were more likely to engage in related acquisitions.

Using Cox regression with results presented in Table 4.3, the hazard of acquisition in the post-acquisition period for mid-sized family firms is significantly lower ($\text{Size}^2 \times \text{family firm acquired another firm in the past}$: percentage family ownership: $\beta = -0.169$, $p < 0.05$; percentage founding CEO ownership: $\beta = -0.118$, $p < 0.05$; percentage later generation ownership: $\beta = -0.159$, $p < 0.05$; and family involvement: $\beta = -0.173$, $p < 0.05$). Further, medium-sized family firms that acquire related firms are also less likely to be acquired in the future ($\text{Size}^2 \times \text{relatedness of target acquired by family firm}$: percentage family ownership: $\beta = -0.147$, $p < 0.05$; percentage founding CEO ownership: $\beta = -0.182$, $p < 0.05$; percentage later generation ownership: $\beta = -0.116$, $p < 0.05$; and family involvement: $\beta = -0.174$, $p < 0.05$). Significant financial loss from acquiring related targets by medium-sized family firms indirectly supports preference towards

18. Percentage family ownership founding CEO ownership later generation ownership involvement	0.303	0.197	0.077	0.145	0.160	0.099	0.135	0.127	0.155	0.134	0.081	0.145	0.123	0.065	0.169	0.150	0.152	0.146	0.089	1								
19. Percentage founding CEO ownership later generation ownership involvement	0.244	0.268	0.056	0.074	0.151	0.091	0.117	0.126	0.144	0.134	0.152	0.118	0.087	0.085	0.137	0.122	0.075	0.076	0.085	0.079	1							
20. Percentage founding CEO ownership later generation ownership involvement	0.208	0.208	0.065	0.105	0.118	0.162	0.132	0.141	0.065	0.098	0.098	0.096	0.133	0.137	0.068	0.155	0.156	0.096	0.103	0.093	0.065	1						
21. Family ownership involvement	2.216	0.824	0.112	0.104	0.065	0.073	0.154	0.071	0.099	0.062	0.089	0.088	0.137	0.120	0.158	0.069	0.079	0.150	0.108	0.133	0.086	0.161	1					
22. Likelihood of acquisition	0.254	-	0.032	0.102	0.064	0.155	0.164	0.106	0.112	0.116	0.089	0.143	0.075	0.160	0.091	0.154	0.084	0.123	0.131	-0.082	-0.092	-0.150	-0.065	1				
23. Relatedness of acquisition	0.309	0.146	0.048	-0.265	0.030	0.119	0.099	0.047	0.087	-0.056	0.092	0.106	0.034	0.023	0.116	-0.157	0.085	0.081	-0.088	-0.106	-0.091	-0.064	-0.084	0.210	1			
24. 3-day CAR	0.087	0.155	-0.244	0.097	0.112	0.093	0.164	0.117	0.156	0.098	0.090	0.128	0.117	0.061	0.159	0.100	0.139	0.081	0.122	-0.085	-0.153	-0.123	-0.057	0.136	0.243	1		
25. 1-year BHAR	0.046	0.191	-0.245	0.056	0.162	0.160	0.072	0.128	0.056	0.088	0.157	0.058	0.125	0.147	0.056	0.160	0.105	0.065	0.072	-0.125	-0.135	-0.083	-0.123	0.075	0.327	0.087	1	
26. 3-year BHAR	0.077	0.307	-0.199	0.124	0.105	0.101	0.065	0.146	0.133	0.102	0.159	0.127	0.090	0.089	0.113	0.120	0.100	0.161	0.167	-0.133	-0.156	-0.163	-0.116	0.163	0.193	0.161	0.099	1

Notes:

1,837 from 738 firms representing 8,372 firm-year observations in 1993–2007

All correlations above [0.086] are significant at 0.05 or below (two-tailed)

All correlations above [0.133] are significant at 0.01 or below (two-tailed)

Table 4.2 Likelihood and relatedness of acquisition

	Random effects logit				Two-limit random effects Tobit			
	DV = Likelihood of acquisition				DV = Relatedness of acquisition			
	Percentage family ownership	Percentage founding CEO ownership	Percentage later generation ownership	Family involvement	Percentage family ownership	Percentage founding CEO ownership	Percentage later generation ownership	Family involvement
Size	0.008***	0.009***	0.011***	0.012***	-0.113**	-0.112***	-0.124***	-0.124***
Size-square	-0.003***	-0.004***	-0.005***	-0.007***	-0.104*	-0.107***	-0.113***	-0.113***
Size-cube	0.003	0.005	0.007	0.008	0.101	0.102	0.102	0.102
Family firm	-0.015***	-0.014***	-0.012***	-0.011***	-0.112***	-0.114***	-0.114***	-0.114***
Size x family firm	-0.032*	-0.031*	-0.029*	-0.027*	-0.112*	-0.112*	-0.111*	-0.111*
Size-square x family firm	0.021*	0.022*	0.023*	0.025*	0.042*	0.045*	0.044*	0.043*
Size-cube x family firm	0.000	0.001	0.001	0.001	0.000	0.001	0.001	0.000
Relative industry size distribution	0.019*	0.021*	0.023*	0.024*	-0.034*	-0.024*	-0.027*	-0.032*
GIM index	0.076*	0.078*	0.079*	0.080*	-0.172***	-0.170***	-0.141***	-0.171***
Absorbed slack _{t-1}	0.057	0.058	0.060	0.061	0.014	0.023	0.024	0.024
Unabsorbed slack _{t-1}	0.059*	0.061*	0.062*	0.064*	0.017	0.024	0.03	0.031
Potential slack _{t-1}	0.066	0.067	0.069	0.070	0.044*	0.041*	0.042*	0.042*
Distance from bankruptcy _{t-1}	-0.045*	-0.044*	-0.042*	-0.041*	0.042*	0.043*	0.033	0.034
R&D intensity _{t-1}	-0.007	-0.005	-0.004	-0.003	0.004	0.012	0.012	0.004
Advertising intensity _{t-1}	-0.008	-0.007	-0.006	-0.004	0.004	-0.002	-0.01	-0.02
Capital intensity _{t-1}	-0.006	-0.004	-0.003	-0.001	0.004	-0.002	-0.004	-0.012

Number of prior acquisitions _{t-1}	0.067*	0.068*	0.070*	0.072*	0.044*	0.042*	0.043*	0.042*
Value of prior acquisitions _{t-1}	0.063*	0.064*	0.066*	0.067*	0.042*	0.042*	0.044*	0.043*
Tobin's Q _{t-1}	0.061***	0.062***	0.063***	0.065***	0.044	0.042	0.042	0.044
ln (free cash flow _{t-1})	0.023***	0.025***	0.026***	0.028***	0.044	0.027	0.044	0.024
Unsystematic risk	0.073***	0.074***	0.076***	0.078***	-0.204***	-0.205***	-0.212***	-0.234***
Unsystematic return	0.103***	0.105***	0.106***	0.108***	0.214***	0.212***	0.202**	0.222***
Debt ratio	-0.108*	-0.106*	-0.105*	-0.103*	-0.107*	-0.114*	-0.107*	-0.104*
Inverse-Mills ratio	1.590***	1.592***	1.593***	1.595***	0.307***	0.244***	0.237***	0.244***
Intercept	Yes	Yes	Yes	Yes	0.234***	0.244***	0.141***	0.147***
Industry dummies [reference category: 39]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Likelihood ratio χ^2	181.364***	136.268***	107.807***	104.335***	71.324***	76.268***	84.619***	67.658***

Notes:

1,837 from 738 firms representing 8,372 firm-year observations in 1993–2007

*** $p < 0.001$, ** $p < 0.01$, ** $p < 0.05$

Table 4.3 Hazard of getting acquired after acquisition in the main sample—Cox regression

	<i>DV = Hazard of getting acquired after acquisition in the main sample (1993–2011)</i>			
	<i>Percentage family ownership</i>	<i>Percentage founding CEO ownership</i>	<i>Percentage later generation ownership</i>	<i>Family involvement</i>
Size ¹	-0.378**	-0.397***	-0.315*	-0.281*
Size-square	0.448***	0.432***	0.352***	0.333*
Size-cube	0.074	0.085	0.024	0.079
Family firm ²	-0.205*	-0.194*	-0.185*	-0.163*
Family firm relatedness of acquisition ³	-0.196**	0.147*	0.134*	0.148*
Size × family firm	0.132*	0.112*	0.117*	0.128*
Size-square × family firm	-0.169*	-0.118*	-0.159*	-0.173*
Size-cubed × family firm	0.043	0.019	0.034	0.037
Size × family firm relatedness of acquisition	-0.169*	-0.197*	-0.185*	-0.136*
Size-square × family firm relatedness of acquisition	-0.147*	-0.182*	-0.116*	-0.174*
Size-cubed × family firm relatedness of acquisition	0.006	0.007	0.003	0.005
Controls	Yes	Yes	Yes	Yes
Intercept	0.890***	0.792***	0.693***	0.795***
Industry [reference category: 39]	Yes	Yes	Yes	Yes
Likelihood ratio χ^2	85.410***	168.763***	89.882***	137.501***

Notes:

¹Size at the time of acquisition in the main sample.

²=1 if a family firm acquired a firm in the main sample [n=341]; =0 if a non-family firm acquired a firm in the main sample [n=397].

³=1 if a family firm acquired a firm in the main sample multiplied by relatedness of acquisition; =0 if a non-family firm acquired a firm in the main sample multiplied by relatedness of acquisition

1,837 acquisitions followed for 738 firms in 1993–2011; we followed 341 family firms who acquired 2,254 firms and 397 non-family firms acquiring 3,118, to test whether they were themselves acquired following acquisition. Of the 341 family firms, 58 were acquired and of the 397 non-family firms, 84 were acquired

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

preserving socioemotional wealth over financial gains. Overall, mid-sized family firms who acquired another firm are less likely to be acquired, providing further support to H1 and H2 by validating the underlying theory of defensive acquisitions.

Discussion

By examining the socioemotional wealth at risk in family firms based on firm size, we develop and validate a framework that explains why medium-sized family firms are more likely to acquire and why they focus on related firms. Applying a “supply side” perspective suggests that mid-sized family firms are more likely to be acquired and have more socioemotional wealth at

risk, creating a motivation to make defensive acquisitions. This validates Gorton *et al.*'s (2009) “eat or be eaten” explanation for defensive acquisitions by applying it to the context of family firms. Due to perceived risk to socioemotional wealth under the behavioral agency model, mid-sized family firms have private motives that justify defensive acquisitions that offset potential wealth losses. Post-hoc analysis confirmed that defensive acquisitions by mid-sized family firms destroyed financial value at the same time that they reduced the likelihood of being acquired. Our findings have important contributions for research and managers.

Implications for research

One implication for research involves extending acquisition research into family firms that suggests reasons for both an increased and decreased propensity to acquire. On one hand, Miller *et al.* (2010) find that family firms engage in fewer acquisitions (in number of acquisitions and dollar value), because of dilution of control, increased firm risk resulting from post-acquisition debt, and lower managerial capital. Meanwhile, Gomez-Mejía and others (2010) find that family firms engage in acquisitions as risk increases. A contingency framework that considers firm size and perceived threat to socioemotional wealth can reconcile these results. For example, family firms in general are less likely to engage in acquisitions unless they perceive takeovers as a threat to socioemotional wealth.

We find mid-size family firms face the greatest threat of acquisition and loss of socioemotional wealth and are the most likely to engage in acquisitions. Further, they are more likely to pursue related acquisitions as they require integration into the social complexity of family firms, which provides the benefit of making them more complicated to integrate by a potential acquirer. Defensive motives after such acquisitions lead to decline in firm value (lower short- and long-term stock market reaction) but increase the benefits of private control (lower likelihood of acquisitions). The context of value-destroying acquisitions supports the view that family firms are rational, but use different criteria (Gomez-Mejía *et al.* 2011). This is significant in that a more aggregated look at family firm acquisitions suggests that family firms exhibit better acquisition performance (Ben-Amar and Andre 2006).

Coincidentally, our research also offers contributions to acquisition research. A significant contribution is that it helps explain a rational motive for value-destroying acquisitions, when acquisitions on average have no impact on performance (King *et al.* 2004), and most research focuses on identifying drivers of higher acquisition performance. However, identifying value destruction in acquisitions is equally important in solving the “puzzle” of why managers continue to pursue acquisitions in the face of evidence that they do not create value (Agrawal and Jaffe 2000), and our post-hoc analysis corroborates the value-destroying nature of acquisitions by medium-sized, family firms. Family firms are the most common form of business, and supplying a rationale for value-destroying acquisitions supports the view that family businesses have a different perspective (Gomez-Mejía *et al.* 2011; Miller *et al.* 2010). Additionally, the most commonly researched variable in acquisition research involves relatedness, yet research results remain equivocal (Hitt *et al.* 2009; King *et al.* 2004). Our research suggests that relatedness takes on meaning when it is considered in an interaction with another variable. This meets and validates a long-standing need to examine interactions in acquisition research (Hoskisson and Hitt 1990; King *et al.* 2004). Further, while broader acquisition research on relative size and acquisitions has focused on transfer of resources, routines and capabilities (e.g. Capron and Mitchell 1998; Capron and Pistre 2002; King *et al.* 2008), our research suggests that firm governance structures play a role in acquisition attractiveness. For example, in socially complex family firms, part of the value may be intrinsically linked to family relationships that could be removed if key family

members depart following a takeover. This would question the attractiveness of family firms as targets, and it would also be worth examining reasons why family firms decide to sell.

Implications for managers

The primary implication for managers is that carrying out an acquisition represents a viable takeover defense, as firms undertaking acquisitions experienced significantly lower risk of acquisition themselves. Further, the decrease in acquisition likelihood was greater for related acquisitions that largely require integration or increase the complexity of a firm. However, while it is a successful defensive strategy, the market appears to perceive non-financial motives and that financial performance is lower over short- and long-term stock performance. A specific implication for family firms is that an important consideration is how to manage firm growth. Getting acquired by another firm could be detrimental to socioemotional wealth, so an added complexity for family firm managers is the need to consider their attractiveness as a takeover target.

Limitations and future research

Our results must be interpreted in light of several limitations. First, we only use a surrogate measure of socioemotional wealth, and additional research using firm size and more direct measures and additional controls can validate our findings. While we control for several factors, examining family dynamics could provide additional explanations as to why some medium-sized family firms engage in acquisitions and others do not. A possible limitation is that the family ownership level displays weak variation across yearly observations. This is consistent with socioeconomic wealth motivations in family firms, but limits observed variance. Again, we used a random effect estimator to control for fixed effects. Additional research with a larger sample across countries could examine the consistency of our findings. Research could also focus on whether family firms make inherently less attractive takeover targets due to their social complexity. Due to complex social and relational factors, potential acquirers may “discount” the net present value of family firms. This is likely more true for small firms that are more difficult to value, but may be ambivalent to takeover. Future research could explore additional signals for how family firms could influence takeover attractiveness, and how small family firms manage growth. For example, an important question is: How do small family firms grow and maneuver in the markets for corporate control?

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