

Don't Ever Take Sides with Anyone against the Family: Family Ownership and Information Management

Completed Research

Abhishek Kathuria
University of Hong Kong
kathuria@hku.hk

Prasanna Karhade
University of Hong Kong
karhade@hku.hk

Jiban Khuntia
University of Colorado Denver
Jiban.khuntia@ucdenver.edu

Xue Ning
University of Colorado Denver
Xue.ning@ucdenver.edu

Abstract

Family-owned firms constitute majority of businesses in China, the United States, and India. We merge the Socioemotional Wealth perspective and microfoundations-based theories to explore the combined effect of nature of ownership and the top management team, on investment in IT-based Information Management. Analysis of an unbalanced 11-year panel of secondary data from all publicly listed firms in India, constituting 3,800 firms and 16,079 firm-year observations, finds support for our primary thesis: since preservation of socioemotional wealth is the primary desire for family owners, family ownership is negatively associated with investment in information management. We also find that family owners' ability, reflected through presence in the top management team, mitigates this negative relationship. Surprisingly, the effect of presence of professionals in the top management team on the relationship of family ownership and investment in information management was not significant, demonstrating that you don't ever take sides with anyone against "The Family".

Keywords

Family ownership, family firm, family management, information management, professional management.

Introduction

Firms owned by families constitute a significant majority of firms in many economies, with China, the US, and India accounting for the largest number of family owned firms. As per a comprehensive multi-year global study by Credit Suisse, family owned firms outperform their peers across regions and sectors. Given that Information Technology (IT) based information management has significant beneficial implications for business models, firm strategies, and performance, it is plausible that firms with family ownership differ from other firms in their level of investment in information management (IM).

The nature of ownership and the nature of the top management team are two major sources of heterogeneity among firms (Banalieva et al. 2011). These reflect the *desire* and *ability* to impact a firm's strategic behavior respectively. While the nature of firm ownership influences the primary *desire* (preservation of wealth versus maximization of returns) underlying strategic decisions, the *ability* to exercise control over the firm's decisions and actions accrues from participation in the top management team of the firm. For example, due to wealth preservation imperatives, family owners are conservative in strategic investments, such as in research and development (R&D), but these decisions are mitigated by moderating factors (Choi et al. 2015). Also, family owners present in the top management team can exercise oversight in the investment decisions of the firm. On the other hand, the presence of professionals in the top management team can help firms gain access to best practices and lessons learned

from across the world. For instance, firms enhance their capabilities to compete in emerging markets by using globally acquired management and IT practices (Kathuria et al. Forthcoming). Research has also suggested that top management plays a significant role in IT investment decisions - Andrade Rojas et al. (2016) find that chief executive officers who receive a larger proportion of long-term compensation are more likely to invest in IT. However, it is important to examine the combined role of nature of ownership and nature of top management team in the strategic decision of investment in IM. Thus, this study investigates three research questions: (1) How does family ownership influence IM investment? (2) How does presence of family owners in the top management team affect this relationship? (3) How does presence of professionals in the top management team affect this relationship?

We merge the Socioemotional Wealth perspective (Berrone, Cruz, and Gomez-Mejia, 2012) and microfoundations-based theory to construct the theoretical edifice of this study. Since preservation of socioemotional wealth is the primary *desire* for family owners, we posit that family ownership is negatively associated with investment in information management. Though they differ in their risk-taking propensity and management styles, the presence of family-owners and professionals in the top management team has a similar mitigating effect on this propensity of family owned firms, albeit through different causal mechanisms. We offer three hypotheses that elaborate upon these arguments.

To corroborate our theory, we constructed a unique dataset consisting of secondary data from all publicly listed firms in India. Analysis of our unbalanced panel of 3,800 firms with 16,079 firm-year observations spread over 11 years (2008 to 2018) finds support for our primary thesis of a negative relationship of family ownership on IM investment. The family owners *ability*, reflected through their presence in the top management team, weakens this relationship. Surprisingly, we find that the presence of professionals in the top management team has no effect on the relationship of family ownership on IM investment. Ergo, we surmise that this demonstrates that you don't ever take sides with anyone against the *Family*.

Theory and Hypotheses

The management literature has recognized two major sources of heterogeneity among firms – nature of ownership (for example, the level of family shareholding) and nature of the top management team (for example, family presence and professional presence in the top management team) (Banalieva et al. 2011). These two sources reflect the *desire* and *ability* to impact a firm's strategic behavior respectively. While the nature of firm ownership influences the primary *desire* (preservation of socioemotional wealth versus maximization of economic returns) underlying strategic decisions, owners must also possess the *ability* to exercise control over the firm's decisions and actions. Participation in the top management of a firm endows this ability to exert control over the firm.

Ownership and the Socioemotional Wealth Perspective

The Socioemotional Wealth perspective has been used to explain why the strategic behavior of firms with family ownership differs from nonfamily firms (Berrone et al. 2012; Gomez-Mejia et al. 2011; Gómez-Mejía et al. 2007). This perspective offers preservation of noneconomic or affective endowments of family owners as the primary motivation for the strategic behavior of the firm (Berrone et al. 2012).

Thus, the primary point of reference, while choosing among strategic alternatives for a family-owned firm, is the preservation of socioemotional wealth and not purely economic considerations (Gomez-Mejia et al. 2011). The firm is a source of personal pride, self-identification, and satisfaction for the family (Schulze et al. 2001). Due to a resultant emotional attachment to the firm, family members usually frame strategic decisions in terms of loss aversion of noneconomic endowments (Gómez-Mejía et al. 2007). In other words, the preservation and enhancement of socioemotional wealth is the primary strategy of family-owned firms, which is reflected in their strategic decisions and outcomes (Berrone et al. 2012).

The overarching *desire* to preserve socioemotional wealth results in not all decisions made by family-owned firms being economically justified. Family-owned firms are risk-averse and demonstrate conservative strategic decision making, avoiding strategies constituting high risk and potentially high returns (e.g. internationalization (Ray et al. 2018) and R&D-intensive innovation (De Massis et al. 2013)).

Family Ownership and IM Investment

The extent of family ownership is a source of heterogeneity in firms (Chrisman et al. 2005) which significantly influences the firms' strategic direction (Chua et al. 1999). We argue that the higher the extent of family ownership, the greater the family owners' *desire* to influence strategic decisions, in this case, a firm's investment in IT-based IM.

High family ownership discourages or negatively influences the adoption of a risky strategy such as high investment in IT because the family owners often bear the overall burden of risky investments and its detrimental impact on their reputation (in case of failure of risky investments). Family ownership deters risky investments primarily because families are often motivated by not just by economic factors (Wright et al. 1996), but by broader socio-economic factors such as preservation of the long term societal reputation of their businesses (Gomez-Mejia et al. 2011; Gómez-Mejía et al. 2007).

Family owners are particularly averse to investments in IM because of their preference for information asymmetry within the firm. Family owners prefer to operate by keeping information compartmentalized and within silos. This minimizes the risk of proprietary information from falling into the hands of competitors and thus harming the socioemotional wealth of the family. Furthermore, the socioemotional wealth of the family is derived from not only the reputation and prestige of the firm but also by developing relational capital by utilizing the influence of the firm (for example, by conferring favors). The presence of IT-driven business processes constrains family owners from leveraging the influence of the family firm for their benefit. Further, family owners' unwillingness to pursue risky strategies depends on their ownership stake (George et al. 2005) such that higher the stake, the lower the willingness to undertake risky investment in IM and consequently forgoing some financially lucrative entrepreneurial opportunities.

In summary, family owners are not only concerned with the financial consequences of their investments, but they also tend to prioritize the objective of preservation or enhancement of socio-economic wealth as a critical criterion influencing the decision-making process (Berrone et al. 2012). Thus, family owners are less likely to invest in IT.

Hypothesis H1: Family Ownership is negatively associated with IM Investment.

Top Management Team and Microfoundations-based Theory

Microfoundations-based theories comprise locating the cause of a phenomenon at a level lower than the phenomenon itself, which enables a better explanation of the phenomenon (Foss et al. 2016). As such, microfoundations-based theories include all multilevel theorizing (Felin et al. 2012) and supplement, reinforce, or offer alternatives to macrolevel theories and explanations (Foss 2011). Much of microfoundations-based research explores how heterogeneity amongst individuals in the top management team of a company drives strategic decisions and firm-level outcomes (Barney et al. 2013). Managerial characteristics, specifically whether the managers are members of the owning family or professionals, form a key source of such heterogeneity.

The top management team of a firm oversees its daily operations and has significant impact on a firm's strategic choices and outcomes. Family managers are primarily motivated to persevere the economic (Anderson & Reeb, 2004; Villalonga & Amit, 2006) and socioemotional (Berrone et al., 2012) wealth of the family. They are also groomed and trained as managers since an early age in a distinct style (Dyer, 1986; McEachern, 1975; Schein, 1968). Thus, they differ from professional managers, in both their risk-taking propensity, as well as management styles, practices, and techniques.

Family Managers and IM Investment

The nature of the top management team is a crucial second source of heterogeneity in firms (Banalieva et al. 2011) which significantly influences the firms' strategic direction (Chua et al. 1999). We argue that presence of family members in the top management team would result in the *ability* of the family owners to influence the strategic decision of investment in IT-based IM. A large proportion of family wealth is usually invested in a family firm, from which the family often derives the power and authority to impose the family's noneconomic goals on the firm (Carney 2005). Often, the confluence of ownership and

management control provides the family with greater prestige and socioemotional wealth from the firm (Ray et al. 2018). In such firms, family managers have substantial control and decision-making authority (Gomez- Mejia et al. 2010), thus any decisions regarding investment in IM proceed unchallenged by the rest of the family.

When family owner-managers invest in IM, they are better able to oversee where the investments are made and the outcomes of these risky investments, thereby reducing the risk inherent in investments in IT. In doing so, family owner-managers enhance the willingness for risky investments in IM. Further, family owners and family managers have similar risk aversion and aligned interests in the preservation and enhancement of socioemotional wealth and safeguarding of the family 'name' for future generations (Anderson et al. 2003), they also have aligned interests in maintaining information asymmetry and leveraging informal business processes to exploit the influence of the firm towards generating relational capital for the family. Therefore, family owners are able to direct the IM investment in a manner such that information asymmetry and informality is maintained, while the benefits of IM are also accrued. In summary, family presence in the top management team is likely to weaken the negative influence of higher family ownership on IM investment strategy.

Hypothesis H2: Family Management is likely to weaken the negative effect of Family Ownership on IM Investment.

Professional Managers and IM Investment

Professional managers are hired because they are likely to possess knowledge and experience about successfully running similar businesses, have valuable business contacts, and other requisite skills and managerial capabilities arguably lacked by the family. By hiring external managers, family owners cede some control over decision-making processes to professional managers. Professional managers prefer IM-driven information sharing across the firm as this may result in gains efficiency and better control and coordination. They also discourage the use of informal processes that enable to use the firm for the personal gain of family owners. Thus, professional managers are likely to encourage riskier investments in IT-based IM that are likely to support formalized business processes.

The presence of top professional managers in the top management team is also likely to weaken the family owners' influence over the business (Schulze et al. 2001). Thus, professional management may weaken the single-minded focus of the firm on preservation of socioemotional wealth (Gómez-Mejía et al. 2007). Thereby, professional managers are likely to act in a manner that encourages maximization of economic returns supported by IM investment. Further, the presence of professional managers is likely to result in frequent and deep engagement with family owners, managers, or representatives, leading to a spillover of knowledge and resources. This may help family owners recognize opportunities and best practices regarding IM and thus may weaken aversion of family owners towards IM investment (Miller et al. 2008). In summary, we propose that presence of professional managers in the top management team is likely to weaken the negative influence of higher family ownership on IM investment strategy.

Hypothesis H3: Professional Management is likely to weaken the negative effect of Family Ownership on IM Investment.

Methods

Data and Variables

We use all publicly listed firms from India as the sample to test our hypotheses. There are two main reasons we select Indian firms as for our sample frame. First, India is one of the most important emerging economies in the world (Kathuria et al. 2018b) and thus a study of IT investment of Indian companies would be helpful for us to understand the characteristics of IT strategies in emerging economies (Kathuria et al. 2018a; Ray et al. 2018). Second, family firms constitute a large percentage of publicly listed firms in India. India has the world's second largest number of family-owned firms. However, we do not separate family firms and only focus on this group as most previous relevant studies. Our sample includes all

companies listed on the Bombay Stock Exchange and National Stock Exchange yielding 3,800 firms with 16,079 firm-year observations over 11 years, from 2008 to 2018.

Table 1 shows the variables used in our research. The dependent variable of this study is IT-based IM investment. We use the natural log of the total IT expenditures on software development charges, IT-enabled service charges, telephone, web-hosting, satellite, internet, computer and IT systems, and software to measure this variable (Dehning et al. 2002).

Variable	Definition
<i>Dependent Variable</i>	
IT-based IM Investment (IMInvest)	Natural log of the total expenditures on software development charges, IT enabled service charges, telephone, web-hosting, satellite, internet, computer and IT systems, and software.
<i>Independent Variables</i>	
Family Ownership	The proportion of shares held by Indian individuals and Hindu Undivided Families (HUFs) as promoters.
Family Management	Presence of family members in the top management team, coded as 1 if a family member has the designation as Chairperson, CEO, or Managing Director and 0 otherwise.
Professional Management	Presence of professionals in the top management team, coded as 1 if a non-family member has the designation as Chairperson, CEO, or Managing Director and 0 otherwise.
<i>Control Variables</i>	
Firm Age	Nature log of the number of years of operation since firm's Incorporation year.
Firm Size	Nature log of the sales.
R & D Investment	Nature log of the R&D expenditure.
Marketing Investment	Nature log of the marketing expenditure.
Prior Performance	Percentage of earnings before depreciation, interest and taxes to total assets.
Market Share	The share of a firm in a certain industry based on the frequency of NIC (National Indian Classification) code.
Year Dummy	Year 2008-2018
Industry ID	Coded into 9 categories by NIC

Table 1. Description of Variables

Our independent variable is family ownership and family management and professional management serve as the two moderators. Family ownership is measured by the proportion of shares held by Indian individuals and Hindu undivided families as promoters (Ray et al. 2018). The measurements for family management and professional management follow prior studies by using a dummy variable. The variable family management is coded as 1 when a member of the promoter family occupies any one of the positions of Chairperson, CEO, or Managing Director in a firm, and as 0 otherwise. Professional management was coded in a similar manner. It is a dummy variable that takes a value of 1 if a non-family member, occupies the roles of Chairperson, CEO, or Managing Director in a firm, and as 0 otherwise (Singla et al. 2014).

We also include several control variables. Firm age is the number of years of operation since firm's year of incorporation. We expect that older firms may be conservative towards investing in new technologies and we use firm age to control for this effect. R&D intensity is the ratio of research and development (R&D) expenditure to total sales while marketing intensity is the ratio of marketing expenditure to total sales. Both of these two variables represent a firm's investment level and innovation level. For example, higher R&D investment is associated with higher IT investment (Chrisman et al. 2015). We control for these two

variables in our analysis. Prior performance is calculated as the percentage of earnings before depreciation, interest, and taxes to total assets. We control this variable since a firm's prior performance could affect its investment decision making. Also, we calculate the market share variable as the share of a firm in a certain industry based on the frequency of NIC (National Indian Classification) code to control for industry effects, and include year dummy to control for the change of the macroeconomic conditions (Kathuria et al. 2018a; Ray et al. 2018).

Model Specification

We use a Tobit estimation approach to test our hypotheses due to the large number of near zero values in our dependent variable, IT Investment. A Tobit model has a unique feature that controls for censored outcomes in the data distribution at both tails. The model allows latent or unobserved factors that generates censored outcomes. Thus, we model both left and right censored outcomes, specified as:

$$y_i = \begin{cases} y_i^* & \text{if } y_L < y_i^* < y_H \\ y_L & \text{if } y_i^* \leq y_L \\ y_H & \text{if } y_i^* \geq y_H \end{cases}$$

Where, the latent or unobservable dependent variable y_i^* linearly depends on x_i using a parameter vector of β . The observable variable y_i is defined to be equal to the latent variable whenever the latent variable is above zero and zero otherwise. There is a normally distributed error term u_i that captures the random influences on this relationship. Thus, y_i^* can be specified as:

$$y_i^* = \beta x_i + u_i, u_i \sim N(0, \sigma^2)$$

Our empirical model specifies IT-based IM investment (IMInvest) as the dependent variable. We test both the direct and interaction models through a hierarchical regression approach. The formal specification of our general model is as follow:

$$IMInvest_{it} = c + \beta_1 FamOwn_{it} + \beta_2 FamOwn_{it} \times FamMgt_{it} + \beta_3 FamOwn_{it} \times ProfMgt_{it} + \beta_4 Controls_{it} + \varepsilon_{it}$$

Where Y_{it} is the dependent variable IM Investment, X_{it} stands for the explanatory variables family ownership, family management, professional management, interaction of family ownership and family management, interaction of family ownership and professional management, and ε_{it} is the error term.

Results

Variable	Obs	Mean	Std. Dev.	Min	Max
IT-based IM Investment	13,055	-2.66	2.41	-6.50	7.30
Family Ownership	16,079	24.05	23.33	0	100
Family Management	16,079	0.12	0.32	0	1
Professional Management	16,079	0.00	0.05	0	1
Firm Age	16,067	3.43	0.52	0	5.04
Firm Size	16,079	2.63	2.25	0	11.32
R&D Investment	16,079	0.14	0.52	0	5.86
Marketing Investment	16,079	0.39	0.80	0	7.40
Market Share	16,067	0.03	0.06	0.001	1
Prior Performance	16,067	0.83	2.77	-0.090	306.57

Table 2. Descriptive Statistics

Table 2 presents the descriptive statistics of the variables. Among the 16,079 firm-year observations, the mean family ownership is 24.05%. The average age of the firms is around 36 years old. Table 3 provides the correlations among variables and the star indicates the significant correlations at 0.1 level.

Variable	1	2	3	4	5	6	7	8	9
IT-based IM Investment	1								
Family Ownership	-0.252*	1							
Family Management	0.014	0.042*	1						
Professional Management	-0.000	-0.020*	0.008	1					
Firm Age	0.116*	-0.162*	0.081*	0.023*	1				
Firm Size	0.633*	-0.153*	0.079*	0.012	0.142*	1			
R&D Investment	0.371*	-0.122*	0.010	0.006	0.126*	0.422*	1		
Marketing Investment	0.483*	-0.162*	0.040*	0.009	0.126*	0.579*	0.495*	1	
Market Share	-0.0039	0.0693*	0.0095	0.0032	-0.0350*	0.0846*	0.0276*	0.0335*	1
Prior Performance	0.0188*	0.0281*	0.0328*	0.0022	0.0016	0.1110*	0.0157*	0.0369*	0.0335*

Table 3. Correlation Table

Variables	(Model 1) IM Investment	(Model 2) IM Investment
Family Ownership	-0.006*** (0.001)	-0.006*** (0.001)
Family Management	-0.015 (0.030)	-0.076* (0.046)
Professional Management	-0.187 (0.129)	-0.360** (0.179)
Family Ownership × Family Management		0.002* (0.001)
Family Ownership × Professional Management		0.013 (0.010)
Firm Age	0.052 (0.054)	0.050 (0.054)
Firm Size	0.562*** (0.011)	0.562*** (0.011)
R&D Investment	0.516*** (0.039)	0.518*** (0.039)
Marketing Investment	0.092*** (0.019)	0.092*** (0.019)
Market Share	-0.411 (0.367)	-0.411 (0.367)
Prior Performance	-0.017*** (0.006)	-0.018*** (0.006)
Year Dummies	Included	Included
Constant	-4.453*** (0.192)	-4.439*** (0.192)
Wald Chi ²	4187.93***	4194.79***
Observations	13,043	13,043
Number of firms	3,800	3,800

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 4. Tobit Estimation Results

Table 4 shows the main results of the Tobit estimation analysis. Model 1 is used to test our first hypothesis regarding the direct effect of family ownership on IM investment. As hypothesized, the result demonstrates that there is a significant and negative relationship between family ownership and IM investment (Table 4, column 1, $\beta = -0.006$, $p < 0.01$). In other words, the higher the level of family ownership, the less the firm invests in IM. Therefore, hypothesis H1 is supported.

We then consider the moderating effects of family and professional managers in the top management team on the direct relationship between family ownership and IM investment. In model 2, we first examine the interaction of family ownership and family management. The results suggest a positive moderating effect of family management on the relationship between family ownership and IM investment (Table 4, column 2, $\beta = 0.002$, $p < 0.1$), implying that family management could decrease the negative impact of family ownership on the IM investment. As a result, Hypothesis H2 is supported, albeit weakly. We then consider the interaction of family ownership and professional management. The results do not find support for this relationship (Table 4, column 2, $\beta = 0.013$, $p > 0.1$, not significant). Thus, hypothesis H3, which suggests that professional management could mitigate the negative effect of family ownership on IT-based IM investment is not supported.

We did not hypothesize any direct effects of family management or professional management on IM investment as it is implausible that this characteristic of top management teams would have a systematic effect on this strategic decision. The results support our line of thinking. The control variables are also generally in expected directions. For example, R&D intensity and marketing intensity are significant and positive, consistent with the argument that firms that have higher investments in innovation and marketing also have higher IM investment (Chrisman et al. 2015).

We tested for multicollinearity by computing variance inflation factors (VIFs) for all estimation models. The highest mean VIF was less than 2.0 in both models, confirming that multicollinearity is not a concern. We also verified the assumptions of regression analysis, including normality of residuals, and heteroscedasticity.

Discussion

This study explores the effect of two major sources of firm heterogeneity – nature of ownership and nature of the top management team (Banalieva et al. 2011), on IT-based IM investment. These two sources reflect the *desire* and *ability* to impact a firm's strategic behavior respectively. We find a significant negative impact of *desire* (family ownership) on a firm's IM investment. More specifically, our results suggest that every percent increase of family ownership could lead to a 0.7% decrease in IM investment, in line with our theory that higher family ownership influences more conservative spending on information technologies. We also find that *ability* (family owners presence in the top management team), weakens the negative relationship of family ownership on IM investment, consistent with our theorizing that the ability to exert oversight on IM investment could result in less conservative spending on IT-based IM. Surprisingly, we find that the presence of professionals in the top management team has no effect on the relationship of family ownership on IM investment.

Implications and Contributions

This study contributes to both theory and practice. On the theoretical side, we identify family ownership and family management as important antecedents to IT-based IM investment, thus contributing to the IT business value stream of research. We also contribute to the microfoundations-based management research by recognizing IT related consequences of top management team heterogeneity. Also, though prior studies have explored the role of the top management as a driver of IT investments (Mithas et al. 2013), either directly or through supportive actions (Kearns et al. 2007; Liang et al. 2007), and the decision making processes between IT departments and executives (Karhade et al. 2015; Xue et al. 2008), we identify the nature of the top management team as a critical consideration. Finally, we introduce the socioemotional wealth perspective to IS research and suggest that family ownership and management are important constructs with significant implications to the IS research discourse.

On the practice side, this study demonstrates to family owners that their wealth preservation outlook has a negative impact on IM investment. Given the demands of the modern competitive business

environment, it is critical for firms to invest in IT to secure and maintain a competitive advantage. Therefore, family firms should be cognizant of this relative weakness compared to other firms and take conscious efforts to address it, perhaps through increased presence of family members in the top management team.

Limitations and Future Research

In this study, we used longitudinal study of publicly listed firms in India to test our hypotheses. We believe the results from this robust dataset and analysis provides strong evidence and support to our arguments. Nevertheless, all research has limitations, which is addressable in future research. First, this study was in India, which is an emerging economy with a high concentration of family owned firms. Generalizability of our findings could be improved, and future studies may replicate our work in other country contexts. Second, in the current study, family management and professional management are coded as dummy variables. Though this provides insights that are adequate to our current study, continuous variables that capture level or intensity of the presence of family-owners or professionals in the top management team can yield additional understanding - a scope for future research.

Conclusion

This study demonstrates that firms with family ownership, which constitute the majority of business enterprises in the top three economies of China, United States and India, make significantly lower investment in IT-based information management. The presence of family owners in the top management team reduces this propensity of family owned firms. Most importantly, our failure to find an effect of professional management on the desire of family owners to investment less in information management demonstrates that you don't ever take sides with anyone against "The Family".

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