Altruism, Intention for Succession, and Family Firms' Risk-Taking Behavior

by

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ABSTRACT

This study addresses the effects of altruism and intention for succession on family firm's risk-taking behaviors. Results show that higher levels of familial altruism in family firms with succession plans lead to lower levels of R&D investment, but have no significant impacts on their earnings management. Also, altruism in these family firms decreases their cost of debt.

Key words: altruism, family firm, succession, risk taking

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1. Introduction

Over the past decade, family firms have become an increasingly important business sector in emerging economies. Previous studies have indicated that family firms' risk-taking behavior and decision-making strategies are different from those of non-family firms (Burkart, Panunzi, and Shleifer 2003; Chrisman and Patel 2012; Chua, Chrisman, and Sharma 1999). Research on family firms' risk-taking behavior has identified a mixed relationship with regard to their succession plan (Bennedsen, Perez-Gonzales, and Wolfenzon 2007; Munari et al. 2010). On the one hand, family firms prefer to maintain family control, even if this could increase in business risk (Chua et al. 1999). This argument echoes the behavioral agency model, which suggests that family firms prefer long-term oriented strategic plans. They intend to maintain their businesses under their family's control in the long run, always keeping family wealth at an optimal level and putting more emphasis on their family members' interests (Chua et al. 1999). More specifically, family firms would prefer to preserve their socioemotional wealth (SEW), especially if they intend to transfer their business to the next generation (Bennedsen et al. 2007; Chua et al. 1999). For instance, family firms are more willing to take risks in investing in research and development (R&D) projects to obtain future opportunities (Gómez-Mejía et al. 2011) and less likely to adopt a short-term or high-risk plan because it will harm their family members' interests and long-term growth (Chrisman and Patel 2012;).

On the other hand, however, family firms tend to be more risk averse than non-family firms with respect to maintaining family control and protecting family reputation (Gómez-Mejía, Makri, and Larraza-Kintana 2010). This particular behavior is also

consistent with the perspective of SEW protection (Chrisman and Patel 2012; Gómez-Mejía et al. 2007). To maintain or improve family reputation, family firms tend to avoid behavior that could damage their public impression, such as fraud and dishonest activities. In this paper, we also investigate if earnings management are a factor in influencing family business risk-taking behaviors (Baysinger, Kosnik, and Turk 1991; Chen and Hsu 2009; Chrisman and Patel 2012); manipulating earnings in the annual report or cash flow statement would potentially increase the risk of damaging the firm's public image and reputation (Chrisman and Patel 2012). Family firms value their reputation more than profit. Thus, they are less likely to engage in earnings management, which would threaten their family's public image.

Last but not least, we use the cost of debt to measure the company's financial risk. The most significant determination of cost of debt is the agency conflict between family shareholders and lenders. Generally speaking, shareholders and lenders have different risk preferences. Shareholders prefer high risk–high expected return decisions that benefit all family members, but lenders are more conservative (Christman, Chua, and Litz 2004). The higher this agency cost, the higher the cost of debt. In this paper, we use the cost of debt as the third measurement of risk-taking behavior to test the effect of family succession on a firm's financial risk. These attitudes toward different types of risk-taking behaviors have been tested using data from developed economies (Chrisman and Patel 2012; Gómez-Mejía el al. 2007). However, we know little about family firms' risk-taking behavior in emerging markets such as China, which lack property rights protection and have a relatively poor legal environment. In these countries, family firms would anticipate more uncertainties and threats, which originate from the political and economic

environment, and this could result in risk-taking behaviors that are very different from those in developed countries (Li et al. 2012).

Furthermore, although altruism is one of the elements of the SEW perspective (Berrone, Cruz, and Gómez-Mejía 2012), previous studies mainly compare altruism in family firms with its absence from non-family firms. However, they do not consider the different levels of altruism between family members in family firms. In this study, we examine the effects of altruism on risk-taking behaviors in family firms with succession intentions. We measure R&D investment and earnings management as a proxy of business risk and the reputation risk of family firms, respectively, and the cost of debt as a proxy of financial risk. We use hand-collected family firm data that include information on the relationships between family members. The proximity between incumbent family members and their potential successors is adopted as a proxy for the degree of altruism. Previous studies of family business succession have found that altruistic incumbents are concerned about both the future of all their family members as well as the ownership/control of their business (MacDonald and Koh 2003; Sharma et al. 2001). Therefore, the closeness of the relationships between incumbents and potential successors could affect their risk-taking behaviors.

This study shows that, in China, the higher the level of altruism between incumbent family members and their potential successors, the less likely family firms are to invest in R&D projects. However, the level of altruism is not significantly associated with earnings management. In addition, family firms' intentions for transgenerational succession could reduce their cost of debt.

This study adds to the entrepreneurial finance and family business management literature in at least three ways. First, it sheds light on how altruism affects the risk-taking behaviors of family firms in China. Although family business succession has been recognized as an important influence on decision making, no study has thoroughly addressed the effects of family firms' succession intentions on decision making. Second, although altruism is covered in the SEW perspective (MacDonald and Koh 2003; Schulze, Lubatkin, and Dino 2003), how various levels of altruism within families influences decision making has not been addressed in previous studies. Hence, this study significantly extends the SEW perspective by quantifying altruism within business families. Third, it adds to the literature by addressing issues related to the risk-taking behaviors of family firms from both non-financial and financial perspectives.

In this paper, we use hand-collected data that is unique to China, currently the world's largest emerging market. The results highlight differences in the aforementioned contexts from developed countries, given their very different characteristics. In addition, most studies only indicate whether or not a family firm has a potential successor in the family (Lee and O'Neill 2003, De Massis et al. 2015). Our data, however, indicate the relationship between the incumbent and the successor and defines their proximity to each other by their genetic closeness.

The remainder of this paper is organized as follows. Section 2 reviews the literature related to the theoretical framework. Section 3 develops our three main hypotheses. Section 4 describes the data and methodology. Section 5 presents and discusses our empirical results. Section 6 draws conclusions and recommends future research directions.

2. Theoretical framework

Studies on family firms agree that one of the key differences between family and non-family firms is the former's desire to transfer business control to the next generation. Generally speaking, family firms are controlled by a family or family group (Chua et al. 1999). The definition of the controlling family is the "people who established or acquired the firm (share capital) or their families or descendants possess 25 % of the right to vote mandated by their share capital" (European Commission 2008, 161). A family owner has an incentive to benefit all family members or to make business decisions in the family members' best interests, including the next generation's (Bennedsen, Perez-Gonzales, and Wolfenzon 2011; Chua et al. 1999). One of the significant differences between family and non-family firms is the choice of potential successors and succession planning. Family firms prefer to choose successors from the next generation within the family, even if the family candidate is not qualified or professional enough to be the company leader (Kets de Vries 1993). It may not be the best solution for the business, but this allows family owners to minimize the influence of non-family shareholders and to retain family control of their business (Astrachan, Klein, and Smyrnios 2002; Blanco-Mazagatos, Quevedo-Puente, and Castrillo 2007).

In an emerging market such as China, however, where the legal environment does not protect property rights, family firms adopt unusual risk-taking behaviors compared to firms in developed countries. Behavioral theory and the SEW perspective may not be fully applicable to the Chinese context, due to the additional uncertainties facing business families. Previous findings of family firm's risk-taking behaviors in Western countries may not be applicable to Chinese family firms either. In this study, we systematically

demonstrate the effects of family succession plans on family firms' risk-taking behaviors using Chinese data.

2.1. Family succession and altruism

In most nations, the parent–owner family firm is considered the most common structure for family firms (La Porta et al. 1999). Parent–owner family firms have a unique governance structure that concentrates both ownership and management within one family unit or group (Lubatkin et al. 2005). Previous studies have indicated that parent–owner family firms are more likely to transfer their business to the next generation within the family to preserve their family legacy (Chua et al. 2011; Goldberg and Woodbridge 1993). In this case, there would be a blood tie relationship between the family incumbent and the successor. Previous studies indicate that the family incumbent has an incentive to transfer both ownership and leadership to the next generation for the family to retain control of the business (MacDonald and Koh 2003). In contrast, if the current business owner cannot find a capable successor within the family, he or she may have to hire an external professional candidate to manage the firm. In this external hire succession, the family incumbent should only transfer leadership to a non-family successor while keeping firm ownership within family, such as by transferring their shares or voting rights to a family member who serves on the company's board of directors. All family firms struggle with their succession decisions. In this paper, we define family succession as the first situation in which the family incumbent transfers both ownership and leadership to another family member (MacDonald and Koh 2003).

There is a large amount of literature on family chief executive officer (CEO) turnover. The effect of family CEO turnover or family succession on a family firm's performance is ambiguous (Donnelley 1964). On the one hand, family CEOs may outperform non-family CEOs, since the nonfinancial rewards associated with firm success are higher for a family CEO (Davis, Schoorman, and Donaldson 1997; Kandel and Lazear 1992). The main reason is that family managers have access to firm-specific information and could easily enjoy a higher level of trust from key family shareholders (Donnelley 1964). Generally speaking, family CEOs tend to have more long-term oriented family goals than non-family CEOs do (Cadbury 2000).

On the other hand, previous studies also indicate that family CEOs usually underperform compared with non-family CEOs. One reason may be rooted in the conflict between family goals and business objectives (Barnes and Hershon 1976; Christiansen 1953; Lansberg 1983; Levinson 1971). Family CEOs put family goals ahead of business objectives in their decision-making processes if there is a conflict between them. The other reason may be so-called adverse selection during family succession. Family CEOs may not be qualified managers (Burkart et al. 2003; Perez-Gonzalez 2006) and their limitations in professionalism and managerial skills affect their overall performance. Some strategic decisions made by family CEOs may mislead the company or prohibit the business from achieving optimal solutions. In addition, according to recent studies, CEO turnover appointments may decrease firm performance (Bennedsen et al. 2007; Perez-Gonzalez 2006), which leads to significant underperformance upon a family CEO's succession compared with a non-family CEO succession (Morck, Stangeland, and Yeung 2000; Perez-Gonzalez 2006; Villalonga and Amit 2006).

Other than family CEO turnover, previous studies also identify potential the determinates of a succession process, such as

> (1) The propensity of the elder family leader to step aside; (2) the family successors' willingness to take over the business; (3) agreement among family members to maintain family involvement within the business; (4) acceptance of individual roles, and (5) firms' succession planning. (Sharma et al. 2001, 671)

MacDonald and Koh (2003) show that transactions from parents to their adult children are motivated by simple altruism. The transfer of wealth and income is not equal among family members. Parents distribute their wealth according to their children's needs, not their capabilities (Kao, Hong, and Widdows 1997). Less able children require a greater human capital investment than more capable children do (MacDonald and Koh 2003). Nevertheless, parents have incentives to maximize all their children's satisfaction. Children with lower incomes and/or abilities will receive more financial assistance and vice versa. This simple altruism theory can be applied to family firms when the incumbent member may provide more benefit to his or her own children because of stronger blood ties with them than with other family members. Thus, the closeness of the relationship between the acting CEO and potential successors will affect the CEO's attitudes toward the potential successor. When family firms have family members in their top management team (TMT), we expect them to have the intention to transfer ownership to one of these family members. In this study, we investigate Chinese family firms' risk-taking behaviors, particularly in decision making on investing in R&D, engaging in earnings management, and the cost of debt for firms with potential family successors.

Van den Berghe and Carchon (2003) use altruism to explain and understand the family firm's existence. Dyer (2003) very similarly indicates that the family firm plays a unique role that is rarely found in other enterprises. From a philosophical standpoint, altruism refers to an act in the interest of others or that benefits others without the expectation of receiving anything in return. From an economics point of view, altruism is to share utilities and welfare with other people (Schulze et al. 2003). In this paper, we use the concept of parental altruism or kin altruism that could be applied to family business studies. Parent–owners intend to give more to their children not only because of blood ties, but also because they aligned their own interests and business objectives with those of their children. Previous studies have found that altruistic behaviors from family owners reduce the agency cost of family firms and improve firm performance. First, family members reduce agency costs by aligning their interests to effectively eliminate information asymmetries among family members (van den Berghe and Carchon 2003). Second, family involvement could reduce agency problems and the owner–manager governance structure could reduce agency costs regarding administration and monitoring (Chrisman et al. 2004; Fama and Jensen 1983). Third, family altruism leads to competitive advantages in decision making (Eaton, Yuan, and Wu 2002; Gómez-Mejia et al. 2001).

2.2 Agency theory and family firm SEW

Agency theory suggests that, in the presence of conflict of interests or information asymmetries between the principle and the agent, an agency cost will be generated to avoid or solve related conflicts, such as administration costs, monitoring costs, and incentive mechanisms that are expected to reduce agency threats (Chrisman et al. 2004;

Cruz et al. 2010; Jensen and Meckling 1976). Generally speaking, agency costs impact firm decision making and relations between shareholders and managerial team members. Scholars have summarized two key issues related to agency threats: moral hazard and adverse selection (Myers 1977). Moral hazard is an opportunistic activity in which the agent opposes the principle's interests or harms the principle's benefits by taking advantage of information asymmetries between them (Jensen and Meckling 1976). Adverse selection takes place when the principle contracts with a less able, under-qualified agent to manage the firm and thus damages its reputation (Chrisman et al. 2004). The key issues in reducing agency costs are to reduce information asymmetries and conflicts of interest between the principle and the agent.

Generally speaking, there are three kinds of agency costs within a firm. First, there is an agency cost between shareholders and managers because shareholders must ensure the managers are pursuing their best interests (Jensen and Meckling 1976). Second, there is an agency cost between lenders and shareholders because their risk preferences and appetites are different (Anderson et al. 2003). Third, there is the cost between majority and minority shareholders because majority shareholders may have adopted self-beneficial projects by reducing minority shareholders' interests. Therefore, the alignment of interests becomes a crucial and imperative solution to eliminating agency costs.

The governance structure of family firms could effectively reduce agency costs and threats. As we know, family firms are usually controlled by a family or a family group that makes the family member either a large block shareholder or an owner–manager (Amihud and Lev 1999; Denis and Sarin 1999). This special structure could efficiently minimize information asymmetries and conflict of interests between the

principle and agent and easily align their interests and eliminate agency threats (Lubatkin et al. 2006).

Most of the literature shows evidence of family firm risk taking behavior in North America or Europe. Within these countries, SEW is a fundamental endowment of family principles (Ding and Wu 2013; Gómez-Mejía et al. 2007). Potential loss of this endowment increases the subjective risk of family firms. The decision maker prefers to avoid a loss of SEW even if this means having to accept a higher-risk activity (Chrisman and Patel 2012). That means, in Western countries, family firms try to preserve their SEW dominant loss-averse behavior. Zellweger et al. (2012, 851) summarizes the definition of SEW as follows:

> Fulfilling needs for belonging, affect, and intimacy; continuation of family values through the firm; perpetuation of the family dynasty; preservation of family firm social capital; discharge of family obligations based on blood ties; ability to act altruistically toward family members using firm resources (Gómez-Mejía et al. 2007); and social status (Zellweger and Astrachan 2008).

In Western developed countries, SEW is considered one of the key elements encouraging family owners to transfer their businesses onto the next generation, but research on the effect of SEW on developing countries or emerging markets is lacking.

2.3 Institutional background in China

Most studies on family businesses have been conducted in North America and Europe (De Massis et al. 2012), where family businesses are meant to benefit multiple

generations of a family (Chua et al. 1999). To support these family-centered goals, family firms adopt particular risk-taking behaviors (Chrisman and Patel 2012). Studies have established that family firms are generally more risk averse than their non-family counterparts, but this behavior changes under certain circumstances. In Western developed countries, the legal systems strongly protect individual businesses and their property rights. Under these circumstances, controlling families have the clear option of passing on their businesses to the next generation, since the government provides a fair and secure external environment in these countries. According to the behavior agency model, family owners adopt conservative risk preferences. However, when faced with the need to preserve their SEW, family firms are likely to switch from risk-averse strategic decision-making to risk-seeking strategies, since they intend to preserve and transfer the family legacy (Gómez-Mejia et al. 2010).

The same problem may be interpreted differently in China due to the lack of property rights protection and a weak external governance and monitoring system. Since the 1980s, Chinese society has transitioned from a traditional central-planned economy to a market-oriented economy. Over the past three decades, private firms have re-emerged in China, but their legal status remains unstable (Lin 2011; Wang and Qian 2011). The lack of clearly defined and regularly enforced property rights increases the risks for family firms in China. In addition, China's government does not effectively monitor the market, increasing the possibility that a firm's illegal activities will go unpunished.

Furthermore, the owners of a family firm in China might not have a strong intention to transfer control to the next generation, due to problems maintaining a relationship with the Chinese government. From an institutional perspective, political ties

are one of the most important types of social ties in an underdeveloped formal institutional environment. Peng and Luo (2000) argue that political connections result in advantages in accessing additional resources. However, it is extremely hard for family firms to form such connections with the Chinese government and obtain resources. Although China has made progress in market-oriented reforms, government officials still have considerable discretionary power over financial institutions, government purchases, public projects, certifications, licenses to do business, land, and so on. Therefore, family firms often need to bribe government officials, which increases operating expenses and damages business ethics. Such practices not only incur substantial costs to the firm but also lower the ethical standards of businesses. Firms may need to spend large amounts of energy and money to maintain a good relationship with the government. According to the altruism perspective, if a family firm in an emerging market such as China struggles to succeed in the current generation, the owners will not want the next generation to follow the same difficult path. Instead, they will sell their company and cash out, leaving the money to their successors.

3. Hypothesis development

In this study, we develop three sets of hypotheses related to the risk-taking behaviors of Chinese family firms with the intention of succession. The first set of hypotheses concerns the effect of altruism on family firms' R&D investments, the second set focuses on the effect of altruism on their earnings management behavior, and the third one concerns mainly the effect of parental altruism on a firm's cost of debt.

Chrisman and Patel (2012) argue that a family firm with a strong intention of trans-generational control through intra-family succession could make higher R&D investments because they would like to adopt longer-oriented project. We assume that if a family firm has a family CEO or board chairperson and at least one other family member in the TMT, this firm is more likely to undergo a family succession in the future. In this situation, the family firm's decision making could be driven by the desire to preserve its SEW rather than by economic rationality.

According to agency theory, however, a family firm's decision maker may be more risk averse than that of a non-family firm (Basu, Dimirova, and Paeglis 2009; McConaughy, Mathews, and Fialko 2001). Generally speaking, family founders invest most of their wealth in their business so that their risks and returns are tied into a single asset, whereas shareholders might invest in multiple enterprises and distribute their risk across different assets. In addition, family firms are always small and medium-sized enterprises. Their risk-taking behavior is more conservative than that of big, wealthy enterprises (Mishra and McConaughy 1999). However, the results of empirical studies examining risk taking are inconsistent. Some studies show that family firms can be simultaneously risk seeking and risk averse in their decision-making processes (Gómez-Mejia et al. 2011).

We focus on three kinds of risk taking behaviors for family firms that have succession plans in China. When family firms have family members in their TMT, we expect them to have the intention to transfer ownership to one of these family members. In this study, we investigate Chinese family firms' risk-taking behavior, particularly in

R&D investments, earnings management, and the cost of debt in firms that have a potential family successor.

3.1. Effects of altruism on R&D investment

Innovation requires R&D investments (David, Hitt, and Gimeno 2001). According to Schumpeter's entrepreneurship theory, to survive and win in the market, entrepreneurs must innovate to gain a competitive advantage. Ettilie (1998) has indicated that innovation helps a firm to gain and sustain market capability and competitive advantage. The extensive literature on R&D research has examined how various factors such as a firm's ownership structure (Baysinger et al. 1991; Chen and Hsu 2009; Lee and O'Neill 2003), board independence (Baysinger et al. 1991; Daellenbach, McCarthy, and Schoenecker 1999), and external governance system (Munari et al. 2010) affect a corporation's R&D strategy. Factors such as a large individual shareholder, a more independent board of directors, and institutional investors positively affect R&D expenditures. In contrast, institutional investors, CEO duality, and a high degree of family ownership negatively affect firm R&D investments. In addition, large firms have more resources for R&D investments than small firms do (Chen and Hsu 2009).

Previous studies have reached inconsistent conclusions about the effect of family ownership on R&D investment. On the one hand, family businesses are more risk averse than non-family firms and therefore tend not to invest in R&D. On the other hand, family firms tend to have a long-term orientation, particularly in their intention to transfer the family business to the next generation, and consequently could become risk neutral. In addition, family firms would like to preserve their SEW and therefore they consider

family ownership and benefits from the perspective of all of the family members (Berone, Cruz, and Gómez-Mejia 2010; Gómez-Mejia et al. 2007). They are more willing to invest in R&D for future development to benefit the entire family in the long run. In this study, we focus on the effect of altruism on family firms' risk-taking behaviors and study how the relationship between the family incumbent and the successor affects R&D investment in a family business.

We first discuss the formal perspective to explain why family firms tend to avoid R&D investment. First, family firms are more risk averse and are therefore less likely to invest in R&D projects. The return on R&D investments is uncertain and takes a long time (Chrisman and Patel 2012). Second, family owners are more conservative when making strategic decisions because they might be more concerned about preserving SEW rather than business objectives (Berone et al. 2010; Gómez-Mejia et al. 2007). Since R&D investments have a higher risk of failure (Chen and Hsu 2009), loss-averse family firms tend not to invest in R&D (Chen and Hsu 2009; Chrisman and Patel 2012; Munari et al. 2010). Third, other researchers argue that family members who own a large percentage of shares have the power to force the firm to act in their interest (Anderson et al. 2003) and could thus prevent risky innovations. Therefore, our first hypothesis is as follows.

Hypothesis 1a: In family firms in China, the closer the relationship between the incumbents and potential successors, the lower the investment in R&D.

However, some researchers suggest that family firms have a long-term investment orientation, particularly if they have succession plans. According to agency theory,

family owners may align their interests with family firm managers (Jensen and Merkling 1976; Lansberg 1983), which will increase their willingness to make risky investments such as R&D. In addition, family firms attempt to preserve their SEW.

As discussed, parents want to transfer their wealth and income to the next generation (MacDonald and Koh 2003) and may derive additional satisfaction from transfers that meet their children's needs. Furthermore, parents love all of their children, regardless of their managerial ability. In fact, they tend to provide more financial support to their less able children. Parents usually have a long-term orientation when they have an intention for trans-generational family control (Chrisman and Patel 2012). Investing in R&D projects helps firms seize more opportunities in the future. Thus, we expect family firms with succession plans to invest more in R&D. Therefore, our competing hypothesis is as follows.

Hypothesis 1b: In family firms in China, the closer the relationship between the incumbents and potential successors, the higher the investment in R&D.

3.2 Effects of altruism on earnings management

Many studies have examined the motivations for earnings management. Dechow et al. (1996) find that an important motivation for earnings management results from the desire to access additional external financing at lower cost. Firms manipulate their financial statements to smooth the volatility of their performance, since positive financial accounting information encourages investors to buy stocks and thus increase the value of the stock of present shareholders. However, earnings manipulation is risky (Jeggi et al. 2009). First, it is illegal. Furthermore, once earnings management is detected, the firm's

value will decrease. In addition, the reliability of the firm's future financial reports will be cast in doubt and the reputation of the management will be damaged.

Family firms desire to protect their SEW. Their family reputation is so important that they may sacrifice economic returns to protect it. Family owners seek to keep and protect their business reputation, since it will benefit successors. The closer the relationship between the incumbent and successors, the more the owner will care about damage to reputation caused by earnings management. Therefore, our second hypothesis is as follows.

Hypothesis 2a: In family firms in China, a closer relationship between the incumbent and potential successor decreases the likelihood of earnings management.

However, Dechow et al. (1996, 1) find that determinants of earnings management include being

(1) more likely to have large boards of directors that are dominated by insiders; (2) less likely to have an outside director with a significant equity holding; (3) less likely to have an audit committee; (4) less likely to have an external blockholder; (5) more likely to have a company founder as CEO; (6) more likely to have a CEO who doubles as chairman of the board; (7) less likely to have a 'Big Six' auditor.

Given the above list, we can predict that family firms are more likely to engage in earnings management than non-family firms due to a higher level of family involvement in the corporate governance of family firms (Benkel, Mather, and Ramsay 2006; Cornett

et al. 2008). Family founders usually act as the firm's CEO or board chair (Daily and Dollinger 1992). In addition, if family firms are owned and managed by the founding family, an outside blockholder is less likely. Therefore, we can predict that family firms are more likely to engage in earnings management than their non-family counterparts.

We also know that external monitoring is ineffective in China. Firms that manipulate their earnings in financial and accounting reports are unlikely to be caught and, therefore, the likelihood of earnings management damaging their reputation is very low. During family firms' succession transitions, owners may put more effort into maintaining business performance and attracting investors to ensure that the new leader will have the capability to retain good performance after taking over the company. In addition to an ineffective external monitoring system, there is also a lack of internal or external audit systems in family firms. Few family businesses have internal audit committees and those that do probably have at least one family member as a committee member. Generally, family firms do not like releasing too much information to the public and do not want external members to be involved in their business. As discussed, previous studies show that family CEO turnover has a negative effect on firm performance. When family firms intend to transfer their control to the next generation, they try to mitigate this negative effect by manipulating their financial reports and attracting investors. Therefore, family firms in China with succession plans are more likely to engage in earnings management. Therefore, our alternative hypothesis is as follows.

Hypothesis 2b: In family firms in China, a closer relationship between the incumbent and potential successor increases the likelihood of earnings management.

3.3 Effects of altruism on the cost of debt

We previously mentioned three types of agency costs between different shareholder groups. In this paper, we focus on the agency costs between lenders and shareholders due to their different risk preferences regarding decision making. Jensen and Meckling (1976) indicate that agency costs of debt are incurred when decision makers shift firm investment behaviors to reallocate wealth from the lender to shareholders. Shareholders are more willing to make risky investments than lenders, because the shareholders would bear the same risks as the lender but capture most of the benefits gained from high-risk and high-return investments. Consequently, lenders intend to claim greater compensation, which increases the cost of debt (Anderson et al. 2003).

In family firms, family members align most of their wealth with their business and, to preserve SEW, they may be more loss averse than non-family firms (Gómez-Mejia et al. 2007). Thus, previous researchers have indicated that family firms pay a lower cost of debt than non-family firms (Anderson et al. 2003). As discussed previously, however, when family firms have succession plans, they may become risk neutral instead of risk averse. In addition, a succession plan is itself a risky strategic plan for family firms. Lenders expect a decrease in performance regarding the transection of firm ownership. Moreover, the potential successors of family firms are choosing from a fairly small sample pool. Moreover, if the choice of potential successor is additionally limited to the son or daughter of the current owner instead of the whole family, the investors or

lenders may ask to increase the cost of debt to secure their investment. Thus, our third hypothesis is as follows.

Hypothesis 3a: In family firms in China, a closer relationship between the incumbent and potential successor increases the cost of debt.

Controversially, if a family firm has a potential family successor within the firm, this firm has a longer-term oriented plan. China lacks property rights protection and its external monitoring system is less secured. Most family businesses would prefer to cash out within the current generation than to transfer the business to the next generation. Thus, the cost of debt may decrease if a family firm has a long-term orientation. Because it adds credit to both the lender and investor's point of view, both of them may feel their money is "safe" when they invest in a sustainable, developed, and reliable company. Thus, our alternative hypothesis is as follows.

Hypothesis 3b: In family firms in China, a closer relationship between the incumbent and potential successor decreases the cost of debt.

4. Data and methodology

Our data set consists of hand-collected information on the intentions for succession for 232 family firms listed on the Chinese stock markets from 2006 to 2011. Following the methods of Chrisman and Patel (2012), we extract from annual reports information about the personal characteristics of both incumbents and potential successors who serve in the TMT and/or on the board of directors. Other data were extracted from the China Stock Market & Accounting Research (CSMAR) database

published by GuoTaiAn; these databases have been extensively used in previous studies (e.g., Wei, Xie, and Zhang 2005). Our sample contains 2,073 observations.

We also construct three variables to characterize the relationship between an incumbent and each potential successor. The first is a dummy variable (*FSdum*) with a value of one if there is a father–child relationship and zero otherwise. The second is a continuous variable (*Altruism*) evaluating the closeness if the relationship between an incumbent and a potential successor. It is based on the percentage of shared genes shared. For instance, in a father–child relationship, the two people share 50% of their genes and, therefore, we set the value of the variable *Altruism* at 0.5. If the two people of interest are siblings, they share 25% of their genes and, therefore, we give the variable *Altruism* a value of 0.25. If, for example, these two people are a biological uncle and nephew, we code the variable as 0.125. Therefore, the variable *Altruism* serves as a gauge of the closeness of the relationship between an incumbent and a potential successor from the same family. The distribution of *Altruism* is illustrated in Figure 1. To test the robustness of our results, we also construct a third variable, the dummy *Succession*, with a value of one if the relationship between the incumbent and potential successor is any of those categorized in the continuous variable *Relationship* and zero otherwise. This dummy variable *Succession* measures the family's intention of succession.

[Insert Figure 1 about here]

The focus of this study is the effect of altruism on the risk-taking behaviors of family firms with succession plans. We examine both business risk, measured by R&D investment (Chrisman and Patel 2012), and the risk of reputation damage as a proxy for

earnings management (Jaggi et al. 2009). Hence, we adopt three dependent variables: R&D investment, earnings management, and the cost of debt. First, *R&D* is the amount of R&D-related expenditure scaled by the firm's total assets; this measure of R&D investment has been widely used in previous studies (e.g., Chrisman and Patel 2012). The second dependent variable is discretionary accruals (*DAM*), a proxy for earnings management, calculated on the basis of the modified Jones model (Dechow, Sloan, and Sweeney 1995). The definitions of these variables are given in Table 1.

[Insert Table 1 about here]

Following Dechow et al. (1995), we first calculate total accruals (*TA*) as follows:

$$TA_t = \frac{\Delta CA_t - \Delta CL_t - \Delta Cash_t + \Delta STD_t - Dep_t}{A_{t-1}},$$

where ΔCA_t is the change in current assets; ΔCL_t is the change in current liabilities; $\Delta Cash_t$ is the change in cash and cash equivalents; ΔSTD_t is the change in debt included in current liabilities, which we use as a measure of net short-term borrowing; and Dep_t is depreciation and amortization expenses. Based on the new Chinese accounting standard, a business does not need to disclose a depreciation fee in its balance sheet. We use a proxy of 5% of a firm's fixed assets to measure depreciation and amortization expenses. Finally, A_{t-1} is one-year-lagged total assets. Then, we estimate α_1, α_2, and α_3, as generated by the following regression (Dechow et al. 1995):

$$TA_t = \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2(\Delta REV_t) + \alpha_3(PPE_t) + \upsilon_t,$$

where TA_t and A_t are as in the previous calculation; ΔREV_t measures the change in revenues in year *t* scaled by total assets in year *t* - 1; PPE_t is gross property, plant, and equipment in year *t* scaled by total assets in year *t* - 1; and v_t is the residual.

We predict the ordinary least squares (OLS) estimators α_1, α_2, and α_3 as the firm-specific parameter and then calculate our proxy for earnings management, nondiscretionary accruals (*NDA*), as follows (Dechow et al. 1995):

$$NDA_t = \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2(\Delta REV_t - \Delta REC_t) + \alpha_3(PPE_t),$$

Where ΔREC_t is the change in net receivables in year *t* scaled by total assets in year *t* - 1. Finally, we calculate discretionary accruals (*DAM*) using total accruals minus nondiscretionary accruals in the modified Jones model.

The third dependent variable is *Cost of Debt (Cost),* calculated by using the GSMAR data set. We use the cost of interest divided by the difference between total liabilities and accounts payable:

Cost of Debt = Cost of Interest/(Total Liabilities – Accounts Payable)

Following previous studies (Chrisman and Patel 2012; Dorsman et al. 2003; Li et al. 2012), we adopt control variables such as the age of the incumbent (*Age*); the age of the firm (*firmage*); the natural logarithm of a firm's total operational revenues (*firmsize*); the natural logarithm of the total number of employees (*employee*); the return on assets (*ROA*); *Tobin's Q,* calculated by the market-to-book ratio; the percentage of the company owned by the chair of the board (*ownership*); the natural logarithm of the total number of shareholders (*totSH*); and a dummy variable *ChairCEO* that is equal to one if a firm's

chair of the board also acts as the CEO and zero otherwise. We include two additional control variables for the analysis of earnings management. The first is the natural logarithm of total cash flow (*TotCF*) and the second is capital intensity (*CapInt*), which is equal to fixed assets scaled by total assets. The definitions of these variables are included in Table 1.

Since we are interested in the effect of altruism on family firms' risk-taking behavior during their succession process, we first assess the potential sample selection biases related to family firm succession decisions. To do so, we adopt a probit model with a dummy variable (*succession*) that measures family succession as the dependent variable and the age of the incumbent (*Age*) as the instrumental variable. This choice of instrumental variable is consistent with previous studies of family firm succession (Ding and Wu 2013) and family firm R&D investment (Chrisman and Patel 2012): When an incumbent of a family firm is closer to retirement age, it is more likely for the incumbent to consider transgenerational succession (Zelleweger et al. 2012). We then compute the inverse Mill's ratio (*invmills*) from this probit model and include it in the main regressions with *R&D* and *DAM* as the dependent variables, respectively. The probit model in the first stage of the analysis is

$$Succession = a_1 Age + c_1 Control\ Variables + \varepsilon_1$$

and the OLS regressions in the second stage are

$$R\&D = a_2 Altruism/FSdum + b_2 Invmills + c_2 Control\ variables + \varepsilon_2,$$

$$DAM = a_3 Altruism/FSdum + b_3 Invmills + c_3 Control\ variables + \varepsilon_3,$$

$$Cost = \frac{a_4 Altruism}{FSdum} + b_4 Invmills + c_4 Control\ variables + \varepsilon_4.$$

5. Empirical results

Table 2 presents the descriptive statistics. An average family firm invests 1.1% of its total assets in R&D and the average amount of discretionary accruals is 0.412. Sons and daughters are considered potential successors by 11.9% of the family firms' incumbents and the average degree of altruism is 0.083. For brevity, we do not repeat the descriptive statistics reported in Table 2 or the correlations between the variables presented in Table 3.

[Insert Tables 2 and 3 about here]

The results of the probit model in the first stage of our analysis are reported in Column (1) of Table 4 and those from the OLS regressions in the second stage are presented in Columns (2) to (5) of Table 4. The variable *Age* is significantly (at the 1% level) and positively associated with the variable *succession*, indicating that, when an incumbent in a family firm gets older, she or he is more likely to have potential successors. The coefficients of both *Altruism* and *FSdum* are significantly negative in the OLS regressions with the dependent variable of *R&D and Cost*, but insignificant in the OLS regressions with the dependent variable *DAM*.

[Insert Table 4 about here]

These results show that a higher level of altruism between an incumbent and a successor reduces a family firm's R&D investment in China. This contradicts the

findings from developed countries but is consistent with those reported by De Massis et al. (2015). For instance, Chrisman and Patel (2012) find that, in the United States, although family firms tend to be more risk averse, they are more likely to have a long-term orientation and may choose to invest in R&D projects, since protecting SEW is a priority in their risk-taking decisions. However, De Massis et al. (2015) find that, in China, family firms tend to invest less in R&D, because of the lack of property rights protection. Family firms may not have long-term orientations because they do not feel secure in Chinese markets and therefore are more likely to transfer income/cash rather than their businesses to their successors. The results of this study build on the conclusions of De Massis et al. (2015); our results show that a closer relationship between an incumbent and a successor is associated with less R&D investment. Unlike De Massis et al. (2015), who compare family and non-family firms, we compare family firms with and without potential family successors. The aim is to examine the effects of altruism on business families and to understand how it fits into the SEW perspective.

Our finding about the effects of altruism on earnings management indicate that family firms with potential successors engage in as much earnings management as those without potential successors. In other words, although the SEW perspective predicts that family firms with succession plans may care more about their reputation (Ding and Wu 2013; Gómez-Mejia et al. 2007; Zellweger et al. 2012), their risk-taking behaviors with respect to potential reputation damage are not affected by altruism in China, perhaps because of China's ineffective monitoring mechanisms and weak public governance system. Even if firms are caught engaging in earnings management, the penalty is likely to be relatively small. During the transition period of family firm succession, incumbents

are less concerned about reputation damage and more concerned about firm short-term performance.

Our result also shows that the closer the relationship between the incumbent family owner and the potential successor, the lower the cost of debt. This result again confirms that, in China, family firms tend to sell their company in the current generation rather than keep it for the next generation. Thus, investors or lenders may feel more secure when they put their money into a long-term oriented firm. In other words, family succession helps investors and lenders reduce their compensation because these companies have fewer opportunities to opt out of the market, thus reducing the agency cost of debt.

6. Conclusions and future research

Unlike previous studies of risk-taking behaviors in family and non-family firms, this study examines how altruism affects family firms' risk-taking behavior during the succession process. Since it is hard to collect personal information about the relationships between incumbents and potential successors in family firms, a sample of Chinese listed firms serves as a natural test. Our hand-collected data on the relationships between incumbents and potential successors are used as proxies for the degree of altruism between family members. To the best of our knowledge, this is the first study to quantify altruism and to investigate how it affects risk-taking behavior in the context of family business succession.

The findings show that, in China, altruism decreases family firm investment in R&D and the cost of debt during the succession process but does not affect their earnings management behavior. This suggests that, when property rights protection is relatively weak and public governance mechanisms are relatively ineffective, the risk-taking behaviors of family firms differs from those common in developed countries; thus, the SEW perspective may not fully apply in such economies. This study significantly adds to the entrepreneurial finance and family business management literature by connecting altruism and various categories of risk-taking behavior in family firms. The findings can be generalized to other jurisdictions with low levels of property rights protection and weak legal environments. These findings have important policy implications for the governments of transitional economies.

While our findings add value to the entrepreneurial finance and family business management literature by extending the insights of the effects of altruism on family firm's risk-taking behaviors, using Chinese firms for the empirical analysis may not be ideal because other factors in China, such as the one-child policy, may affect the succession intention of family firms. Therefore, one of the future research directions is to collect data from multiple countries and redo the tests by taking country-level factors, such as culture, history, and political and business environment, into account. Another limitation of this study is that altruism among potential successors is not considered, partly because of the special one-child policy in China. When observations from other countries are used for retesting the hypotheses proposed in this study, it is likely that asymmetric altruism and reciprocal altruism between incumbents and potential successors, as well as potentially negative altruistic degree among potential successors,

may play an important role in the relationship between family firm's intention for succession and its risk-taking behaviors. This is an interesting avenue for future research along the lines drawn by this study. Last but not least, cost of equity may also be used as a dependent variable in order to take into consideration how shareholders react to family firms' intention for succession by emphasizing agency conflict between majority and minority shareholder.

This study also points to several directions for future research. First, hand-collected data describing the relationships between incumbents and potential successors in family firms in developed countries would allow for a comparative study in an international setting. Such a study could explore the differences in the relationship between altruism and risk taking in family firms in different business and legal environments. Second, this study could be extended to other aspects of the SEW perspective and behavioral agency theory. Doing so would be a significant theoretical contribution to both family business management and entrepreneurial finance research. Third, it would be interesting to investigate how stock markets react to listed family firms' succession plans in an international setting. An event study that identified the reactions of external investors would help family firms in their decision-making processes.

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Table 1. Variable Definition

Variables	Difination
R&D	The amount of R&D related expenditure invested by a family firm scaled by its total asset
DAM	The amount of discretionary accruals that use to estimate earnings management of a firm
Cost	Cost of debt, total interest expenditure divide by the difference between total liability and account payable
FSdum	The dummy variable measures the father-son or father-daughter relationship between incumbent and potential successor
Altruism	The continuous variable measures the relationship between incumbent and potential successor
Firmsize	The natural logarithm of a firm's total operation revenues
Employee	The natural logarithm of the total number of employees
ROA	Return on Assets
TobinsQ	Calculated by the market to book ratio
Firmage	The age of the company
Age	The age of an incumbent
Ownership	The percentage of ownership owned by the chairman of the board
TotSH	The natural logarithm of total number of shareholders
ChairCEO	The dummy variable, which equals to 1 if a firm's chairman also acts as the CEO, zero otherwise
CapInt	Capital Intensity, which is equal to fixed assets scaled by total assets
TotCF	Total Cash Flow, which is the natural logarithm of total cash flow

Table 2. Descriptive Statistics

Variables	N	Mean	S.D
R&D	472	0.011	0.016
DAM	2064	0.412	1.139
Cost	1747	0.064	0.096
FSdum	2073	0.119	0.323
Altruism	2073	0.083	0.170
Firmsize	1942	21.231	1.328
Employee	1928	6.954	1.502
ROA	1942	0.017	0.667
TobinsQ	2073	3.192	4.320
Firmage	1942	15.483	3.645
Age	1957	53.659	9.067
Ownership	1867	21.082	14.110
TotSH	1942	10.372	0.843
ChairCEO	1921	0.407	0.491
CapInt	1942	0.246	0.183
TotCF	1184	17.933	2.170

Table 3. Correlation Table

	R&D	DAM	Cost	FSdum	Altruism	firmsize	employee	ROA
R&D	1							
DAM	-0.007	1						
Cost	0.110**	-0.086***	1					
FSdum	-0.102**	-0.025	0.084***	1				
Altruism	-0.118**	-0.023	0.094***	0.903***	1			
Firmsize	-0.088*	-0.236***	0.102***	0.117***	0.121***	1		
Employee	0.004	-0.215***	0.135***	0.121***	0.107***	0.654***	1	
ROA	0.081*	0.001	0.062**	0.009	0.006	0.041*	0.014	1
TobinsQ	0.192***	0.258***	-0.051**	-0.052**	-0.044*	-0.474***	-0.292***	-0.127***
Firmage	-0.127***	0.097***	-0.160***	-0.138***	-0.142***	-0.183***	-0.237***	-0.043*
Age	-0.090*	-0.103***	0.110***	0.343***	0.337***	0.268***	0.186***	0.024
Ownership	-0.015	0.073***	-0.053**	-0.013	0.006	0.141***	-0.046**	-0.010
TotSH	-0.154***	-0.178***	0.020	0.099***	0.082***	0.593***	0.404***	0.020
ChairCEO	0.162***	-0.032	0.048**	0.128***	0.144***	0.125***	0.148***	-0.007
CapInt	-0.168***	-0.013	0.031	0.002	-0.012	-0.126***	0.121***	-0.129***
TotCF	-0.061	-0.238***	0.104***	0.079***	0.068**	0.708***	0.417***	0.054***
	TobinsQ	firmage	Age	owners~p	totSH	ChairCEO	CapInt	TotCF
TobinsQ	1							
Firmage	0.114***	1						
Age	-0.124***	-0.141***	1					
Ownership	-0.021	-0.008	0.029	1				
TotSH	-0.248***	-0.034	0.185***	-0.186***	1			
ChairCEO	-0.049**	-0.171***	0.084***	0.054**	0.069***	1		
CapInt	0.066***	-0.083***	0.013	-0.232***	0.083***	-0.019	1	
TotCF	-0.348***	-0.160***	0.177***	0.124***	0.360***	0.086***	-0.216***	1

*p<0.10, **p<0.05, ***p<0.01

Table 4. Major Results from Equations (1)-(3)

Dependent Variables	Succession	R&D		DAM		Cost	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Altruism		-0.013***		0.153		-0.113*	
		(0.005)		(0.138)		(0.065)	
FSdum			-0.006**		0.109		-0.039**
			(0.002)		(0.071)		(0.019)
Invmills		0.003	0.003	0.145*	0.154*	0.004	-0.003
		(0.003)	(0.003)	(0.084)	(0.086)	(0.029)	(0.030)
Firmsize	0.019	0.000	-0.000	-0.022	-0.021	0.028**	-0.028**
	(0.036)	(0.002)	(0.002)	(0.081)	(0.081)	(0.012)	(0.012)
Employee		0.001	0.001	-0.089**	-0.090**	0.002	0.002
		(0.001)	(0.001)	(0.036)	(0.036)	(0.009)	(0.009)
ROA		0.037**	0.037**	0.061	0.060	0.829***	0.834***
		(0.017)	(0.017)	(0.073)	(0.073)	(0.116)	(0.115)
TobinsQ		0.001**	0.001**	0.061***	0.061***	0.001	0.001
		(0.001)	(0.001)	(0.019)	(0.019)	(0.002)	(0.002)
Firmage		-0.001**	-0.001**	0.008	0.008	0.005	0.005
		(0.000)	(0.000)	(0.008)	(0.008)	(0.003)	(0.003)
Ownership	-0.002	-0.000	-0.000	0.005**	0.005**	-0.002***	-0.002***
	(0.003)	(0.000)	(0.000)	(0.002)	(0.002)	(0.001)	(0.001)
TotSH	-0.076	-0.003*	-0.003*	0.027	0.026		
	(0.054)	(0.002)	(0.002)	(0.080)	(0.080)		
ChairCEO	0.301***	0.005**	0.005**	-0.024	-0.022	0.009	0.008
	(0.071)	(0.002)	(0.002)	(0.059)	(0.059)	(0.020)	(0.020)
TotCF				-0.010	-0.010	0.016***	0.015***
				(0.021)	(0.021)	(0.004)	(0.005)
CapInt				-0.124	-0.127	0.197***	0.190***
				(0.260)	(0.259)	(0.072)	(0.071)
Age	0.053***						
	(0.004)						
Year /Ind		Yes	Yes	Yes	Yes	Yes	Yes
Constant	-3.360***	0.037	0.040*	0.800	0.788	0.0285	0.303
	(0.604)	(0.023)	(0.024)	(1.193)	(1.191)	(0.024)	(0.238)
Observations	1757	443	443	1,006	1,006	204	204
Pseudo R-sq	0.1006						
LR Chi-sq	189.61***						
R-sq		0.160	0.154	0.188	0.188	0.379	0.383
Adj R-sq		0.141	0.134	0.178	0.179	0.295	0.300
F test		2.926***	2.878***	4.695***	4.673***	4.55***	4.62***

*p<0.10, **p<0.05, ***p<0.01

Figure 1. Gene Shared between Incumbent and Successor